

Technical Assistance Bulletin

May 10, 2019

MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) PERMITS

What is an MS4?

The term “MS4” is commonly used to describe the infrastructure used to convey storm water runoff within a city, town, borough, county, parish, or other public body. The infrastructure used to control and convey storm water can be linear or complex, including, but not limited to, open ditches, manmade canals, subsurface storm drainage systems, and storm water pumping stations. MS4s do not include combined sewers and are not part of a publicly owned treatment works (POTW). An MS4 system must be owned or operated by a public entity, such as the US government, state government, city, or parish. A public works department, environmental department, or similar agency usually operates traditional MS4s, which are owned by a city or parish government. Non-traditional storm water utilities, such as those operated by a transportation agency, are responsible for maintaining right of ways and managing storm water during public construction projects.

Why is Storm Water Management a Concern?

According to the U.S. Environmental Protection Agency, urban storm water is a major source of pollutants that contribute to water quality impairments. Water from storms picks up debris, chemicals, and other pollutants as it flows into the storm drains. Storm water runoff is transported through MS4s, from which it is often discharged untreated into local water bodies. Illicit discharges, such as dumping of chemicals, paint, or untreated wastewater to storm drains also contributes to water quality impairments. Common pollutant sources include sediment from construction sites, automotive fluids, landscaping waste, cleaners, trash, cigarette butts, pesticides, and pet waste. Sediment and debris can clog waterways and damage aquatic habitat. To prevent pollutants from entering local water bodies or from being illicitly dumped into an MS4, operators are required to obtain a Louisiana Pollutant Discharge Elimination System (LPDES) permit and develop a storm water management program (SWMP).

Current Regulations Requiring Permit Coverage

In 1990, EPA promulgated rules establishing Phase I of the National Pollutant Discharge Elimination System (NPDES) storm water program. The Phase I program for MS4s requires operators of “medium” and “large” MS4s, that is, those that generally serve populations of 100,000 or greater, to implement a storm water management program as a means to control polluted storm water discharges from these MS4s. Phase II, promulgated in 1999, requires regulated 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. Federal requirements are found in 40 CFR 122.26(b)(8). Current urbanized

area maps are based on the 2010 census, which are available at https://www2.census.gov/geo/maps/dc10map/UAUC_RefMap/ua/. Unless otherwise designated by the permitting authority, the areas covered by the permit include only those within the urbanized areas. However, this does not preclude parishes, cities, or towns from implementing their SWMP throughout the entire jurisdiction. MS4s outside of an urbanized area that have a population > 10,000 and a population density of greater than 1,000 people per square mile may be designated as a regulated small MS4 by the permitting authority.

As an agency that is delegated to administer the NPDES program, LDEQ is the state permitting authority that issues LPDES permits. Phase I and II federal storm water requirements have been adopted into state water quality regulations. LAC 33: IX §2511 contains the permit requirements for large and medium MS4s; Phase II requirements for small MS4s are described in LAC 33: IX §2517. Individual permits cover Phase I (large and medium) MS4s; whereas, the LPDES general permit, LAR040000, covers Phase II (small) MS4s. Individual permits may have more area-specific requirements, including regular monitoring of identified outfalls. All regulated MS4s are required to develop and implement a storm water management program (SWMP) to reduce the contamination of storm water runoff and prohibit illicit discharges.

General Permit Requirements

The majority of regulated MS4s in the state of Louisiana has obtained or is required to obtain coverage under the General Permit for Discharges from Small Municipal Storm Sewer Systems (LAR040000). Only four Phase I MS4s are specifically named in the state and federal regulations; all have been issued individual LPDES permits. Therefore, the focus of this bulletin will be on the requirements of the general permit.

In *Environmental Defense Center, et al. v. EPA*, the US 9th Circuit Court of Appeals partially remanded Phase II MS4 Storm Water regulations in 2003. The court found that EPA failed to require permitting authority review of the Best Management Practices (BMPs) to be used at a particular MS4 to ensure that the permittee reduces pollutants in storm water discharges to the Maximum Extent Practicable (MEP) and failed to provide adequate public participation in the permit process. By remanding and vacating portions of the Phase II rule, EPA was required to revise the Phase II permit regulations, addressing the public participation and permitting authority procedures. EPA's final rule was published in October 2016. The LDEQ incorporated EPA's Phase II MS4 Remand Rule in the state's regulations, which became final and effective on May 20, 2017 (see Final Rule WQ095ft). The MS4 general permit revisions are found in LAC 33:IX.2515, 2521, 2523, and 2525. The Rule states that if the regulatory authority uses a general permit to regulate small MS4s, the regulatory authority can choose either one or a combination of the following two options: Option 1 (comprehensive general permit) or Option 2 (two-step general permit). LDEQ included both Option I and Option II under LAC 33:IX.2515.B – General Permits. LDEQ is implementing Option II. Therefore, after issuing the general permit, the state administrative authority may establish through a second permitting step additional permit terms and conditions for each MS4 seeking authorization to discharge under the general permit. Once the NOI is determined to be administratively and technically complete, the state administrative authority will initiate the public noticing process. Upon completion of this process, LDEQ will notify the MS4 by means of an LPDES permit authorization letter of the authorization to discharge, subject to the terms of the general permit and the additional requirements that apply individually to that MS4. Once accepted, the SWMP and any other additional conditions identified in the LPDES permit authorization letter become enforceable parts of the permit authorization.

LAR040000 was initially issued in 2003 and subsequently reissued on November 27, 2007, February 13, 2013, and August 17, 2018 (effective September 1, 2018). Operators of small MS4s initially obtain authorization to discharge under the general permit by submitting a complete Notice of Intent (NOI – form MS4-G). The NOI should include an attachment that describes the receiving water bodies, and clear, specific, and measurable best management practices and goals to be implemented for each of the six storm water minimum control measures (see below). To date, all regulated MS4s in Louisiana have been permitted for more than 5 years and are required to have fully developed and implemented a storm water management plan (SWMP). Annual reports for the preceding year must be submitted to LDEQ's Water Permits Division by March 10. Specific annual report requirements are described in Part V.C of the general permit.

Components of the general permit include allowable non-storm water discharges, description of the monitoring and recordkeeping requirements, emergency notifications, special conditions related to Total Maximum Daily Loads (TMDLs), and standard permit conditions. However, the majority of the general permit describes the six minimum control measures required in a SWMP:

Public Education and Outreach—Each permittee must implement a program to educate citizens on proper use and disposal of chemicals, pesticides, etc. This program may include the distribution of educational materials and outreach activities designed to teach adults and children the steps that the public can take to reduce pollutants in storm water runoff.

Public Involvement Participation—Permittees must develop a program to encourage public involvement in the storm water program. Examples include holding public hearings on storm water issues, volunteer monitoring, and stream or beach clean-up activities. At a minimum, permittees must comply with state and local public notice and participation requirements. Publishing the NOI, SWMP, and Annual Reports for public review and comment is strongly encouraged.

Illicit Discharge Detection and Elimination—Discharges from MS4 systems should primarily be comprised of storm water. Some non-storm water discharges may be allowed such as flows from fire fighting activities, potable water line flushings, routine street and building wash water (without detergents), and any discharges that are in compliance with a separate LPDES. Other discharges, such as untreated sanitary waste, paint, chemicals, debris, etc. are considered illicit discharges. Permittees must develop, implement, and enforce a program to identify illegal dumping to the storm sewer system (untreated sanitary waste, paint, chemicals, etc.). Elements of this program include, at a minimum, a storm sewer system map that identifies outfalls to water of the State, wet and dry weather screening of outfalls, and appropriate enforcement procedures and actions to ensure compliance with the storm water code, ordinance, or other regulatory mechanism.

Construction Site Storm Water Runoff Control—Permittees must develop ordinances or other regulatory mechanisms for managing storm water from activities that disturb > 1 acre of land. The program must include best management practices (BMPs) for construction site operators, procedures for site plan reviews, and inspection and enforcement procedures.

Post-Construction Storm Water Management in New Development and Redevelopment—Permittees are responsible for the operation and maintenance of control structures and long-term implementation of BMPs. Non-structural BMPs may include requirements to direct growth in identified areas, policies encouraging redevelopment in urban areas, or other measures that minimize the percentage of impervious area after development.

Pollution Prevention/Good Housekeeping for Municipal Operations— Permittees must implement measures to prevent or reduce pollutant runoff from municipal operations, such as maintenance barns and public works projects. A training component for employees at municipal facilities should be included as part of the program.

MS4 Permits and TMDLs

State and federal water quality regulations require LDEQ to develop Total Maximum Daily Loads (TMDLs) for impaired waters, which are identified in LDEQ's biennial 303(d) list. TMDLs effectively assign waste load allocations (WLA) and in some cases, more stringent permit limitations to dischargers in order to meet water quality standards. Per EPA requirements, WLAs must be assigned to MS4 permittees during TMDL development. Under the conditions in which the TMDL was developed, pollutant contributions from MS4s are most likely illicit (i.e. non-storm water) discharges and should be addressed through the appropriate BMPs. Specifically, MS4s must describe how the selected BMPs will minimize, to the maximum extent practicable, the discharge of the pollutants causing the impairment. Identifying and eliminating illicit discharges should address a large portion of the pollutant loading under the TMDL conditions.

Permittees must also implement a monitoring program to determine if the BMPs are adequate to meet the requirements of the TMDL (See Parts IV.H and V.A). Neither the general permit nor the TMDLs specify types of monitoring, frequencies, or which water quality parameters must be analyzed. The general permit provides the permittee the flexibility to select the most effective and practicable BMPs for the MS4 area and the appropriate types of monitoring to effectively evaluate the selected BMPs. Changes to the BMPs based on regular evaluations should be documented in the Storm Water Management Plan and annual reports. Permittees should be aware that monitoring does not necessarily require laboratory analyses of specific pollutants. Visual inspections of outfalls and ambient water samples (e.g. inspection of grab samples for solids, oil, foam, etc.) could be conducted to determine if BMPs and other controls are effective. Such monitoring methods are low-cost and would meet the requirements of the general permit and the TMDLs.

2019 LDEQ Municipal Storm Sewer System (MS4) Conference

This fall, the LDEQ will be hosting its first Municipal Storm Sewer System (MS4) Conference in Baton Rouge. The two-day event will be held on October 23-24, 2019 near the State Capitol at the Galvez Building in Baton Rouge, Louisiana. The conference will include updates on regulatory and permitting requirements, compliance issues, TMDL overview and modeling, presentations on notable MS4 programs in Louisiana, and other related topics. Everyone is welcome and registration is free. This conference will be an opportunity to learn and improve the MS4 program and network with other permittees, consultants, and the regulatory staff. Registration and additional information regarding the conference will be posted later on the LDEQ website.

Recommended Links

EPA MS4 Page: <https://www.epa.gov/npdes/stormwater-discharges-municipal-sources>

SWPPP for Construction Activities: <https://www.epa.gov/npdes/developing-stormwater-pollution-prevention-plan-swppp>

Model Ordinances: <https://www.epa.gov/nps/urban-runoff-model-ordinances-prevent-and-control-nonpoint-source-pollution>

EPA Storm Water Program: <https://www.epa.gov/npdes/npdes-stormwater-program>

LDEQ website: <https://deg.louisiana.gov/>