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# BACKGROUND AND HISTORY OF STORMWATER REGULATIONS

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#### I. INTRODUCTION

The history of federal and state regulation of stormwater discharges includes debate, refinements and challenges. This history is not surprising when one considers the universe of sources of stormwater discharges that are potentially subject to regulation. "Stormwater," as defined by the Clean Water Act regulations, includes "stormwater runoff, snow melt runoff, and surface runoff and drainage." 40 C.F.R. §122.26(b)(13). During rain or snow falls, water run off from urban streets, parking lots and construction sites can carry oil, grease, sediment and other pollutants, either directly or indirectly through storm drains, into surface waters. In time, it became evident that these more diffuse sources of water pollution were major causes of water quality problems. Stormwater is one of the leading causes of pollution to our nation's waters today.

Over the years, both Congress and the U.S. EPA have addressed the question of how should this broad universe of potential discharges be regulated by attempting to adequately protect against discharges for which stormwater controls are reasonable and to regulate as appropriate those discharges for which a more streamlined approach to regulation makes sense.

The history of stormwater regulation begins in 1972 with the passage of the Clean Water Act. Subject to some exceptions, the Clean Water Act generally prohibited the discharge of any pollutant to navigable waters from a point source unless the discharge was authorized by a National Pollution Discharge Elimination System ("NPDES") permit. In 1973, the U.S. EPA adopted regulations that generally exempted stormwater dischargers from permitting requirements except where their discharges were identified as significant contributors to water pollution. See 40 C.F.R. § 125.4 (1975). The limited scope of this initial rule addressed only those major manufacturing facilities with discharges that included the potential for contaminated stormwater runoff. As would prove to be the case with each significant regulatory step to regulate stormwater, the new federal regulations were successfully challenged in court as too limited in scope. This lead to a new rule, issued by the U.S. EPA in 1976, that created general permits for separate storm sewers in urban areas. Under the 1976 rule, only a notice of intent to be covered by the general permit was required. However, another court challenge led to further revisions of the stormwater rule in 1979 and 1980. This version of the rule required individual permit applications from all stormwater dischargers. The series of court battles among industry groups, municipalities, environmentalists, and others, along with various stormwater rule revisions, continued through most of the 1980's until the passage of the federal Water Quality Act of 1987.

<sup>&</sup>lt;sup>1</sup> See *Natural Resourced Defense Council, In. v. Costle*, 568 F.2d 1369, 1377 (D.C. Cir. 1977) ("the EPA Administrator does not have authority to exempt categories of point sources from the permit requirements of § 402 [33 U.S.C. § 1342].")

# II. 1987 STORMWATER AMENDMENTS TO THE CLEAN WATER ACT - THE NATIONAL STORMWATER PERMIT PROGRAM

The Water Quality Act of 1987 provides the framework for the current regulations. In addition to the limited scope of stormwater discharges for which permits had been issued been issued prior to February 4, 1987, it required for the first time stormwater discharge permits from a wide variety of previously exempted activities, including discharges "associated with industrial activity," discharges from a "municipal separate sewer system serving a population of 100,000 or more, and discharges for which the U.S. EPA determines that stormwater discharges are contributing to a water quality standard violation or is otherwise a significant contributor of pollutants to navigable waters. 33 U.S.C. § 1342(p)(2)(A) -(E). The 1987 Stormwater Amendments created a structure encompassing different conceptual classifications of stormwater that might be contaminated and established different methodologies, including various types of discharge permits, to address each classification.

On October 31, 1990, the U.S. EPA issued the stormwater rule based on the 1987 Stormwater Amendments and they became effective on December 17, 1990. 55 Fed. Reg. 47,990 (Nov. 16, 1990). The classifications of stormwater systems subject to regulation included combined sewer overflows (sewer systems in which both sanitary sewage and industrial process wastewater are mixed with rainwater and land runoff, primarily found in older urban areas); municipal separate stormwater systems (storm sewer systems owned or operated by municipalities that receive only stormwater runoff); separate stormwater systems (storm sewer systems that serve industrial facilities and were historically subject to or part of the industry's NPDES permit); and non-point source runoff (all runoff that is not discharged to surface waters via a discrete pipe or conduit). In the 1987 Stormwater Amendments, Congress addressed generally the proper method of regulation for each of these types of stormwater discharges. It was left to the U.S. EPA to implement the stormwater program to accomplish those objectives. The U.S. EPA did so by segregating the classes of stormwater dischargers. The stormwater regulations specified two types of stormwater permits: municipal and industrial.

## A. Phase I Municipal Separate Storm Sewer Permits

Under Phase I of the U.S. EPA's National Stormwater Permit Program, and as specified in §402(p)(3)(B) of the Clean Water Act, municipal separate storm sewer systems were required to reduce the pollutants in their stormwater discharges "to the maximum extent practicable." This could be accomplished through the use of management practices, control techniques, design and engineering methods and other appropriate approaches. Municipal systems also had to prohibit non-stormwater discharges into their separate storm sewer systems. Municipal discharge permits also included counties. Forty-seven counties that had urban characteristics were included on the list of municipalities that had to submit municipal stormwater permit applications. Under Phase I, only municipal discharges from municipal separate stormwater systems serving populations of more than 100,000 were regulated. 33 U.S.C. §1342(p). There were two types of municipal permits created: one for large municipalities with a populations greater than or equal to 250,000 and another for medium municipalities with a population between 100,000 and 250,000. However, the permit applications for both differed only in terms of the deadline for submittal, with the medium municipalities being given 6 months more to complete their initial application (to May 18, 1992 instead of November 18, 1991 for the large municipalities). Further, the U.S. EPA (or a State with delegated NPDES authority) had the

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power to designate additional municipal separate storm sewer systems to submit permit applications based on certain criteria, such as whether there was an interrelationship with other regulated municipal systems. Where necessary to control pollutants that may violate state water-quality standards, in the U.S. EPA's discretion, the requirements also included water quality-based controls. In Illinois, only the Metropolitan Wastewater Reclamation District of Greater Chicago, Peoria and Rockford were part of the Phase I municipal stormwater permitting program.

#### **B.** Phase I Industrial Permits

The 1990 stormwater rule defined industrial stormwater discharges to include any discharge from any conveyance used to collect and convey stormwater directly or indirectly to a navigable water and that is directly related to manufacturing, processing, or raw materials storage areas at an industrial facility. The term "stormwater discharges associated with industrial activity," defined in 40 C.F.R. §12.26(b)(14(i)-(xi), determined which industrial facilities are potentially subject to the NPDES permitting requirements of Phase I of the stormwater program. The definition includes eleven categories of industrial facilities. Even if these industrial facilities discharged to large and medium municipal separate stormwater systems that were also regulated under the Phase I rules, they were included in the stormwater permit program (although the industrial permit requirements do not apply if the discharge goes into a municipal combined sewer system).<sup>2</sup> The industries regulated include many of the standard industrial classification (SIC) categories, but also included hazardous waste facilities, landfills, recycling facilities in specified SIC codes, certain transportation facilities, sewage treatment plants and construction activities on property of 5 or more acres. However, certain of the categories (i.e., mineral industry, transportation and light industry) have special conditions or exceptions which may exclude a facility in these categories from the stormwater permitting requirements.

The comprehensive definition of a discharge "associated with industrial activity" covers a wide range of general industrial sites, including plant yards, material handling sites, refuse sites, tank farms, and areas of past industrial activities where significant materials (e.g. fertilizers, pesticides, fuels, solvent or detergents) remain and are exposed to stormwater. Stormwater discharges associated with wholesale, retail, commercial or service industries are not covered by the definition. Industrial dischargers are required to implement best available technology (BAT) and best conventional pollutant control technology (BCT) to control their stormwater discharges. BAT requires the maximum economically achievable pollution reduction and primarily applies to priority pollutants such as metals and organics. BCT, while similar to BAT, is applied primarily to conventional pollutants such as BOD, total suspended solids, pH and fecal coliform. Industrial dischargers were also required to include water quality-based controls where necessary.

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<sup>&</sup>lt;sup>2</sup> In addition to the industrial stormwater permit application requirements, the operators of stormwater discharges associated with industrial activity that flows through large and medium municipal separate storm sewer systems also are required to provide the municipal entity with certain additional information (e.g. facility name, contact person, discharge location, SIC number and any existing NPDES permit number) by May 15, 1991 or 180 days prior to commencing the discharge.

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Under the original 1990 rule, there were three types of stormwater permits available to industrial dischargers: general permits, group permits, and individual permits. However, the group permitting option expired on September 30, 1991 and only the general permit and individual permit options still exist.

#### 1. General Permits

A general permit is applicable to all users similarly situated. The general permit has standardized conditions for similar discharges in a specific industrial category, creating a uniform set of requirements for a given industry. They are generic permits that establish baseline standards for industries with relatively insignificant stormwater discharges, such as construction sites. States with delegated NPDES permitting authority, such as Illinois, can create their own general permits. Several have been created by the Illinois EPA and they are referred to be their respective general permit number (e.g. "ILR00" for discharges of stormwater from industrial property identified by Phase I of the U.S. EPA stormwater rule; "ILR10" for discharges of stormwater from construction sites of five acres or larger). An application form, which is a Notice of Intent ("NOI"), basically requires a preliminary identification of the industrial discharge status and activity to be covered by the general permit, is available from the Illinois EPA's Bureau of Water and is typically issued within a matter of weeks after a discharger submits the application. Applications for general permits for construction sites (Notice of Intent or NOI) must be filed at least two days prior to the start of construction. In addition, a Stormwater Pollution Prevention Plan (SWPPP) must be prepared before the NOI is filed.

The general permits expire on a five-year cycle. They have been reissued by Illinois EPA with generally only minor changes. The Illinois EPA determined that anyone covered under a pre-existing general permit will be covered under a new general permit unless notified to the contrary by the Agency. The general permits require a pollution prevention plan be filed within 180 days, an annual self-inspection to assure that the plan is working, as well as an annual report that must be filed with the Illinois EPA 60 days after the anniversary of the facility's notification of intent to be covered under the general permit. Those discharges who fail to file the annual report may be excluded from the general permit's coverage and required to file for an individual permit. Thus, it is important to remember to file the annual report.

#### 2. Individual Permits

By far the more time-consuming and difficult permit application is the individual stormwater discharge permit for an industrial facility. When a facility does not qualify for a general permit, then it must apply for an individual stormwater permit. This involves not only completing the notice of intent form described above for general permits but also a highly detailed NPDES-type application that requires extensive monitoring during stormwater events, identification of control strategies, listing of chemicals used at the facility, and related matters. The U.S. EPA estimated that it takes about 60 hours to complete an individual stormwater permit application. See U.S. EPA's Guidance Manual for the Preparation of NPDES Permit Application for Stormwater Discharges Associated With Industrial Activity (Apr. 1991) (EPA publication number 505/8-91-002).

#### III. PHASE II STORMWATER PROGRAM

The U.S. EPA finalized the long-delayed stormwater regulations Phase II Rule in December 1999. (64 Fed. Reg. 68843 (December 8, 1999). The Phase II rule requires controls on stormwater discharges from a broader sector of municipalities, industries and construction sites. The Phase II Rule requires construction sites that disturb between one and five acres of land to control stormwater runoff pollutants. Also, construction activities disturbing less than one acre require a permit if it is part of a larger common plan of development or sale disturbing a total of one acre or greater, or is individually designated for permit coverage by the NPDES permitting authority (in Illinois, that is the Illinois EPA). Thus, owners or operators of these regulated small construction sites must obtain an NPDES permit, by submitting a Notice of Intent or "NOI," and implement best management practices (BMPs) to minimize pollutant runoff. Upon completion of the construction, the owner or operator also submits a Notice of Termination ("NOT") to inform the NPDES permitting authority that the need for the stormwater permit was ended. Under the Phase II Rule, the deadline for developing general permits for small construction sites was December 8, 2002. Small construction sites had to be permitted under a construction general permit by March 10, 2003.

Phase II of the U.S. EPA's stormwater program also covers small municipal stormwater systems. (See 40 C.F.R. §122.34) These rules require NPDES permits, mostly general permits, for stormwater discharges from small municipalities, defined to include those in urbanized areas with populations less than 100,000. The U.S. EPA estimated that approximately 3500 municipalities will be covered by the Phase II rules. The Phase II rule requires the regulated communities to reduce pollutants in storm water to the "maximum extent practicable." However, how they do so is not determined by the traditional "command and control" measures that the U.S. EPA has used for years in regulating wastewater discharges from industrial dischargers. Instead, the Phase II program is characterized by more flexible and reasonable methods. However, it is also an unfunded federal mandate that local communities are required to find the means to include in their already strained budgets, such as through local taxes It is up to the local community whether to decide to tax sources of storm water runoff, including industrial, commercial and residential properties, and if so, whether to impose identical rate charges on each or justify different rates (e.g. per square foot of structures) based on the differing levels of pollutants contributed by commercial versus residential property. The U.S. EPA study in support of the 1999 final Phase II Rule shows that stormwater runoff from commercial entities was a larger concern than runoff from residential property.

Phase II municipalities have to develop a Stormwater Management Plan (SWMP) that includes six minimum control measures.<sup>3</sup> Many of these measures require more paperwork demands than they do any new construction projects. For example, the local community may need to adopt an ordinance that restricts impacted runoff into nearby surface waters. Maps need to be prepared showing where outfalls of the storm water system are located. Community education programs are to be developed to educate citizens how to help minimize the introduction of pollutants into the stormwater system (*e.g.*, by not dumping waste down the storm sewers by their homes).

<sup>&</sup>lt;sup>3</sup> The six minimum control measurements are: 1) public education and outreach; 2) public participation/involvement; 3) illicit discharge detection and elimination; 4) construction site runoff; 5) post-construction run-off and 6) pollution prevention/good housekeeping.

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The Phase II Final Rules require these small municipalities to implement the SWMP using best management practices ("BMPs") for the control of pollutants in stormwater runoff. Municipalities have to identify the BMPs they will use and set measurement goals for these BMPs. For example, one type of BMP is to eliminate illicit connections to stormwater collection system. Ways of measuring this goal include conducting annual surveys of a certain percentage of the pipes and eliminating those illicit connections discovered. The deadline for such municipalities to apply for NPDES permit coverage was March 10, 2003. The U.S. EPA attempted to make the Phase II program both implementable and reasonable in order to avoid some of the problems involved with implementing the Phase I rules. The U.S. EPA will allow Phase II municipalities 5 years to implement such BMPs.

On May 30, 2003, IEPA issued new general permits for stormwater discharges from both industrial activities and the new Phase II rules construction site activities for one or more acres. The general permits were set to expire at the end of May and the new permits needed to be adopted by May 31, 2003. These permits are effective June 1, 2003 and will expire May 31, 2008. There are significant changes to the permits.

For both the Industrial Activities and Construction Site Activities General Permits, a new requirement prohibits coverage of industrial activities stormwater discharges to ORWs pursuant to the revised antidegradation rule at 35 Ill.Adm.Code §302.105(d)(6). Such discharges must be covered by individual permits so that the IEPA may conduct the required antidegradation review. Other significant new provisions in these General Permits include an express prohibition of violations of applicable water quality standards, requirements for design levels for Stormwater Pollution Prevention Plans (SWPPP), including absolute minimum acceptable design level for direct discharges to impaired waters, and a requirement to the notify the IEPA when the SWPPP is completed. For the Construction Site Activities General Permit, new provisions include a modification to the automatic coverage period from two days to 30 days from the postmark date of submission of the NOI. For Industrial Activities General Permits, the submission of a Notice of Intent (NOI) is required within 180 days of expiration of the existing general permit to continue coverage under the new general permit. The revised NOIs are available on the IEPA website at http://www.epa.state.il.us/water/permits/storm-water/general-permits.html.

## IV. Combined Sewer Overflow Control Strategy

In April, 1994, the U.S. EPA issued a Combined Sewer Overflow ("CSO") control strategy under which municipalities are required to take certain short-term and long-term steps to control CSOs. See 59 Fed.Reg. 18,688 (Apr. 19, 1994). The first deadline under the policy was on January 1, 1997, for the short-term controls. It required municipalities to implement minimum technology controls, commonly called the "nine minimum controls." The Illinois EPA incorporates these requirements into the NPDES permits of municipalities with CSO systems. CSO communities are also expected to develop long-term CSO control plans that will provide for full compliance with the Clean Water Act.