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Stormwater Permits: Status of EPA's Regulatory Program

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Summary

The Environmental Protection Agency (EPA) and states are implementing a federally mandated program for controlling stormwater discharges from industrial plants and municipalities. Large cities and most industry sources are subject to rules issued in 1990, and EPA issued permit rules to cover smaller cities and other industrial sources and construction sites in 1999. Because of the large number of affected sources and deadline changes that led to confusion, numerous questions have arisen about this program. Impacts and costs of the program's requirements, especially on cities, are a continuing concern. The 109th Congress enacted energy legislation (P.L. 109-58) that included a provision giving the oil and gas industry regulatory relief from some stormwater requirements. In May 2008, a federal court vacated an EPA rule implementing this provision; EPA has not indicated how it will respond to the ruling.

Background

Stormwater discharge systems are the pipes and sewer lines that carry rainwater or snow melt, but not domestic sanitary wastes, away from urban areas and commercial and industrial facilities. For many years the focus of the nation's water quality programs was on controlling pollutants associated with industrial *process* wastewaters and municipal sewage discharges. More diffuse sources (such as rainfall runoff from farm lands and urban runoff) and discharges believed to be relatively uncontaminated received less attention from policymakers and regulators.

However, as the traditional sources of water pollution have become better controlled through laws and regulations, attention has increasingly focused on remaining problems that continue to prevent attainment of current state and tribal water quality standards. Stormwater is one such source of pollution. For some time, it was generally believed that stormwater was largely clean, or uncontaminated. However, studies have demonstrated that this type of discharge — from rainfall and snow melt — carries with it large amounts of organic and toxic pollutants that can harm water quality, including oil and grease, heavy metals, pesticides, soil, and sediment. In urban areas, widespread residential and

commercial development results in the removal of vegetation cover and building of impervious structures such as roads and parking lots. These activities may change natural drainage patterns in an area, causing higher runoff flows during wet weather events. States report that stormwater discharges, including urban runoff, industrial activity, construction, and mining, are a significant source of surface water quality problems today.

Recognition of the water quality problems of stormwater runoff led Congress in 1987, when it last amended the Clean Water Act (CWA) comprehensively, to direct EPA to implement a specific permit program for stormwater discharges from industrial sources and municipalities (P.L. 100-4, Section 405). Even before the 1987 amendments, the issue of how to regulate stormwater discharges had a lengthy history of regulatory proposals, delays, legal challenges, and court decisions. Still, EPA had been unable to devise a comprehensive and flexible administrative process for regulating stormwater discharges before requirements were legislated in 1987.

EPA initially issued regulations to implement Congress' 1987 legislative mandate in 1990, proposing a series of phased requirements (55 *Federal Register* 47990, Nov. 16, 1990). Phase I applied to large dischargers: those associated with industrial activities, municipal separate storm sewer systems serving 100,000 people or more, and construction projects disturbing more than five acres. Smaller sources were slated for possible regulation under Phase II of the program (discussed below) and included cities and towns with separate storm sewer systems serving fewer than 100,000 people, commercial operations, and smaller construction projects. Stormwater requirements are one element of the comprehensive permit program, the National Pollutant Discharge Elimination System (NPDES), authorized in Section 402 of the act. Under the act, it is illegal to discharge pollutants from point sources (e.g., industrial plant pipes, sewage treatment plants, or storm sewers) into the nation's waters without an NPDES permit — permits are the fundamental compliance and enforcement mechanism of the law. EPA manages the NPDES stormwater program in five states (Alaska, Idaho, Massachusetts, New Hampshire, and New Mexico) and has delegated that authority to the remaining 45 states.

An estimated 123,000 industrial facilities (twice the number of industrial sources subject to the base NPDES program) and 220 municipalities and counties were covered by the 1990 permit rules for Phase I of the program. The initial procedures and deadlines were complex and were made more confusing by subsequent deadline extensions.[1]

The 1987 CWA amendments directed EPA (or qualified states) to issue stormwater permits not later than four years after enactment of that legislation. This would have required permits to be issued by February 4, 1991, but this did not occur, in part because EPA's 1990 rule was issued 21 months after the statutory deadline. Regulated sources must comply with stormwater permits within three years of their issuance.

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[1] Moreover, the 1990 regulations themselves were challenged by an environmental group, the Natural Resources Defense Council. In 1992, a federal appeals court ruled that EPA had failed to meet certain deadlines specified in the 1987 legislation and had been improper in exempting from regulation light industry and construction sites that affect less than five acres of land. *Natural Resources Defense Council v. EPA*, 966 F.2d 1292 (9th Cir. 1992).

Permits require dischargers, at a minimum, to implement pollution prevention plans, although remediation or additional treatment of runoff may also be required. Permits issued to municipalities require cities to develop, implement, and enforce a stormwater management program that addresses key areas such as public education, eliminating illicit connections to storm sewers, good housekeeping of municipal operations, and control of erosion and sedimentation from construction sites.

Industrial Facilities

Industries that manufacture, process, or store raw materials and which collect and convey stormwater associated with those activities were required to apply for an NPDES permit under the Phase I program. Several industries were specifically identified in EPA's 1990 regulation: mining operations; lumber and wood products; paper and allied products; printing, chemical products, paints, varnishes, and lacquers; stone, clay, glass, and concrete; metals; petroleum bulk terminals; hazardous waste treatment facilities; salvage operations; and power plants.

Industrial facilities had several options to comply with these permit requirements. Chiefly, they could obtain either individual or group permits. Applications for *individual* facility permits were due to be submitted by October 1, 1992. For *group* permits (covering multiple facilities with similar stormwater discharges), a two-step process applied: submitting a list of facilities to be covered by September 30, 1991, and submitting more detailed information, such as sampling data on 10% of facilities in the group and a description of a stormwater management program, by October 1, 1992.[2]

EPA also provided a third option for industrial facilities, through a *general* permit procedure. A general permit is one that covers discharges from more than one facility. Sources are only required to submit a Notice of Intent to be covered by a general permit. EPA expected that general stormwater permits will make for a less costly and burdensome permitting process through less extensive testing and control requirements, as well as minimal monitoring and reporting. For most sources, general permits require preparation of a pollution prevention plan, and compliance with the plan six months later. EPA has issued general permits for stormwater discharges associated with industrial and construction activities that disturb five acres or more, which apply in the five states where EPA is the permitting authority for the stormwater program. Most other states which have been delegated permitting responsibility by EPA are using similar general permits to reduce the administrative burden of the industrial stormwater permit program.

Since 1987, Congress has twice addressed the deadlines for stormwater permitting of industrial facilities. Congress first extended aspects of the deadlines for group applications by industrial facilities (P.L. 102-27, Dire Emergency Supplemental

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[2] The same deadlines also applied to industrial activities owned or operated by municipalities with a population of 250,000 or more. For industrial activities owned or operated by municipalities with populations of more than 100,000 but less than 250,000, the respective deadlines were May 18, 1992, and May 17, 1993. Certain government-owned or -operated activities (airports, powerplants, and uncontrolled sanitary landfills) also were subject to the May 1992 and May 1993 deadlines, even if the unit of government has a population of less than 100,000.

Appropriations Act of 1991), and in the 1991 Surface Transportation Act (P.L. 102-240), Congress clarified the deadlines applicable to industrial activities that are municipally owned or operated (such as airports or powerplants).

Municipalities

Phase I. Much of the controversy about stormwater requirements has focused on impacts on cities, not industrial sources. Municipalities with separate storm sewer systems (called MS4s) are subject to EPA's regulations under staggered deadlines based on the size of population served. In the 1990 Phase I regulations that apply to industrial activities, EPA also regulated discharges from medium-size and large cities (covering those with populations greater than 100,000 persons). The regulations specified deadlines for these cities to provide regulators with information on legal authority over stormwater discharges and to provide detailed information on source identification and monitoring data. EPA identified 173 cities and parts of 47 urban counties as covered by Phase I.

Cities of all sizes have complained about the costs and difficulties of complying with EPA's regulations, especially because there is no specific CWA grant or other type of assistance program to help pay for developing and implementing local stormwater programs. Many contend that cities already are burdened with numerous environmental compliance requirements and lack adequate resources to address stormwater controls in addition to drinking water, solid waste, wastewater treatment, and sludge disposal problems.

Phase II. The 1987 amendments exempted smaller cities (with populations of fewer than 100,000) from any stormwater permit requirements until October 1, 1992, and directed EPA to develop a suitable approach to address them under Phase II of the stormwater regulatory program. Because of problems in formulating a permitting strategy, EPA did not issue regulations by the 1992 deadline, nor did it meet the deadline in a one-year extension that Congress provided in P.L. 102-580. In 1995, EPA convened an advisory committee of stakeholders to assist in developing rules by March 1, 1999, a deadline set in a judicial consent order in *Natural Resources Defense Council v. EPA* (Civ. No. 95-0634 PFL (DDC, Apr. 6, 1995)) that required EPA to clarify the scope of coverage and control mechanisms for the Phase II program. Based in part on extensive discussions with the stakeholder advisory committee and with another court-approved extension, EPA issued a final Phase II rule October 29, 1999 (64 *Federal Register* 68721, Dec. 8, 1999). EPA estimated that the rule would make approximately 3,000 more river miles safe for boating annually and protect up to 500,000 people a year from illness due to swimming in contaminated waters.

The 1999 rule extended Phase I by requiring permits of two additional classes of dischargers on a nationwide basis: (1) operators of MS4s serving populations of less than 100,000 persons in urbanized areas as defined by the Bureau of the Census, and (2) operators of construction activities that disturb greater than 1 and less than 5 acres of land (larger construction sites are covered by the Phase I rules). EPA estimated that 5,040 small cities are covered by Phase II, along with about 110,200 currently unregulated construction starts per year.

Waivers from coverage are available both for small cities (those with fewer than 10,000 persons) and construction activities if the discharges are not causing water quality

impairment. At the same time, additional small municipal systems and construction sites may be brought into the stormwater program on a case-by-case basis, if permitting authorities determine that they are significant contributors to water pollution. Covered facilities were required by the 1999 rule to apply for NPDES permit coverage (most under a general rather than an individual permit) by March 2003 and implement six minimum management controls that effectively reduce or prevent pollutant discharges into receiving waters, such as pollution prevention and eliminating illicit discharge connections for municipal operations. The rule also provided that municipally-operated industrial activities not previously regulated were required to apply for permit coverage under the same schedule as other facilities covered by Phase II.

In the final Phase II rule, EPA attempted to balance statutory requirements for a nationally applicable program with sufficient administrative flexibility to focus on significant water quality impairments. For example, EPA encouraged permitting authorities to use general rather than individual permits for the majority of covered dischargers. The agency's decision to not include construction sites smaller than 1 acre was based on the belief that regulating the smallest of such sites would overwhelm the resources of permitting authorities and might not yield corresponding water quality benefits. Further, EPA modified the previous Phase I rule to exclude industrial facilities that have "no exposure" of their activities (such as raw materials) to stormwater, thus reducing coverage by an estimated 76,000 facilities that have no industrial stormwater discharges. These efforts to provide flexibility notwithstanding, many regulated entities continued to criticize the scope of the stormwater program, saying that EPA had greatly underestimated the cost of the Phase II rules (projected to be $297 million annually for small cities and $505 million annually for construction activities).

Many dischargers covered by the Phase I program have reached the end of their initial permit terms (NPDES permits are issued for five-year terms). For permit renewals, the agency is implementing a streamlined reapplication process that will not require the extensive information collection that characterized the first round of permitting.

Implementation of permits — i.e., translating permits into specific steps to manage stormwater runoff — is now the challenge for permit authorities and permittees. According to a Government Accountability Office report, local governments are primarily using best management practices (BMPs) to manage stormwater, rather than requiring that stormwater be transported to treatment facilities (*Water Quality, Better Data and Evaluation of Urban Runoff Programs Needed to Assess Effectiveness*, GAO-01-679, June 2001). BMPs include nonstructural measures to minimize contaminants getting into stormwater (e.g., street sweeping) and structural practices such as detention ponds to separate contaminants from stormwater. GAO criticized EPA for not establishing systematic efforts or measurable goals to evaluate the effectiveness of the program in reducing stormwater pollution or to determine its costs, which local governments have portrayed as high.

Congressional Interest

Prior to issuance of the final Phase II rule in 1999, Congress included language in EPA's FY2000 appropriation bill (P.L. 106-74) directing the agency not to issue the final rule before submitting a detailed impact analysis to Congress. To meet a court-ordered

deadline for the regulation, EPA released the report concurrently with the final rule. Legislation was introduced to exempt construction sites of less than 5 acres and certain above-ground drainage ditches from stormwater permitting requirements (S. 2139/H.R. 3625). At an October 1999 Senate hearing, EPA witnesses opposed the bill, saying that above-ground drainage ditches and small construction sites are significant sources of water pollution and thus should be subject to stormwater management requirements. No further action occurred.

In response to concerns about impacts of the Phase II program, the 107th Congress enacted legislation allowing states to use Section 319 grant funds, which are used for projects to manage nonpoint sources of water pollution (P.L. 107-303). This authority only applied to Section 319 funds in FY2003. Legislation to extend this authority beyond FY2003 was introduced in the 108th Congress, but was not enacted (S. 1716/H.R. 3528).

Oil and Gas Facilities. As the March 2003 Phase II deadline approached (affecting small municipalities and construction sites), EPA proposed a two-year extension of the rule for small oil and gas exploration and production facility construction sites to allow the agency to assess the rule's economic impact on that industry. EPA had initially assumed that most oil and gas facilities would be smaller than one acre in size and thus excluded from Phase II rules, but newer data indicated that up to 30,000 new sites per year would be of sizes subject to the rule. In March 2005 EPA extended the exemption until June 2006 for further study and said it would issue a specific rule for small oil and gas construction sites by that date. The postponement did not affect other industries, construction sites, or small cities covered by the 1999 rule. Under the CWA, the *operations* of facilities involved in oil and gas exploration and production generally are exempt from compliance with stormwater runoff regulations (so long as the runoff is uncontaminated by pollutants), but the *construction* of associated facilities is not. In the 109th Congress, omnibus energy legislation enacted in August 2005 (P.L. 109-58) included a provision addressing this issue. Section 323 amends the CWA to specifically include construction activities, regardless of size (including those previously covered by Phase I), in the oil and gas facilities covered by the law's general statutory exemption from stormwater rules. Its intention was to exempt from the CWA all uncontaminated stormwater discharges that occur while setting up drilling operations.

Oil and gas officials, who supported the provision, said that the existing EPA stormwater rules create time-consuming permitting requirements, even though the short construction period for drilling sites carries little potential for stormwater runoff pollution. Opponents argued that the provision did not belong in the energy legislation and that there is no evidence that construction at oil and gas sites causes less pollution than other construction activities, which are regulated under EPA's stormwater program. EPA promulgated a rule to implement Section 323 (71 *Federal Register* 33628, June 12, 2006). Some interest groups and Members of Congress criticized the rule, saying that EPA exceeded its authority by broadly defining the scope of contamination exempted by the rule to include stormwater discharges contaminated solely with sediment. In May 2008, a federal court held that the rule is arbitrary and capricious, and it vacated the rule (*NRDC v. EPA*, No. 06-73217, CA 9, May 23, 2008). In July, EPA petitioned the court to rehear the case, but the request was denied on November 3. EPA has not yet formally responded to the vacatur of the rule. Legislation to repeal Section 323 was introduced in the 109th Congress (H.R. 4541), but no further action occurred.