

HISTORY OF NPDES STORM WATER PHASE II MANAGEMENT PROGRAM

Increased public knowledge and concern about water quality led to the formation of the Federal Water Pollution Control Act Amendments of 1972. In 1977, these acts were amended and are now commonly known as the Clean Water Act (CWA). The CWA established a baseline for regulating point source effluents through the creation of the National Pollutant Discharge Elimination System (NPDES). This permit system controls water quality by regulating point sources that discharge pollutants into waters of the United States. Originally, the NPDES program focused on implementing pollution control programs controlling industrial wastewater or municipal sewage. These CWA enabled programs, consequently made it unlawful to discharge any pollutant from a point source into waters of the United States, unless a NPDES permit was obtained under the proper provisions.

Throughout the same period, subsequent enactments modified some of the earlier CWA provisions. One of these enactments established the Water Quality Act (WQA), which provided a legal framework mandating EPA to implement a phased program for the regulation of municipal and industrial storm water discharge. Storm water discharges are considered point sources and require coverage by and NPDES permit.

In 1990, Phase I of the EPA's storm water program was promulgated. This program relied on NPDES permit coverage to regulate the runoff from medium to large municipal separate storm sewer systems (MS4), generally any municipality over 100,000 people. Phase I also regulated some construction and industrial activities.

The Storm Water Phase II Final Rule, promulgated in 1999, is the second step at combating municipal storm water discharge. The Phase II program regulates additional MS4 operators that are located within an urbanized area, as defined by the United States Census Bureau. Phase II also mandates NPDES permits to implement programs and practices to control polluted storm water runoff.

The NPDES Storm Water Phase II permit program is administered by and EPA appointed state agency. The EPA has appointed the Kentucky Division of Water (KDOW), of the Kentucky Department of Natural Resources and Environmental Protection Cabinet, as the delegated permitting authority. Thus, the designated MS4s within the state of Kentucky had to submit to KDOW for a Phase II permit coverage by March 10, 2003.

Storm water pollution degrades surface waters making them unsafe for drinking, fishing, swimming, and other activities. According to a 1996 Nation Water Quality Inventory, approximately 40 percent of surveyed waterbodies are impaired and do not meet water quality standards. Storm water discharges from MS4s in urbanized areas are of a particular concern to these impaired waterbodies, since there is a high concentration of pollutants found in these discharges. Storm water discharges are produced from land runoff and impervious areas such as paved streets, parking lots, and building rooftops during rainfall and snow events, and often contain pollutants in quantities that could

adversely affect water quality. Frequent pollutants include pesticides, fertilizers, oils, salt, litter, and other debris and sediment.

In addition, uncontrolled runoff from construction activity is an impairment to water quality. Polluted storm water runoff from construction sites often flow to MS4s (Municipal Separate Storm Sewer System), where it is discharged into the local rivers and streams. Sediment is the leading pollutant concern from construction site storm water runoff. Typically, sediment runoff from construction sites is 10 to 20 times greater than those of agricultural lands and 1,000 to 2,000 times greater than those of forestlands. Thus, during a short time period construction site storm water runoff can deposit more sediment than would naturally be deposited over several decades. This excessive siltation can negatively impact waterways, necessitating dredging and spoiling the natural aquatic habitat. Furthermore, other pollutants can be discharged from the construction sites that further impair the physical, chemical, and biological characteristics of the Country's waterways. These pollutants include solid and sanitary wastes, phosphorus and nitrogen from fertilizers, pesticides, oil and grease, and construction chemicals and debris.

Since its introduction in 1972, the NPDES permit program is responsible for significant improvements to the Nation's water quality. The Storm Water Phase II permit program will continue this tradition, primarily by controlling storm water discharges through the development of a storm water management program and the use of Best Management Practices (BMP). The regulated small MS4s storm water management program must be designed to reduce the discharge of pollutants from their MS4, to the maximum extent possible, to protect water quality and to satisfy the requirements set forth by the CWA.

The storm water management program must include six minimum control measures as set forth by 40 CFR 122.34. This regulation, codified in 1999, stipulates that the six minimum controls include:

1. Public Education and Outreach
2. Public Involvement and Participation
3. Illicit Discharge Detection and Elimination
4. Construction Site Stormwater Runoff Control
5. Post-Construction Stormwater Management, and Pollution Prevention
6. Good House keeping for Municipal Operations

Furthermore, the regulated small MS4 must identify the selected Best Management Practices (BMP) and measurable goals for each minimum control in the permit application. Following the initial permit submittal, the MS4 must report annually on the evaluation and assessment of the chosen BMPs.

The Storm Water Phase II permit program will promote watershed planning and develop a storm water management program on a watershed basis to work cohesively with the Storm Water Phase I permit program. Therefore, this comprehensive approach, derived from the federally enforceable NPDES program, will allow for the continued improvement of the Nation's water quality.