

**Background:** Polluted runoff is commonly transported to municipal separate storm sewer systems (MS4s) and ultimately discharged into local streams and lakes without treatment. The National Pollution Discharge Elimination System (NPDES) is the federal program by which discharges to streams and other surface water bodies, as well as groundwater, are regulated.

In 1990, Phase I of the NPDES storm water program was established under the Clean Water Act. This phase of NPDES permit coverage addresses storm water from: (1) medium and large municipal MS4s generally serving populations of 100,000 or greater; (2) construction activity disturbing five acres of land or more; and (3) ten categories of industrial activity.

The Phase II Rule is intended to improve waterways by reducing the quantity of pollutants that storm water picks up and carries into storm sewer systems during storm events. The Phase II program expands the Phase I program by requiring those small MS4s, located within urbanized areas, not already covered by the Phase I program and operators of small construction sites (operations that disturb equal to or greater than one and less than five acres of land), through the use of NPDES permits, to implement programs and practices to control polluted storm water runoff (Figure 1). MS4s located outside of urbanized areas can be required to comply with the NPDES Phase II rule if its discharges cause a negative impact on water quality.

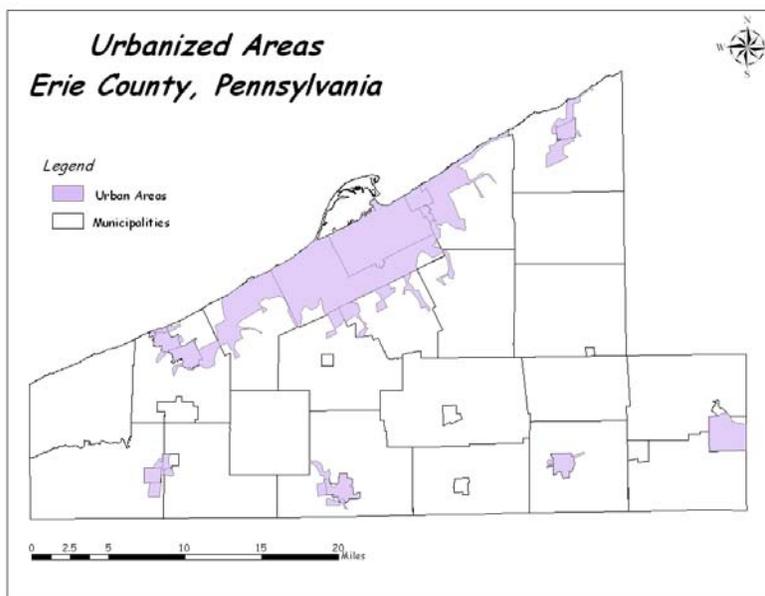


Figure 1. Urbanized Areas in Erie County Pennsylvania  
\*Based on data from U.S. Census Bureau\*

An **urbanized area** is an area of land (independent of county and municipal borders) that has a residential population of at least 50,000 and an overall population density of at least 1,000 people per square mile.

**MS4s** are a system of conveyances, including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains; owned or operated by a state or local jurisdiction, state departments of transportation, universities, local sewer districts, hospitals, military bases, associations, or other public body; used for collecting storm water; which is not a combined sewer.

Also, under the Phase II rule, operators of “light industrial activity” are required to provide evidence of no exposure. The intent of the no exposure provision is to provide facilities with industrial materials and activities that are entirely sheltered from storm water a simplified way of complying with the storm water permitting provisions of the Clean Water Act.

**Small MS4 Permitting and Requirements:** NPDES storm water permits are issued by an NPDES permitting authority. In Pennsylvania the authority is the Pennsylvania Department of Environmental Protection (DEP). Once a permit application is submitted by the operator of a regulated small MS4 and a permit is obtained, the conditions of the permit must be satisfied and periodic reports must be submitted on the status and effectiveness of the program.

Operators of regulated small MS4s are required to submit the following information in their Notice of Intent, which serves as application for the general permit or individual permit application:

- Best management practices (BMPs) are required for each of the six minimum control measures:
  - *Public education and outreach on storm water impacts* – develop and distribute educational materials related to the impacts of storm water runoff on water quality and conduct outreach to inform citizens of the issues.
  - *Public participation/involvement* – provide opportunities for citizens to become involved in the program development and implementation, including publicizing public hearings.
  - *Illicit discharge detection and elimination* – developing and implementing a plan to detect and eliminate illicit discharges to a storm sewer system (includes developing a system map and informing the community about hazards associated with illegal discharges and improper disposal of waste).
  - *Construction site storm water runoff control* – developing, implementing, and enforcing an erosion and sediment control program for construction activities that disturb one acre of land or more.
  - *Post-construction storm water management in new development/redevelopment* – developing, implementing, and enforcing a program to address discharges of post-construction storm water runoff from new development and redevelopment areas.
  - *Pollution prevention/good housekeeping for municipal operations* – developing and implementing a program with the goal of preventing or reducing pollutant runoff from municipal operations. The program must include municipal staff training on pollution prevention measures and techniques.

*\*Visit the EPA Web site: <http://cfpub.epa.gov/npdes/stormwater/menuofbmps/menu.cfm> for more information on Best Management Practices for Phase II\**

- Measurable goals for each minimum control measure (i.e, narrative or numeric standards used to gauge program effectiveness).
- Estimated months and years in which actions to implement each measure will be undertaken, including interim milestones and frequency.

- The person or persons responsible for implementing or coordinating the storm water program.

Phase II small MS4 operators are required to design their programs so that it reduces the discharge of pollutants to the maximum extent practicable, protects water quality, and satisfies the appropriate water quality requirements of the Clean Water Act. Once a permit is obtained, the conditions of the permit must be satisfied and periodic reports must be submitted on the status and effectiveness of the program.

The reports must include the following:

- The status of compliance with permit conditions, including an assessment of the appropriateness of the selected BMPs and progress toward achieving the selected measurable goals for each minimum measure.
- Results of any information collected and analyzed, including monitoring data, if any.
- A summary of the storm water activities planned for the next reporting cycle.
- A change in any identified BMPs or measurable goals for any minimum measure.
- Notice of relying on another governmental entity to satisfy some of the permit obligations (if applicable).



Figure 2. Small Construction Site

**Phase II Small Construction Site Permitting and Requirements:** The Phase II Final Rule also requires operators of Phase II small construction sites to obtain an NPDES permit and implement practices to minimize pollutant runoff. NPDES storm water permits are issued by an NPDES permitting authority. In Pennsylvania the review of small construction permits is commonly a joint effort between DEP and the County Conservation District.

Operators of small construction sites are required to submit a Notice of Intent, which includes general information and a certification that the activity will not impact endangered or threatened species, and a storm water pollution prevention plan (SWPPP) with appropriate BMPs to minimize the

discharge of pollutants from the site, including an Erosion and Sediment Control Plan (E&S) and Post Construction Storm water Plan (PCSM). A Notice of Termination must be submitted when final stabilization of the site has been achieved as defined in the permit or when another operator has assumed control of the site.

An **operator** is the party or parties that has:

- Operational control of construction project plans and specifications, including the ability to make modifications to those plans and specifications: or
- Day-to-day operational control of those activities that are necessary to ensure compliance with a SWPPP for the site or other permit conditions

In Erie County, Pennsylvania, the Erie County Conservation District is responsible for issuance of small construction permits. Development cannot begin until the operator's NPDES Phase II permit has been

approved. Also, municipalities cannot issue a building permit to an operator until the NPDES Phase II permit is approved.

**Light Industrial Activity Requirements:** The Phase II Rule expands the eligibility and responsibilities for facilities claiming no exposure. Under the original no-exposure provision, a light industry operator was expected to independently determine if there was “exposure” of industrial materials and activities to storm water and, if not, the operator was not required to submit a permit application.

*No exposure* means all industrial materials and activities are protected by a storm resistant shelter to prevent exposure to rain, snow, snowmelt, and/or runoff. Industrial materials or activities include, but are not limited to, material handling equipment or activities, industrial machinery, raw materials, intermediate products, by-products, final products, or waste products.

Under Phase II, an operator seeking to qualify for the revised conditional no-exposure exclusion, must: submit written certification that the facility meets the definition of “no exposure” to the DEP once every five years; submit a copy, upon request, of the municipality in which the facility is located; and allow the DEP or, if discharging into a municipal separate storm sewer system, the operator of the system, to inspect the facility and make such inspection reports publicly available upon request.

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