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Stormwater Permits: Status of EPA's Regulatory Program

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Summary

The Environmental Protection Agency (EPA) and states implement a federally mandated program for controlling stormwater discharges from industrial facilities and municipalities. Large cities and most industry sources are subject to rules issued in 1990 (Phase I rules), and EPA issued permit rules to cover smaller cities and other industrial sources and construction sites in 1999 (Phase II rules). 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 omnibus energy legislation (P.L. 109-58, the Energy Policy Act of 2005) that included a provision giving the oil and gas industry regulatory relief from some stormwater control requirements. In 2008, a federal court vacated an EPA rule implementing this provision. EPA intends to issue a revised rule that repeals the one that was vacated by the court and codifies the statutory exemption in P.L. 109-58, but the agency does not have a specific schedule for doing so. In the 111th Congress, the House passed a bill that included a provision that would repeal the exemption in P.L. 109-58, but the Senate took no action. Similar legislation has been introduced in the 114th Congress (H.R. 1460).

Congress often looks to federal agencies to lead or test new policy approaches, a fact reflected in legislation enacted in the 110th Congress. Section 438 of the Energy Independence and Security Act (P.L. 110-140, EISA) requires federal agencies to implement strict stormwater runoff requirements for development or redevelopment projects involving a federal facility in order to reduce stormwater runoff and associated pollutant loadings. EPA has issued technical guidance for federal agencies to use in meeting these requirements.

In 2009 the National Research Council issued a report calling for major changes to strengthen EPA's stormwater regulatory program, which it criticized as being inconsistent nationally and failing to adequately control all sources of stormwater discharge that contribute to waterbody impairment. In response, EPA began efforts to expand regulations and strengthen the current program with a revised rule. Agency officials said that the new rule would focus on stormwater discharges from newly developed and redeveloped, or post-construction, sites, such as subdivisions, roadways, industrial facilities, and commercial buildings or shopping centers. The rule was originally due to be proposed in 2011, but EPA missed that and several subsequent deadlines, due to analytic problems associated with developing the rule. In 2014, the agency announced that it would defer action on a national rule and instead will provide incentives, technical assistance, and other approaches for cities to address stormwater runoff themselves.

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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 and episodic discharges (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 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. Urbanization and the human alteration of landscapes and land uses that is associated with it have resulted in the degradation of conditions in downstream waterbodies. States report that stormwater discharges, including urban runoff, industrial activity, construction, and mining, are a significant source of surface water quality problems today. But control of stormwater discharges and other sources of wet weather pollution, including overflows from combined and separate sewer systems, is complicated because discharges generally are intermittent and are less amenable to “end of pipe” solutions than conventional industrial and municipal water pollution.

Recognition of the water quality problems of stormwater runoff led Congress in 1987, when it last comprehensively amended the Clean Water Act (CWA), to direct EPA to implement a specific permit program for stormwater discharges from industrial sources and municipalities (P.L. 100-4). 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. In that legislation, Congress established a phased and tiered approach to permitting of stormwater discharges that fundamentally redesigned the CWA's approach to stormwater discharges. Congress recognized that EPA's difficulties in addressing sources of stormwater stemmed in part from the large number of sources potentially subject to regulation, so the 1987 legislation adopted a procedure that would enable the major contributors of stormwater pollutants to be addressed first, and remaining stormwater discharges in later phases.

EPA initially issued regulations to implement Congress's legislative mandate in 1990, utilizing a series of phased requirements.¹ 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 5 acres. Smaller sources were slated for possible

¹ U.S. Environmental Protection Agency, “National Pollutant Discharge Elimination System Application Regulations for Storm Water Discharges,” 55 *Federal Register* 47990-48091, November 16, 1990.

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 four states (Idaho, Massachusetts, New Hampshire, and New Mexico), plus the District of Columbia and most U.S. territories, and has delegated that authority to the remaining 46 states and the Virgin Islands.

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.²

The 1987 CWA amendments directed delegated states (or EPA) 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.

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.

Prior to implementation of the stormwater regulatory program, the universe of NPDES permittees nationwide was less than 70,000 industrial and municipal facilities. The addition of stormwater permittees greatly expanded this regulatory program. EPA estimates that the total number of stormwater permittees at any one time exceeds half a million—thus, NPDES stormwater permittees outnumber wastewater permittees more than five-fold.

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 powerplants.

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

² 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 5 acres of land. *Natural Resources Defense Council v. EPA*, 966 F.2d 1292 (9th Cir. 1992).

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, 1992.³

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, thus making the large number of stormwater permittees more manageable. Sources are only required to submit a Notice of Intent to be covered by a general permit, rather than the detailed application for an individual 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 issued general permits for stormwater discharges associated with industrial and construction activities that disturb 5 acres or more, which apply in the four states where EPA is the permitting authority for the stormwater program. Using the EPA general permit as a model, most other states that have been delegated permitting responsibility use similar general permits to reduce the administrative burden of the industrial stormwater permit program.

Congress addressed the deadlines for stormwater permitting of industrial facilities twice. Congress first extended aspects of the deadlines for group applications by industrial facilities (P.L. 102-27, Dire Emergency Supplemental 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) were 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 Phase I regulations are primarily application requirements that identify components that must be addressed in permit applications. The rules require large and medium MS4s to develop a stormwater management program, track and oversee industries facilities that are regulated under the stormwater program, conduct monitoring, and submit periodic reports. 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.

³ 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.

Phase II

The 1987 CWA amendments exempted smaller cities (with populations of less 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 in 1999.⁴ 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 Phase II 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). Separate storm sewer systems such as those serving military bases, universities, large hospital or prison complexes, and highways are also included in the definition of small MS4. EPA estimated that 5,040 small cities are covered by Phase II, along with about 110,200 construction starts per year.⁵

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. Under the 1999 rule, covered facilities were required to apply for NPDES permit coverage by March 2003 (most under a general rather than an individual permit) and implement stormwater management programs that include 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

⁴ U.S. Environmental Protection Agency, "National Pollutant Discharge Elimination System—Regulations for Revision of the Water Pollution Control Program for Storm Water Discharges," 64 *Federal Register* 68721-68851, December 8, 1999.

⁵ Although precise numbers are not available, EPA now estimates that the number of regulated MS4s is about 7,000 (including 1,000 under Phase I and 6,000 under Phase II). The number of industrial permittees is estimated to be around 100,000. The construction site portion of the program each year covers about 200,000 permittees under Phase I (5 acres or greater) and another 200,000 under Phase II (1 to 5 acres). See National Research Council of the National Academy of Sciences, Water Science and Technology Board, *Urban Stormwater Management in the United States*, The National Academies Press, Washington, DC, 2009, p. 36.

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).

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. Where cities need to construct or install technology to control stormwater discharges, the principal source of financial assistance is the CWA's state revolving fund (SRF) loan program that is administered by states. However, because SRF assistance is not restricted to meeting just stormwater project needs, competition for available funds for all types of eligible projects is intense.⁶

Many municipal and industrial dischargers covered by the Phase I and Phase II programs 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 permitting authorities and permittees. According to a 2001 Government Accountability Office (GAO) report, local governments are primarily using best management practices (BMPs, sometimes called stormwater control measures, or SCMs) to prevent or slow stormwater from quickly reaching nearby waterbodies and degrading water quality, rather than requiring that stormwater be transported to treatment facilities.⁷ 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. In the 1999 rules, EPA set a goal of beginning to evaluate implementation of Phase II of the program in 2012.

In a 2007 report, GAO examined implementation of the stormwater regulatory program by municipalities.⁸ GAO found that implementation of both Phases I and II had been slow: nearly 11% of communities were not permitted as of 2006; and even in communities with permits, delays occurred due to litigation or other disputes. Thus, GAO reported that because many communities were still in the early stages of implementation at the time of the report, it was too

⁶ For additional information, see CRS Report 98-323, *Wastewater Treatment: Overview and Background*, by (name redacted) .

⁷ U.S. Government Accountability Office, *Water Quality, Better Data and Evaluation of Urban Runoff Programs Needed to Assess Effectiveness*, GAO-01-679, June 2001.

⁸ U.S. Government Accountability Office, *Clean Water, Further Implementation and Better Cost Data Needed to Determine Impact of EPA's Storm Water Program on Communities*, GAO-07-479, May 2007.

early to determine the overall program burden. While EPA's regulations provide flexibility, which could limit program burden, increased burden could result if communities are required by states or EPA to expand stormwater management activities or meet more stringent specific permit conditions in the future. GAO found that EPA is not collecting complete and consistent cost and other data, which hampers assessment of program burden.

The 1999 Phase II rules were challenged by environmental groups. The litigation resulted in a 2003 federal court ruling (*Environmental Defense Center v. EPA*, 344 F.3d 832 (9th Cir. 2003)). The Phase II rules allowed permitting authorities to issue general permits for MS4 stormwater discharges and required regulated MS4s to submit a Notice of Intent (NOI) to be covered by the general permit. The court found that the Phase II rules failed to require review of NOIs and failed to make NOIs available to the public or subject to public hearings and directed EPA to revise the rules to correct these procedural shortcomings. Following the court's ruling, EPA issued guidance but did not propose revised rules. In 2014, the environmental groups sued EPA for failing to follow the court's nearly 12-year-old ruling. Under a settlement agreement with the environmental plaintiffs, EPA agreed to issue final revised rules by November 17, 2016.

The agency issued revised MS4 rules on November 17.⁹ The new rule allows states to choose between two options for increasing scrutiny of the MS4s' compliance plans. It allows states and other authorities crafting general permits for small MS4s to either outline in the permit terms all compliance methods that are open to permittees, or set up a "two-step" process in which facilities that apply for coverage must add their compliance plans as enforceable permit terms, including a notice-and-comment process for each plan. According to EPA, the two-step general permit allows the permitting authority to establish some requirements in the general permit and others applicable to individual MS4s through a second proposal and public comment process. Most states reportedly were pleased that the final rule provides permitting authorities with flexibility, although a few states said that allowing states to choose the regulatory approach would be more time-intensive and expensive than the system under the previous MS4 rules. Environmentalists' responses to the new rule were mixed, with some supporting EPA's actions and saying that the revised rule would lead to tighter controls on MS4 permits, but others contending that the rule's flexibility would make oversight by the public more difficult.

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 Phase II rule.¹⁰ In the 106th Congress, legislation was introduced to exempt construction sites of less than 5 acres and certain above-ground drainage ditches from stormwater permitting requirements. At a 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.

⁹ A prepublication version of the *Federal Register* Notice for the rule is available at <https://www.epa.gov/npdes/npdes-stormwater-final-ms4-general-permit-remand-rule>.

¹⁰ U.S. Environmental Protection Agency, Office of Water, *Report to Congress on the Phase II Storm Water Regulations*, EPA 833-R-99-001, September 1999, http://www.epa.gov/npdes/pubs/ReptoCong_PhII_SWR.pdf.

In response to concerns about program impacts and costs, 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, for projects or activities related to developing and implementing a Phase II stormwater program (§301 of 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.

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 1987 amendments to the CWA, the *operations* of facilities involved in oil and gas exploration and production generally were exempted from compliance with stormwater runoff regulations (so long as the runoff is uncontaminated by pollutants), but the *construction* of associated facilities was not.

Omnibus energy legislation enacted in the 109th Congress (P.L. 109-58, the Energy Policy Act of 2005) included a provision addressing this issue. Section 323 amends the CWA to specifically include construction activities at *all* oil and gas development and production sites, regardless of size (including sites larger than 5 acres, previously covered by Phase I), in the law's general statutory exemption for oil and gas facilities 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 omnibus 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 in 2006.¹¹ The rule was criticized by some interest groups and Members of Congress who argued that EPA had exceeded its authority by broadly defining the scope of contamination that is exempted by the rule beyond the statutory language to also 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.¹² EPA petitioned the court to rehear the case, but the request was denied—thus, the exemption is no longer in effect. At the time, EPA said that it intends to issue a revised rule that would remove the 2006 rule from the Code of Federal Regulations consistent with the court vacatur and codify the

¹¹ U.S. Environmental Protection Agency, "Amendments to the National Pollutant Discharges Elimination System (NPDES) Regulations for Storm Water Discharges Associated with Oil and Gas Exploration, Production, Processing, or Treatment Operations, or Transmission Facilities," 71 *Federal Register* 33628-33640, June 12, 2006.

¹² *Natural Resources Defense Council v. U.S. Environmental Protection Agency*, 526 F.3d 591 (9th Cir. 2008).

statutory exemption in P.L. 109-58, but the agency has not proposed any revisions or announced a specific schedule for doing.

Legislation to repeal Section 323 was introduced in the 109th Congress, but no further action occurred. In the 111th Congress, legislation to repeal the exemption passed the House (the provision was Section 728 of H.R. 3534, the Consolidated Land, Energy, and Aquatic Resources Act), but it was not enacted. In the 114th Congress, a bill has been introduced to repeal the oil and gas exemption enacted in P.L. 109-58. This bill, H.R. 1460, also would direct the Secretary of the Interior to conduct a study of stormwater runoff from oil and gas operations that may result in contamination. Similar legislation was introduced in the 113th Congress.

Stormwater Management at Federal Facilities

Congress often looks to federal agencies to lead or test new policy approaches, a fact reflected in legislation passed in 2007. Section 438 of P.L. 110-140, the Energy Independence and Security Act (EISA), requires federal agencies to implement strict stormwater runoff requirements for development or redevelopment projects involving a federal facility in order to reduce stormwater runoff and associated pollutant loadings to water resources. The legislation requires agencies to use site planning, construction, and other strategies to maintain or restore, to the maximum extent technically feasible, the predevelopment hydrology of the property.

To assist agencies in meeting these requirements, EPA issued technical guidance.¹³ The guidance provides two options for meeting the performance objective of preserving or restoring the hydrology of a site: retaining the 95th percentile rainfall event (i.e., managing rainfall on-site for storm events whose precipitation total is less than or equal to 95% of all storm events over a given period of record), or site-specific hydrologic analysis (i.e., using site-specific analysis to determine predevelopment runoff conditions). According to the guidance, using a performance-based approach rather than prescriptive requirements is intended to give site designers maximum flexibility in selecting appropriate control practices. Issuance of the guidance also fulfilled an element of an October 2009 executive order that formally assigned to EPA the responsibility to issue the Section 438 guidance, in coordination with other agencies, and to do so by December 5, 2009.¹⁴

In December 2010 Congress passed legislation requiring federal agencies to pay local fees for treating and managing stormwater runoff. The legislation amends CWA Section 313, which requires federal agencies to comply with all federal, state, and local water pollution control requirements as nongovernmental entities, including the payment of reasonable service charges. The issue emerged earlier in 2010 when several federal agencies announced that they would not pay stormwater fees assessed by the District of Columbia, claiming that the fees amounted to a tax that the agencies were not required to pay, because the waiver of sovereign immunity in Section 313 applies to fees and charges, but not a tax. The legislation was intended to clarify uncertainty over whether federal agencies must pay local stormwater fees. President Obama signed the legislation in January 2011 (P.L. 111-378).

¹³ U.S. Environmental Protection Agency, Office of Water, Technical Guidance on Implementing the Stormwater Runoff Requirements for Federal Projects Under Section 438 of the Energy Independence and Security Act, EPA 841-B-09-001, December 2009, http://www.epa.gov/owow/NPS/lid/section438/pdf/final_sec438_eisa.pdf.

¹⁴ Executive Order 13514, "Federal Leadership in Environmental Energy and Economic Performance," 71 *Federal Register* 52117-52127, October 8, 2009.

A continuing aspect of the issue of interest in a few locations is the scope of P.L. 111-378 and whether it requires the government to pay local stormwater fees retroactively. After the Bonneville Power Administration objected to paying retroactive stormwater fees imposed by two Washington localities following passage of the federal facility amendment, the matter ended up in federal court. The government took the position in the litigation that the legislative change amounted to a redefinition of “service charges,” instead of a clarification of Congress’s original intent, and would only apply prospectively. In 2012, a federal district court rejected the government’s position and held that the CWA amendment was merely a clarification of the statute and thus is entitled to retroactive effect.¹⁵ The federal government did not appeal this ruling. A similar case in Georgia was dismissed following a settlement agreement between the parties, but the settlement did not resolve lingering questions whether stormwater charges are fees for “reasonable services provided” or taxes, an issue of concern more broadly than just regarding government facilities.

EPA’s Stormwater Rulemaking

In 2006 EPA requested the National Research Council of the National Academy of Sciences (NRC) to conduct a review of the existing stormwater regulatory program. The resulting report, issued in 2009, called for major changes to EPA’s stormwater control program that would focus on the flow volume of stormwater runoff instead of just its pollutant load. The committee observed that—

stormwater discharges would ideally be regulated through direct controls on land use, strict limits on both the quantity and quality of stormwater runoff into surface waters, and rigorous monitoring of adjacent waterbodies to ensure that they are not degraded by stormwater discharge.... Presently, however, the regulation of stormwater is hampered by its association with a statute that focuses primarily on specific pollutants and ignores the volume of discharges.¹⁶

The NRC report recommended that EPA adopt a watershed-based permitting system encompassing all discharges—stormwater and wastewater—that could affect waterways in a particular drainage basin, rather than individual permits that do not account for cumulative conditions from multiple sources in the same watershed. Under the proposed watershed permitting strategy, responsibility to implement watershed-based permits and control all types of municipal, industrial, and construction stormwater discharges would reside with MS4 permittees. The report criticized EPA’s current approach, which leaves much discretion to regulated entities to set their own standards through stormwater management plans and to self-monitor. As a result, enforcement is difficult and variable, and information to assess the water quality benefits of the regulatory program is limited. The report also noted that adequate resources, including new levels of public funds, will likely be required to operate a more comprehensive and effective stormwater permitting program.

Subsequently, EPA initiated information-gathering and public dialogue activities as a prelude to possible regulatory changes that would respond to the NRC’s criticism of inconsistency in stormwater requirements nationally and embrace the report’s recommendation to adequately control all sources of stormwater discharge that contribute to waterbody impairment. EPA proposed to collect data from MS4s, states, and industry entities involved in developing or redeveloping sites on the scope of the current regulatory program and management practices, as

¹⁵ *United States v. Renton*, W.D. Wash., No. C11-1156JLR, May 25, 2012.

¹⁶ *Supra* note 5, p. 3.

well as information on control, pollution prevention technologies, and BMPs applied to stormwater discharges from newly developed and redeveloped sites.¹⁷

In response to the NRC report, EPA began work to develop a rule to revise the existing stormwater regulatory program. The rule also followed a 2010 settlement agreement between EPA and environmental litigants, which called for EPA to revise existing rules “to expand the universe of regulated stormwater discharges and to control, at a minimum, stormwater discharges from newly developed and redeveloped sites.”¹⁸ In the settlement, EPA committed to consider supplemental provisions as part of the national rule that would apply only to the Chesapeake Bay watershed, a region where municipal stormwater discharges are a significant cause of water quality impairment and are one of the only sources of pollutants with increasing loads to the Bay and its tributaries.

In early 2010 EPA held a series of listening sessions across the country as part of a process seeking public comments on potential considerations for regulatory changes.¹⁹ The agency also sent survey questionnaires to property owners and developers, municipal sewer system authorities, state regulators, and EPA regional offices to obtain their input. Some industry groups reportedly criticized possible expansion of the current program, saying that EPA’s authority to regulate stormwater does not extend to regulation of post-construction discharges. Some states also said that EPA lacks the technical knowledge to regulate stormwater across the nation, while states with comprehensive regulations, such as Florida and Maryland, demonstrate that regulation is best done at the state and local level, because of locational differences in stormwater discharges. EPA officials noted that a number of states have developed their own stormwater management programs, particularly in the Northeast, where lawsuits have pushed regulators, and also in some high-precipitation states in the Northwest. A number of commenters urged EPA to ensure that performance standards designed to reduce storm runoff be flexible so that communities can create requirements appropriate to their stormwater needs. Cost is a key issue raised by some states and municipalities concerned about the possibility of mandatory retrofit requirements that would impose a significant economic burden on cities.²⁰ Some state and local government representatives—while they concerned about details of a rule—believed that a national rule would provide needed uniformity and consistency in stormwater programs across the nation.

During efforts to develop a national rule, EPA explored regulatory options that would strengthen the regulatory program by establishing specific post-construction requirements for stormwater discharges from new development and redevelopment, which currently are not regulated. While MS4s are required to address stormwater discharges from new development and redevelopment in their management plans, existing rules do not include specific management practices or standards to be implemented. Other options that EPA considered included expanding the area defined as MS4s to include rapidly developing areas, devising a single set of consistent regulations for all MS4s, and requiring MS4s to address stormwater discharges in areas of existing development through retrofit practices. EPA officials said that the rule would focus on

¹⁷ U.S. Environmental Protection Agency, “Agency Information Collection Activities; Proposed Collection; Comment Request; Stormwater Management Including Discharges from Newly Developed and Redeveloped Sites; EPA ICR No. 2366.01, OMB Control No. 2040-NEW,” 74 *Federal Register* 56191-56193, October 30, 2009.

¹⁸ *Fowler v. EPA*, D.D.C. No. 1:09-cv-5, May 11, 2010, pp. 18-19.

¹⁹ U.S. Environmental Protection Agency, “Stakeholder Input; Stormwater Management Including Discharges from New Development and Redevelopment,” 74 *Federal Register* 68617-68622, December 28, 2009.

²⁰ Examples of urban retrofits include breaking up concrete and installing stones, thereby replacing an impermeable surface with a permeable one that will absorb runoff; and adding vegetation and trees to parking lots.

stormwater discharges from developed, or post-construction, sites, such as subdivisions, roadways, industrial facilities, and commercial buildings or shopping centers, and to seek to ensure that even after development projects are completed, runoff levels from sites are equivalent to pre-construction hydrology. The proposal, referred to as the “post-construction rule,” likely would set a first-time stormwater retention performance standard to limit runoff that would otherwise enter an MS4 system. By retaining a portion of rainfall on-site, the discharge of pollutants for that volume is prevented from entering the sewer system. Requirements in the post-construction rule, once finalized, would be incorporated into MS4 permits as permits come up for renewal.

The stormwater rulemaking drew some interest from Members of Congress. In 2013, Republican members of the Senate Environment and Public Works Committee urged EPA to suspend work on the rulemaking until the agency could seek meaningful input from small businesses and provide a report to Congress on the necessity for new stormwater regulations.²¹

Under the 2010 settlement with environmentalists, EPA was initially due to propose a national rule by September 2011 and complete the rule in 2014. Subsequently, the deadlines were renegotiated several times. Under the last deadline, EPA was to propose regulations by June 17, 2013, but EPA missed that deadline, and on June 18, the environmental plaintiffs notified the agency that it was in breach of the legal settlement. At that point, EPA and the plaintiffs had reached a legal impasse; EPA reportedly continued to work on the rule, while the environmental groups considered further legal action. Finalizing a rule with national application was said to be complicated by a number of analytic issues, particularly how to calculate costs and benefits of the proposal and how to incorporate flexibility, such as possibly including lengthy implementation plans for retrofit projects and allowing states with equivalent stormwater programs to regulate in lieu of EPA.

In mid-March 2014, EPA announced that it would defer action on the post-construction stormwater rule and instead will provide incentives, technical assistance, and other approaches for cities to address stormwater runoff themselves. In particular, the agency said that it will leverage existing requirements to strengthen municipal stormwater permits and will continue to promote green infrastructure as an integral part of stormwater management.²²

Although EPA discontinued development of a national stormwater rule, the agency continues to pursue some of the ideas that the rule had been expected to incorporate, such as emphasizing on-site retention of stormwater at construction sites or requiring green infrastructure, when individual MS4 permits come up for renewal. These concepts are reflected, for example, in the MS4 permit for Washington DC, issued by EPA in 2013, and EPA's 2014 proposed MS4 general permit for Massachusetts; both were crafted by EPA, which is the NPDES permitting authority in DC and Massachusetts. In the majority of states, permitting authority has been delegated to states (see page 2). In those cases, environmental groups are reportedly pursuing a permit-by-permit approach of encouraging states to strengthen the terms of new and reissued MS4 permits.

²¹ Letter from Senator David Vitter et al., Ranking Member, Senate Committee on Environment and Public Works, to Nancy K. Stoner, Acting Assistant Administrator, U.S. EPA, May 20, 2013, on file with author.

²² For additional information, see CRS Report R43131, *Green Infrastructure and Issues in Managing Urban Stormwater*, by (name redacted) .

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