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When It Rains It Pours: Past, Present, and Future Regulation of Wet Weather Discharges

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Managing and controlling stormwater and other "wet weather" discharges[1] presents unique challenges, far different from the management and control of industrial and municipal wastewater streams. Wet weather discharges are periodic and unpredictable. They can contain varying concentrations and types of pollutants. The wet weather discharger can rarely know with any certainty when or how much water will need to be managed. The source of pollutants in these weather-related discharges is often difficult to discern, and sampling wet weather discharges is a challenge. In contrast, process and sanitary waste streams tend to be more consistent and predictable. The types and concentrations of pollutants generally remain the same, and when changes do occur, they are typically knowable in advance; the source of those pollutants is easily discernable; the timing and quantity of flows is foreseeable; and it is a relatively simple task to develop a sampling program. In light of these distinctions, it is appropriate that the requirements for managing, treating, and controlling wet weather discharges are different from those applicable to process and sanitary waste streams.

Both the U.S. Environmental Protection Agency (EPA) and the Clean Water Act (CWA)[2] recognize these differences. When first faced with the dual challenge of dealing with stormwater and process/sanitary discharges in the 1970s, EPA promptly turned its attention to the more pressing problems posed by the latter and attempted to exempt stormwater discharges from any requirements under the CWA. The U.S. Court of Appeals for the District of Columbia (D.C.) Circuit found this exemption to be inconsistent with the mandatory terms of the CWA, which requires EPA to issue permits for *all* discharges of pollutants. EPA struggled for many years to develop a workable approach to stormwater permitting in light of the logistical nightmare of having to permit hundreds of thousands of minor and periodic discharges while still attempting to achieve the CWA's ambitious deadlines for developing and implementing technology-based effluent standards and achieving the water quality goals of the Act. In 1987, the U.S. Congress stepped in and enacted new provisions specifically addressing stormwater discharges. Even the deadlines in the 1987 Amendments, however, had to be extended, as EPA belatedly developed its new stormwater program. While this program has matured, legal and technical issues regarding the control of stormwater remain. Moreover, as the novelty of the stormwater program has passed, EPA and the states are turning their attention to the regulation of other wet weather discharges and increasing enforcement against industrial, construction, and municipal stormwater dischargers.

This Article examines the regulation of wet weather discharges, including regulated stormwater discharges, combined sewer overflows (CSOs), and concentrated animal feeding operations (CAFOs). It first reviews the history of the stormwater program under the CWA, from EPA's initial failed attempts at grappling with this issue in the 1970s and 1980s, to the development and implementation of control requirements for industrial and large municipal discharges in the 1990s, to the maturation of the program over the last several years. We then examine several issues of current interest. We first explore the extent to which the CWA distinguishes between stormwater discharges from industrial operations and stormwater discharges from municipal separate storm sewers (or, as they are commonly called, MS4s). We examine whether and how water quality-based limits apply to stormwater discharges, including the relationship between the stormwater control program and the CWA's program for "impaired" waters (the total maximum daily load (TMDL) program). Next, we review the regulation of other wet weather discharges. We conclude with a look to the future of wet weather controls.

The Regulation of Stormwater Discharges Under the CWA

The 1972 Amendments to the CWA

The modern framework for controlling water pollution and improving water quality was established with the 1972 Amendments to the CWA. Before the 1972 Act, control efforts focused on establishing water quality standards (WQS) and then setting plans to attain those standards.[3] Although states had made significant progress in establishing WQS by the early 1970s, working backwards from broadly applicable standards to establish specific limits for individual dischargers proved extremely difficult. Frustrated with the progress achieved under this approach, in 1972 Congress adopted a sharply different effort—one focused on deciding what reductions in pollutant discharges could be achieved through engineering controls and then imposing these technology-based restrictions on individual dischargers through a national permitting system.[4] WQS took a back

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1. As used in this Article, the term "wet weather discharges" is meant to include stormwater discharges, combined sewer overflows (CSOs), sanitary sewer overflows (SSOs), concentrated animal feeding operations (CAFOs), and weather-related "discharges" from nonpoint sources.
2. 33 U.S.C. §§1251-1387, ELR Stat. FWPCA §§101-607.
3. *See, e.g.*, Water Quality Act of 1965, Pub. L. No. 89-234, 79 Stat. 103 (1965).
4. *See* Federal Water Pollution Control Act Amendments of 1972, Pub. L. No. 92-500, 86 Stat. 894 (1972).

seat to establishing technology-based effluent standards applicable to groups of "point sources" and jump-starting the permit program. The Act created an aggressive schedule for attaining these goals, but when that schedule was not met (and new issues arose), Congress extended the deadlines and expanded the types of standards required to be achieved in the 1977 Amendments to the CWA.[5]

The 1972 Act established the national pollutant discharge elimination system (NPDES), under which all "discharges"[6] of "pollutants"[7] from "point sources" are required to obtain permits authorizing such discharges.[8] The term "point source" is defined broadly to mean "any discernable, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock . . . ."[9]

Under the NPDES, each discharger must apply for a permit, submitting information concerning its facility and discharges to the permitting authority.[10] In most instances, states are responsible for issuing permits, but EPA remains responsible in certain jurisdictions. The permitting authority will review the information and then propose permit terms, including effluent limits and other requirements with which the discharger must comply, such as best management practices (BMPs), sampling and monitoring of discharges, and reporting monitoring results to the permitting authority. The proposed permit is issued for public notice and comment, and, if requested, a public hearing on the permit can be held.[11] A final permit can be challenged through administrative and judicial appeals.[12]

Effluent limits in permits can be technology-based or water quality-based. Technology-based standards are typically "performance standards" set for different industrial categories through rulemaking.[13] "Effluent guidelines" require dischargers within industry categories, regardless of where they discharge, to achieve a common level of performance, typically stated in terms of the amount of pollutants that can be discharged or a required percentage reduction to be achieved.[14] These guidelines are applied to individual dischargers by setting effluent limits, traditionally expressed in numerical terms, in the permit.[15] If no industrywide standard applies, then permit writers use "best professional judgment" to establish technology-based limits.[16] Under current law, only if the technology-based standards fail to achieve the appropriate level of water pollution reduction can the permit writer impose more stringent "water quality"-based standards.[17] There are different methods for establishing water quality-based effluent limits, but the basic thrust of each is to provide a means to mathematically translate the broadly applicable WQS into numerical effluent limits specific to a discharger. Thus, the traditional approach to control process wastewater discharges or discharges from sewage treatment plants has been to issue permits with numerical effluent limits, either technology-based or water quality-based, compliance with which is measured by periodic sampling of the effluent and monthly reporting of results.

EPA's Initial Attempts at Regulating Stormwater Discharges

Despite the breadth of the definition of "point source," EPA initially made several attempts to reduce the scope of its burden to permit all discharges. In 1973, EPA decided to generally exempt stormwater discharges from the permitting requirements of the NPDES.[18] EPA reasoned that the administrative burden of permitting these discharges and the need to conserve the Agency's resources for more significant process and sanitary discharges provided a firm basis for this exemption.[19] EPA also claimed that the characteristics of stormwater discharges—stormwater's unpredictability and variability—made it impossible to establish categorical, nationally applicable, technology-based effluent standards required by §§301(b) and 304 of the Act,[20] which were to provide the core baseline control requirements applicable to all point source discharges.[21] EPA's view was that without such effluent standards, stormwater required neither control nor a permit.

The D.C. Circuit rejected both of EPA's arguments, finding that the Agency lacked authority under the Act to exempt broad categories of discharges from the permitting requirements.[22] The court noted that the Act provided EPA with a variety of options to address the difficulties of regulating stormwater discharges: "[W]hen numerical effluent limitations are infeasible, EPA may issue permits with conditions designed to reduce the level of effluent discharges to acceptable levels," including proscribing "industry practices that aggravate the problem of point source pollution."[23] Alternatively, EPA could simply require the discharger to monitor and report its discharges.[24] Finally, EPA could issue "general" permits to cover groups of discharges and was not required to issue separate permits for each indi-

5. *See* Clean Water Act of 1977, Pub. L. No. 95-217, 91 Stat. 1576 (1977).
6. The Act regulates the "discharge of pollutants," which includes "any addition of any pollutant to navigable waters from any point source." 33 U.S.C. §1362(12).
7. "Pollutant" is defined to mean "dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discharged equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water." *Id*. §1362(6).
8. *See id*. §1311(a) (making "the discharge of any pollutant by any person unlawful" if done without a permit issued under §402, *id*. §1342).
9. *See id*. §1362(14). Agricultural stormwater discharges and return flows from irrigated agriculture are expressly excluded. *Id*.
10. *See id*. §§1311(a) (prohibiting all discharges without a permit), 1342(a) (authorizing EPA to issue permits).
11. *See* 40 C.F.R. pts. 122, 124.
12. *See* 33 U.S.C. §1369(b); 40 C.F.R. pt. 124.
13. *See* 40 C.F.R. pts. 400-471 (effluent guidelines for different categories).
14. *See, e.g., id*. pt. 413 (effluent guidelines for electroplating operations).
15. *Id*. §122.44(a).
16. *Id*.
17. *Id*. §122.44(d).
18. 38 Fed. Reg. 13528-30 (May 22, 1973). The exclusion only applied to "separate storm sewers" and not to discharges from "combined sewers and bypass sewers." *Id*.
19. *See* Natural Resources Defense Council v. Costle, 568 F.2d 1369, 8 ELR 20028 (D.C. Cir. 1977).
20. 33 U.S.C. §§1311(b), 1304.
21. *Costle*, 568 F.2d at 1377-79.
22. *Id*. at 1377.
23. *Id*. at 1380.
24. *Id*.

vidual discharge.[25] These options would ultimately guide the Agency, albeit after much hemming and hawing, to establish a workable stormwater control program.

Congress Takes Over—The 1987 Water Quality Amendments

Following *Natural Resources Defense Council, Inc. v. Costle*,[26] EPA struggled to develop a workable set of rules for stormwater permitting. By 1987, frustrated with EPA's progress, Congress took matters into its own hands and enacted a new provision, §402(p), that established the existing framework for regulating stormwater discharges.[27] This provision originally required permits to be obtained by October 1992, for four types of stormwater discharges: discharges associated with industrial activity; discharges from "large" (serving more than 250,000 people) and "medium" (serving between 100,000 and 250,000 people) municipal storm sewer systems; discharges which had been issued a permit before 1987; and any discharge which EPA or other permitting authority determined contributed to a violation of water quality standards or was a significant source of pollutants.[28] Congress later extended the deadline by which such permits were required to October 1994.[29] EPA was prohibited from issuing permits for other stormwater discharges, e.g., discharges from "small" municipal storm sewers, prior to 1994.[30]

EPA Efforts in the 1990s and Beyond

With the structure provided by the 1987 Amendments, EPA set out to develop a stormwater permitting program, culminating with regulations issued in 1990.[31] These "Phase I" regulations governed stormwater discharges associated with 11 categories of industrial activity and those from large and medium municipal separate storm sewers.[32] These regulations form the core of the existing program for these stormwater discharges. They specify which stormwater dischargers must obtain permits and establish application requirements and deadlines.[33] The regulations do not establish substantive standards or permit conditions for the affected stormwater dischargers. EPA also attempted to extend the statutory deadlines for submission of applications by industrial and municipal dischargers, changes which Congress later ratified.[34]

The regulations also provided a glimpse of EPA's plans for permitting such discharges. Taking the hint provided by the *Costle* court, EPA made it clear that it planned to rely heavily on general permits, BMPs, and reduced monitoring and reporting to avoid the administrative burden of issuing individual permits to the thousands of dischargers covered by the rules.

These rules did not go unchallenged. The Natural Resources Defense Council, Inc. (NRDC) again successfully attacked portions of the new rules—specifically, the regulatory extensions to statutory deadlines, the "exemption" given to stormwater discharges associated with construction activities of less than five acres and certain stormwater discharges from "light industry."[35] In response, EPA issued amended rules establishing new deadlines for issuing permits and reaffirming the construction activity and light industry exemptions until it developed requirements for smaller construction projects and light industry.[36] EPA subsequently modified its regulations to require "light industrial" facilities and small construction sites[37] to obtain stormwater permits.

As required by §402(p)(5), EPA also undertook two studies of stormwater discharges not covered under the Phase I rules, such as agricultural discharges and discharges from small municipalities (serving less than 100,000 persons): one assessing the nature and extent of these discharges, and the other examining methods for controlling such discharges. These studies were to be completed by 1989 and were to form the basis for regulations to be issued by October 1993, which would include "expeditious deadlines" for controlling such discharges.[38] Recall that the statute set a permit moratorium for Phase II stormwater discharges (those discharges not covered under the Phase I rules) ending in October 1994.

EPA once again failed to meet these deadlines. It submitted the required reports to Congress in the mid-1990s.[39] In April 1995, the Agency issued a direct final rule establishing a permit application program for Phase II stormwater discharges. Under this direct rule, stormwater discharges not covered by the Phase I rule would not need to be permitted unless EPA or a state determined that the discharge contributed to water quality impairments or was a significant contributor of pollutants.[40] EPA also stated its intention to promulgate additional regulations, and, if these regulations required certain Phase II stormwater discharges to be permitted, applications would have to be submitted by August 2001.[41]

In January 1998, EPA proposed substantial revisions to the Phase II program.[42] These were issued in final form on

25. *Id*. at 1380-81. Note, however, that the use of general permits is threatened by recent decisions in the U.S. Court of Appeals for the Ninth Circuit, Environmental Defense Ctr. v. EPA, 319 F.3d 398, 33 ELR 20139, *vacated with substitute opinion at* 2003 U.S. App. LEXIS 19073 (9th Cir. Sept. 15, 2003), and in Minnesota, Minnesota Ctr. for Envtl. Advocacy v. Minnesota Poll. Control Agency, 660 N.W. 2d 427 (Minn. Ct. App. 2003). The impact of these decisions is discussed *infra* in the section entitled *The Future of General Permits*.
26. Natural Resources Defense Council v. Costle, 568 F.2d at 1369.
27. 33 U.S.C. §1342(p).
28. *Id*. §1342(p)(1)-(2) (1993); *see also* 55 Fed. Reg. 47990, 47992 (Nov. 16, 1990).
29. *Id*. §1342(p)(1) (2002).
30. *Id*.
31. 55 Fed. Reg. at 47990; 40 C.F.R. §122.26.
32. *Id*.
33. *See* 40 C.F.R. §§122.26(c) (industrial dischargers), 122.26(d) (large and medium municipal dischargers).
34. *See* Dire Emergency Supplemental Appropriations Act of 1991, Pub. L. No. 102-27, §307, 105 Stat. 130, 152 (1991); Intermodal Surface Transportation Efficiency Act of 1991, Pub. L. No. 102-240, §1068, 105 Stat. 1914, 2007 (1991).
35. Natural Resources Defense Council v. EPA, 966 F.2d 1292, 22 ELR 20950 (9th Cir. 1992).
36. 57 Fed. Reg. 60444 (Dec. 18, 1992).
37. 64 Fed. Reg. 68722 (Dec. 8, 1999).
38. 33 U.S.C. §1342(p)(6).
39. *See* 60 Fed. Reg. 17950, 17952 (Apr. 7, 1995) (explaining that first report was being submitted to Congress at that time, and that President William J. Clinton's Clean Water Act Initiative, released in February 1994, constituted the second report).
40. *Id*. at 17953.
41. *Id*.
42. 63 Fed. Reg. 1535 (Jan. 9, 1998).

December 8, 1999, and established control requirements for stormwater discharges from small "urban" municipalities and small construction areas (between one and five acres).[43] Permit applications for these discharges (or notices of intent to be covered by a general permit) were required to be submitted and BMPs to control the discharges implemented by March 10, 2003. General permits for such discharges were to be issued by December 2002,[44] and permit coverage must be obtained within 90 days of issuance.[45] The Phase II rules also provide a new "conditional" exclusion from the permitting program for discharges associated with industrial activity if the discharger can certify that all industrial materials and activities are protected by a storm-resistant shelter to prevent exposure to rain, snow, snowmelt, and/or runoff.[46]

Permitting Stormwater Discharges

As difficult as it has been for EPA to develop a workable schedule and program for permit application and issuance, the Agency has also struggled to implement the standards in the 1987 Amendments for managing and limiting stormwater discharges. This issue confronting EPA was how to deal with the administrative burden of permitting the large number of stormwater discharges.

The Phase I rules established three options for an industrial discharger to obtain a stormwater permit. An industrial discharger could apply for an individual permit, take part in a "group" application, or could submit a notice of intent to be included in a "baseline" general permit. The individual applicant is to submit information concerning its facility and supply monitoring data collected during storm events that are intended to quantify "representative" loadings from the facility.[47] In lieu of individual applications, a group of similar facilities, i.e., in a single industrial category, were allowed to submit a two-part "group" application.[48] The first part was to identify the participants in the application and the basis for submitting the application as a group. The second part was to include data from a portion of the group members. EPA intended to use this group application to issue individual or general permits.

Finally, EPA announced its intention to issue baseline general permits for different industries, and a series of such general permits were issued, including one of general applicability. The general permit, in fact, has become the default option for most discharges associated with industrial activity. Exceptions to this general scheme do exist, however. For example, large and medium MS4s must submit detailed permit applications and be issued individual permits.[49] Similarly, EPA or a state can reject a notice of intent and require the discharger to obtain an individual permit.[50] Still, the vast bulk of stormwater discharges—industrial, construction, and small MS4s—are subject to "general" rather than individual permits.

Under a general permit scheme, the permit is issued in a manner similar to a rule, by publication in the *Federal Register*.[51] Consistent with §402(b)(1)(B) of the CWA,[52] the general permits have five-year terms. To be covered by the permit, a discharger submits a "notice of intent" to comply with the permit, after which the discharger becomes subject to the terms and requirements of the permit.[53] Most general permits do not require any sampling data to be submitted with the notice of intent, nor do they impose specific sampling requirements during the term of the permit. Instead, the notice contains information about the facility to be covered, and an indication of whether the facility has prepared and implemented a stormwater pollution prevention plan (SWPPP). SWPPPs are plans, similar to spill prevention control and countermeasure plans, which describe the measures and controls (the BMPs) the facility intends to take to minimize the amount of pollutants in its stormwater discharges. SWPPPs are to designate the individual(s) responsible for developing and overseeing implementation of the plan, describe sources of pollutants, and establish measures and controls that will be put in place to minimize the contact of stormwater with pollutants.[54] SWPPPs can include structural measures, e.g., placing loading and unloading areas under roof; diverting stormwater around storage areas, or management measures, e.g., periodic inspections of storage areas; prompt responses to spills. The SWPPP is to be updated as appropriate. In practice, most facilities rely on SWPPPs to control their stormwater discharges.

Application and control requirements for large and medium MS4s are more rigorous. MS4s must include detailed information about their storm sewer system outfalls, a description of the "watershed" supplying stormwater to that system, i.e., land use types, the identification of each discharger to the storm sewer system, data characterizing the storm sewer dischargers, a description of existing and proposed management programs to control and monitor pollutants from the storm sewer system.[55] Management programs for MS4s must provide a detailed description of: (1) the structural and source control measures to reduce pollutants from runoff from commercial and residential areas entering the storm sewer system; (2) the program and schedule to detect and remove illicit discharges and other improper disposal into the storm system; (3) the program to monitor and control pollutants in stormwater discharges from landfills and hazardous waste treatment, storage, and disposal facilities; and (4) the program to implement and maintain structural and nonstructural BMPs.[56] Notwithstanding the more

43. 64 Fed. Reg. at 68722 (codifying 40 C.F.R. §§122.30-37). These rules were challenged by citizen groups and industry in Environmental Defense Ctr. v. EPA, 319 F.3d 398, 33 ELR 20139, *vacated with substitute opinion at* 2003 U.S. App. LEXIS 19073 (9th Cir. Sept. 15, 2003). While affirming the rules on most grounds, the court remanded three aspects of the rules, as discussed *infra* in the section entitled *The Future of General Permits*.

44. EPA issued a draft General Permit for these discharges on December 20, 2002. 67 Fed. Reg. 78116 (Dec. 20, 2002).

45. *Id*. at 78119.

46. 64 Fed. Reg. at 68840 (codified at 40 C.F.R. §122.26(g)).

47. 40 C.F.R. §122.21(g)(7).

48. *Id*. §122.26(c)(2).

49. *Id*. §122.26(a)(3).

50. *See, e.g.*, 60 Fed. Reg. at 50812 (EPA may deny coverage based on review of completeness or content of Notice of Intent (NOI) or other issues, such as Endangered Species Act compliance).

51. *See, e.g.*, 60 Fed. Reg. 50804 (Sept. 29, 1995) ("multi-sector" general permit for stormwater discharges associated with industrial activities).

52. 33 U.S.C. §1342(b)(1)(B); 40 C.F.R. §122.26(g)(1)(iii).

53. *See, e.g.*, 60 Fed. Reg. 50804, 50811 (Sept. 29, 1995) (multi-sector general permit for discharges of stormwater associated with industrial activity).

54. *See, e.g., id*. at 50814.

55. 40 C.F.R. §122.26(d).

56. *Id*. §122.26(d)(2)(iv).

comprehensive and detailed application requirements for MS4s, most rely solely on their management plans to control their stormwater discharges.

The Current Status of EPA Regulation of Stormwater Discharges

Thirty years after enactment of the 1972 CWA, EPA now has in place a comprehensive program for the control of most stormwater discharges. Some portions of the program—those governing industrial discharges and large and medium municipalities—are relatively mature. Others—those governing stormwater discharges from small construction activities and small municipalities—are in place but are not fully implemented. In recent years, EPA and states have stepped up enforcement against industrial, construction and municipal stormwater discharges, charging them with failing to develop or properly implement their plans for controlling and minimizing their discharges. The focus now is on improving performance rather than building new programs.

Notwithstanding this progress, EPA's stormwater permit program is actually quite narrow and does not address many wet weather discharges. These other storm-related discharges are either not regulated or are covered under other programs.

First, EPA's stormwater permitting program covers only those industrial and municipal discharges composed *entirely* of stormwater.[57] Thus, discharges comprised of or containing groundwater or process wastewater, combined sewer overflows, and weather-related sanitary sewer overflows are not regulated under the stormwater program.

Second, the stormwater regulations only apply to 11 specified categories of industrial stormwater discharges (and municipal discharges).[58] If the storm discharges are from a facility that is not in one of these 11 industries, it does not need a permit unless EPA or the state affirmatively requires the facility to apply for one.

Third, the stormwater program does not govern several important categories of wet-weather discharges. Separate programs govern wet weather discharges from CAFOs[59] and CSOs[60] and sanitary sewer overflows.[61]

Fourth, as with the rest of the NPDES program, the stormwater permitting program only governs point source discharges. Nonpoint, storm-related "discharges" are outside the scope of the NPDES program and instead are regulated, if at all, by states under §319 of the Act.[62]

Current Issues in the Regulation of Wet Weather Discharges

Effluent Limits for Stormwater Discharges

The factors that make stormwater discharges unique—their variability and unpredictability—have forced EPA to grapple with how to develop effective and enforceable effluent limits. Are stormwater discharges subject to just technology-based controls, or must they also meet water quality standards? If water quality standards do apply, must they be expressed as numerical limits or do BMPs suffice? What effect will a TMDL have on stormwater discharges?

Must Stormwater Discharges Comply With Water Quality Standards?

Section 402(p)(3)[63] provides EPA some guidance on these issues and creates an apparent distinction in the requirements that apply to industrial and municipal stormwater discharges. On the one hand, industrial stormwater discharges are made subject to §301 of the CWA.[64] Section 301, on its face, requires that discharges comply with applicable technology and water quality standards.[65] On the other hand, in specifying controls applicable to stormwater discharges from MS4s, §402(p)(3)((B) makes no mention of §301 or water quality standards.[66] Rather, MS4 permits must include: (1) "a requirement to effectively prohibit non-stormwater discharges into the storm sewers"; and (2) "controls to reduce the discharge of pollutants to the maximum extent practicable [or MEP], including management practices, control techniques, and system, design, and engineering methods, and such other provisions" that the permitting authority determines to be appropriate.[67]

Is this distinction intentional and material? There is some logic in treating MS4s differently from industrial discharges. In contrast to most industrial stormwater discharges, stormwater entering MS4s typically comes from an extremely large "watershed" (on the order of square miles) and is discharged through many outfalls, hundreds in the case of a large city. These factors greatly complicate the efforts to develop effective, yet reasonable, permit requirements. At bottom, do industrial stormwater discharges *and* MS4s have to comply with water quality standards?

Certainly, the lack of any reference to §301 in §402(p)(3)(B)'s standards for MS4s strongly suggests that Congress answered this question in the negative. The legislative history is generally unhelpful on this point. EPA and the courts, however, have concluded that, while not manda-

57. *Id*. §§122.26(a)(1) (describing permit requirements for discharges "composed entirely of storm water"); 122.26(a)(7) (explaining that CSOs are subject to normal permitting requirements and not stormwater permitting requirements); 60 Fed. Reg. at 50813 (industrial general permit prohibiting discharges of non-stormwater pursuant to permit). Note that the industrial general permit does contain some minor exceptions, such as fire hydrant flows, to the prohibition against non-stormwater discharges.

58. 40 C.F.R. §122.26(b)(14) (identifying 11 categories of industrial activities requiring stormwater discharges).

59. 68 Fed. Reg. 7176 (Feb. 12, 2003) (final rules for discharges from CAFOs).

60. CSOs are discharges from sewers that are designed to collect rainwater runoff, domestic sewage, and industrial wastewater in the same pipe, and are governed by a CSO policy. *See* 59 Fed. Reg. 18688 (Apr. 19, 1994); *see also* 33 U.S.C. §1342(q) (specifying that CSOs are to be permitted under the April 19, 1994 CSO Control Policy). This guidance requires CSOs to implement nine "minimum" controls and develop and implement long-term control plans to attain compliance with water quality standards.

61. *See* http://cfpub.epa.gov/npdes/sso/ssorule.cfm. In the closing days of the Clinton Administration, then-Administrator Carol Browner signed proposed regulations for SSOs, but these were never published and were withdrawn by the Bush Administration when it took office. 66 Fed. Reg. 7701 (Jan. 24, 2001).

62. 42 U.S.C. §1329 (requiring states to develop "management programs" for nonpoint sources).

63. 33 U.S.C. §1342(p)(3).

64. *See id*. §1311.

65. *See id*. §§1311(b)(1)-(2), 1342(p)(3)(A).

66. *See id*. §1342(p)(3)(B).

67. *See id*.

tory, the Agency retains discretion to require compliance with water quality standards. EPA provided its first interpretation of §402(p)(3) in the preamble to the Phase I stormwater rule, recognizing the distinctive statutory requirements applicable to industrial stormwater discharges and MS4s:

> [S]torm water discharges associated with industrial activity must comply with [§§]301 and 402 of the CWA (requiring control of the discharge of pollutants that utilize the Best Available Technology (BAT) and the Best Conventional Pollutant Control Technology (BCT) and where necessary, water-quality based controls), but permits for municipal separate storm sewer systems must require controls to reduce the discharge of pollutants to the maximum extent practicable, *and where necessary water-quality based controls*, and must include a requirement to effectively prohibit non-stormwater discharges into the storm sewers.[68]

EPA thus concluded that permitting authorities are authorized to impose water quality-based controls upon MS4s.

The U.S. Court of Appeals for the Ninth Circuit in *Defenders of Wildlife v. Browner*[69] supported EPA's interpretation. In *Defenders of Wildlife*, the petitioner challenged five municipal permits issued in Arizona, claiming that the CWA requires numeric effluent limitations to ensure strict compliance with state water quality standards.[70] The court rejected this argument, holding that the CWA unambiguously expressed Congress' intent that MS4s do not have to "strictly comply" with water quality standards.[71] The court rested its conclusion on the fact that Congress expressly required industrial stormwater discharges to comply with water quality standards through the reference in §402(p)(3)(A) to §301 of the CWA, but did not include a similar reference when prescribing requirements for MS4s.[72] The court found this omission telling and a clear indication that Congress did not intend for MS4s to have to comply with water quality standards.[73] The court's analysis did not end there, however. Relying on the authority provided by CWA §402(p)(3)(B)(iii) to impose additional controls determined to be "appropriate," the court found that, even if not mandatory, EPA and the states retain discretion to require MS4s to comply with water quality standards.[74]

The Ninth Circuit's decision in *Defenders of Wildlife* seems to have resolved the question of the relevance of water quality standards to stormwater discharges. While industrial dischargers of stormwater must comply with water quality standards, such standards only apply to MS4s upon a determination that they are "appropriate." That still leaves open the issue of how such water quality standards must be expressed.

68. 55 Fed. Reg. 47990, 47994 (Nov. 16, 1990) (emphasis added).
69. 191 F.3d 1159, 30 ELR 20116 (9th Cir. 1999).
70. *Id*. at 1161.
71. *Id*. at 1165-66.
72. *Id*. at 1164-65. *Compare* 33 U.S.C. §1342(p)(3)(A) *with id*. §1342(p)(3)(B).
73. *Id*. at 1164-65.
74. *Id.* at 1166-67 (stating that "under that discretionary provision, the EPA has the authority to determine that ensuring strict compliance with state water quality standards is necessary to control pollutants").

Are Numeric Water Quality-Based Effluent Limitations Required or Will BMPs Suffice?

Given the statutory requirement for industrial stormwater discharges to comply with water quality standards and EPA's discretionary authority to impose water quality-based controls on MS4s, how can or should such controls be expressed? EPA's view is that such water quality-based controls do not need to be expressed in numerical form, and, for some discharges, should *not* be expressed numerically. This approach was first announced in the Agency's 1996 Interim Permitting Approach for Water Quality-Based Effluent Limitations in Stormwater Permits (Interim Permitting Approach)[75] and restated in the preamble to the Phase II rule.[76] In these documents, EPA concluded that developing numerical limits for stormwater discharges was often impractical and exceedingly difficult given the inherent variability and lack of information regarding these discharges. EPA thus announced its intention to use "[BMPs] in first-round stormwater permits, and expanded or better-tailored BMPs in subsequent permits, where necessary, to provide for the attainment of water quality standards."[77] EPA's interpretation has been endorsed by EPA's Environmental Appeals Board[78] and withstood judicial challenge.[79]

EPA has continued to follow the 1996 Interim Permitting Approach guidance. Most large and medium MS4s and industrial discharges are not subject to strict water quality-based effluent limitations; instead, they must implement BMPs and SWPPPs to control their discharges. Similarly, in the Phase II rule, EPA requires small MS4s to undertake six measures to control their stormwater discharges[80] and presumes, absent information to the contrary, that no "more stringent limitations" will be needed to meet water quality standards.[81] Even when information becomes available that further controls may be needed, EPA suggests that the MS4 should undertake additional management measures to improve the quality of its discharge rather than be made subject to strict water quality-based effluent limits. In the interim, EPA is undertaking an assessment of the impact of MS4 discharges on water quality, which it intends to complete by December 2012.[82] As a result, the Phase II regulations ex-

75. U.S. EPA, Interim Permitting Approach for Water Quality-Based Effluent Limitations in Stormwater Permits (1996) (EPA-833-D-96-00), *available at* http://www.epa.gov/npdes/pubs/swpol.pdf. *See* 61 Fed. Reg. 42668, 43671 (Aug. 26, 1996). *See also* Questions and Answers Regarding Implementation of an Interim Permitting Approach for Water Quality-Based Effluent Limitations in Stormwater Permits, 61 Fed. Reg. 57425 (Nov. 6, 1996) [hereinafter Interim Permitting Approach].
76. 64 Fed. Reg. at 68788 (quoting and adopting the Interim Permitting Approach).
77. Interim Permitting Approach, *supra* note 75, 61 Fed. Reg. at 43761.
78. *See* In re Government of the District of Columbia Municipal Separate Storm Sewer System, 2002 WL 257698 (Feb. 20, 2002); In re Arizona Municipal Stormwater NPDES Permits, 7 E.A.D. 646, 654 (1998).
79. *Defenders of Wildlife*, 191 F.3d at 1165 (numeric limitations not required to ensure compliance with water quality standards for MS4s).
80. These are: (1) public education and outreach on stormwater impacts; (2) public involvement and participation; (3) illicit discharge detection and elimination; (4) construction site stormwater runoff control; (5) post-construction stormwater management in new development and redevelopment; and (6) pollution prevention/good housekeeping for municipal operations. *See* 40 C.F.R. §122.34(b).
81. 64 Fed. Reg. at 68753.
82. *See* 40 C.F.R. §122.37.

plain that "EPA strongly recommends that until the evaluation of the stormwater program [is complete], no additional requirements beyond the minimum control measures be imposed on regulated small MS4s."[83]

Although MS4s are generally not subject to numerical limits, their permits do impose substantial requirements. For example, a recent permit issued for Riverside County, California collects requirements for several MS4s and requires each to: (1) survey and eliminate illicit connections; (2) establish mechanisms to address illegal discharges and response to spills, leaks, and other incidents; (3) establish mechanisms to prevent failure of septic systems and placement of portable toilets; (4) establish guidelines for new development; (5) implement a system to conduct inspections of construction, industrial, and commercial establishments to ensure compliance with local ordinances; (6) implement a comprehensive public education program, including education of staff at municipal facilities; (7) implement controls for construction by municipalities; and (8) extensive monitoring and reporting requirements.[84] The permittees must monitor stormwater flows, receiving water quality, and sediment quality to assess rates of mass loading, influence of land use on water quality, compliance with water quality objectives, effectiveness of water quality controls, and several other aspects of the stormwater control program.[85] In short, while avoiding the imposition of numerical limits avoids the need to operate end-of-the pipe-controls, MS4s are still subject to substantial, demanding, and expensive control requirements in the form of BMPs and monitoring.

How Will TMDLs Affect Effluent Limitations for Stormwater Discharges?

Discharge requirements established in TMDLs have the potential to affect controls required for industrial stormwater discharges and MS4s. A TMDL is a written, quantitative plan and analysis for attaining compliance with water quality standards in a particular water body, which includes an allocation among the various sources of that pollutant.[86] A TMDL includes allocations of that amount to the pollutant's sources, including point sources (wasteload allocations (WLAs)), and nonpoint sources (load allocations (LAs)).[87] The CWA requires states or EPA to establish TMDLs for waters that are not meeting applicable water quality standards even after technology-based controls have been applied (so-called impaired waters).[88]

EPA has issued guidance regarding the integration of the stormwater and TMDL programs.[89] According to this guidance, stormwater discharges must be addressed in the WLA component of that TMDL. More specifically, stormwater permits for industry and MS4s must contain "effluent limits and conditions consistent with the requirements and assumptions of the [WLAs] of the TMDL."[90] Consistent with its Interim Permitting Approach guidance,[91] EPA recommends that water quality-based controls for NPDES-regulated stormwater discharges contained within TMDLs be expressed as BMPs or other similar requirements, rather than as numeric limits, at least for the initial round of permitting.[92] According to EPA, this policy recognizes that because stormwater discharges are highly variable in frequency and duration and are not easily characterized, only in "rare cases" will it be feasible or appropriate to establish numeric limits for stormwater discharges.[93]

Even without numeric limits, however, TMDLs can lead to the imposition of stricter requirements for stormwater discharges than would occur without a TMDL. Permits subject to TMDLs must contain monitoring "necessary to assure compliance with permit limitations, . . . [and] EPA recommends that such permits require collecting data on the actual performance of the BMPs."[94] These data, according to the policy, can be used to adjust the BMPs to ensure "adequate performance."[95]

EPA also recognizes that, as a general rule, available data usually are not detailed enough to determine WLAs for stormwater discharges on an outfall-specific basis.[96] EPA thus recommends expressing the WLA as:

> [E]ither a single number for all NPDES—regulated storm water dischargers, or when information allows, as different WLAs for different identifiable categories, *e.g.*, municipal storm water discharges as distinguished from storm water discharges from construction sites or municipal storm water discharges from City A as distinguished from City B.[97]

However, when WLAs are developed for categories of discharges, these categories should be defined as narrowly as available information allows, e.g., separate WLAs for each municipality.[98]

83. *See id*. §122.34(e).

84. *See* California Regional Water Quality Control Board, Santa Ana Region, Order No. R8-2002-0011, NPDES No. CAS 618033, Waste Discharge Requirements for the Riverside County Flood Control and Water Conservation District, the County of Riverside, and the Incorporated Cities of Riverside County Within the Santa Ana Region Areawide Urban Runoff.

85. *Id.*

86. *See* CWA §303(d)(1)(C), 33 U.S.C. §1313(d)(1)(C); 40 C.F.R. §§30.2(h), 130.32(a); Pronsolino v. Nastri, 291 F.3d 1123, 32 ELR 20689 (9th Cir. 2002).

87. 40 C.F.R. §130.2(h). EPA's regulations divide TMDLs into two types: "load allocations," for nonpoint source pollution, and "wasteload allocations" for point source pollution. *See id*. §130.2(g)-(i)).

88. *See* CWA §303(d)(1)(A), 33 U.S.C. §1313(d)(1)(A).

89. *See* November 22, 2002, Memorandum, Establishing Total Maximum Daily Loads (TMDLs) Wasteload Allocations (WLAs) for Stormwater Sources and NPDES Permit Requirements Based on Those WLAs, from Robert Wayland, III, Director, Office of Wetlands, Oceans and Watersheds, EPA Office of Water, and James A. Hanlan, Director, Office of Wastewater Management, EPA Office of Water, *available at* http://www.wpa.gov/npdes/pubs/final-wwtmdl.pdf [hereinafter TMDLs for Stormwater Sources].

90. *Id*.

91. 61 Fed. Reg. 43761 (Aug. 26, 1996).

92. *See* TMDLs for Stormwater Sources, *supra* note 89, at 4 (stating that although WLAs in TMDLs are typically expressed in numeric form, water quality-based effluent limits for stormwater discharges should be expressed as BMPs or other similar requirements).

93. *Id.* This variability combined with the minimal data generally available make it difficult to determine with precision or certainty actual and projected loadings for individual dischargers or groups of dischargers.

94. *Id.* at 5.

95. *Id.* at 2.

96. *Id*. at 4.

97. *Id*. EPA also stated that "[i]t may be reasonable to express allocations for NPDES-regulated storm water discharges from multiple point sources as a single categorical wasteload allocation when data and information are insufficient to assign each source or outfall individual WLAs." *See id*. at 1 (citing 40 C.F.R. §130.2(i)).

A good example of a TMDL that has impacted stormwater control requirements is the trash TMDL developed for the Los Angeles River Watershed.[99] This TMDL establishes a goal of zero trash in the river system. It requires the county of Los Angeles, several municipalities, and the state Department of Transportation to reduce the amount of trash their storm systems annually by 10% from "baseline" over a 10-year period. While no specific controls are mandated, the TMDL identifies a range of possible end-of-the-pipe capture controls, partial control systems, e.g., street sweeping, and institutional controls, e.g., litter ordinances, that could be used. Los Angeles City and County challenged the TMDL, but reached a settlement where they agreed to spend $168 million over five years to reduce the amount of trash flowing into the Los Angeles River by 50%.[100] Under the settlement, the city and county will use a variety of measures to achieve this goal, including filtering devices, screens, and metal inserts to keep trash out of storm drains and more aggressive street sweeping and enforcement of littering laws.[101]

In sum, EPA has to date adopted a general preference for expressing water quality-based controls for stormwater discharges in non-numeric form, whether adopted as a MEP requirement under CWA §402(p)(3)(B)(iii) or as part of a TMDL. As these programs mature and additional data are collected, it is conceivable that the permitting authorities may impose numeric limits necessary to attain water quality standards.

CSOs, Sewer Sanitary Overflows (SSOs), and CAFOs

The current stormwater permitting program does not address several important categories of wet weather discharges. These include CSOs, SSOs, and CAFOs. These wet weather discharges pose some of the same regulatory challenges as industrial stormwater discharges and MS4s. Because they result from events that vary in frequency and duration and are not easily characterized, the type of controls used for process and sanitary waste streams will rarely be feasible or appropriate for these wet weather discharges.

CSOs

Combined sewer systems are relics of 19th and early 20th century sewer systems that collected storm and sewage and discharged the combination to rivers, harbors, and lakes. CSOs are sewers that are designed to collect rainwater runoff, domestic sewage, and industrial wastewater in the same pipe.[102] Most of the time, combined sewer systems transport all of their wastewater to a sewage treatment plant, where it is treated and then discharged. During periods of heavy rainfall or snowmelt, however, the wastewater volume in a combined sewer system can exceed the capacity of the sewer system or treatment plant. For this reason, combined sewer systems are designed to overflow occasionally and discharge excess wastewater directly to nearby streams, rivers, or other water bodies. CSOs contain not only stormwater but can also contain untreated human and industrial waste. According to EPA, CSOs are "a major water pollution concern for the approximately 772 cities in the U.S. that have combined sewer systems."[103]

EPA, states, and cities with CSOs have struggled for more than 25 years to control CSO discharges, a problem arising in part from a lack of coherent policy and in part from the lack of funds to implement effective controls.

CSOs are point sources and thus subject to permitting requirements. As with stormwater discharges, however, EPA struggled with determining the type of controls required and appropriate for CSOs. Initially, there was a question as to whether CSOs were part of the "treatment works" and thus subject to special control requirements applicable to publicly owned treatment works (POTWs), including secondary treatment technology.[104] The D.C. Circuit, in *Montgomery Environmental Coalition v. Costle*,[105] upheld EPA's conclusion that CSOs are not part of the treatment works and thus were only subject to "best practicable" effluent requirements. However, the general belief through the 1970s and 1980s was that CSOs were not subject to any effluent limitation requirements.[106]

In 1989, EPA attempted to remedy this confusion by issuing a CSO Control Strategy, which announced three objectives for CSOs: (1) limiting CSO discharges to wet weather events; (2) ensuring that CSO discharges were made in compliance with technology-based controls and water quality standards; and (3) minimizing the environmental and human health effects of these overflows.[107] The 1989 strategy required permitting agencies to ensure that all CSOs were permitted and that these permits include technology-based, and where necessary, water quality-based controls. Technology-based controls were to satisfy applicable "best available technology" and "best control technology" requirements determined according to "best professional judgment" on a case-by-case basis.[108] The controls were to include, among other things, operation and maintenance programs, maximum use of the collection system for storage, minimization of CSO discharges, and the prohibition of dry weather flows. These initial ideas were carried forward into the existing control system for CSOs.

In 1994, EPA issued a revised CSO Control Policy that created the current framework for CSO regulation.[109] The policy requires CSO communities to implement nine "minimum" controls and develop and implement long-term control plans to attain compliance with water quality standards. The nine "minimum" technology-based controls were to be developed by January 1, 1997, and include: (1) proper oper-

98. *Id*.

99. *See* California Regional Water Quality Control Board, Los Angeles Region, Trash Total Maximum Daily Loads for the Los Angeles River Watershed (Sept. 19, 2001), *available at* http://www.swrcb.ca.gov/rwqcb4/html/meetings/tmdl/tmdl_ws_los_angeles.html.

100. *See* Daily Env't Rep. (BNA), Sept. 5, 2003, at A-7.

101. The status of this TMDL is uncertain. On December 24, 2003, the San Diego Superior Court held the TMDL unlawful on a variety of grounds in response to a challenge brought by 22 other cities subject to the TMDL. *See* Arcadia v. State Water Resources Control Bd., No. GIC 803631 (Cal. Super. Ct. Dec. 24, 2003).

102. *See* http://cfpub.epa.gov/npdes/home.cfm?program_id=5.

103. *See id*.

104. 33 U.S.C. §§1311(b)(1)(B), 1314(d)(1).

105. 646 F.2d. 568, 11 ELR 20211 (D.C. Cir. 1980).

106. *See* 54 Fed. Reg. 37370, 37371 (Sept. 8, 1989) (1989 National Combined Sewer Overflow Control Strategy); Northwest Envtl. Advocates v. City of Portland, 56 F.3d 979, 25 ELR 21250 (9th Cir. 1995).

107. 54 Fed. Reg. at 37370.

108. 33 U.S.C. §1311(b)(2). This provision required compliance with "best practicable technology" on or before July 1, 1977, and compliance with BCT and BAT on or before March 31, 1989.

109. 59 Fed. Reg. at 18688.

ation and regular maintenance of the sewer system; (2) maximum use of the collection system for storage; (3) review and modification of pretreatment requirements to minimize CSO impacts; (4) maximization of flow to POTWs; (5) prohibition of CSOs during dry weather; (6) control of solids and floatables; (7) pollution prevention; (8) public notification of CSO occurrences and impacts; and (9) monitoring of CSO impacts and controls.[110] The CSO Control Policy contemplates that implementation of the nine minimum controls will become an enforceable obligation through, for example, permits.[111] To encourage CSO communities to implement these minimum controls, EPA stated that it would not seek civil penalties for past CSO violations if the January 1997 deadline were met; this discretionary, nonenforcement pledge would, however, not apply if the deadline were missed.[112] In 1998, EPA reported that only 52% of CSO communities had implemented the minimum criteria, and only 42% had documented their compliance.[113] By 2001, EPA found that 77% of CSO communities had documented implementation of at least one of the criteria.[114]

The policy also requires CSOs to develop and implement long-term CSO control plans that will ensure compliance with the CWA, including water quality standards. The CSO Control Policy establishes nine essential elements for these long-term control plans: (1) characterization, monitoring, and modeling of the CSO system; (2) public participation; (3) consideration of sensitive areas; (4) evaluation of alternatives to meet CWA requirements; (5) cost/performance considerations; (6) an operational plan; (7) maximizing treatment at the existing POTWs; (8) an implementation schedule; and (9) compliance monitoring.[115] In 1998, only 33% of CSO communities had begun to implement their long-term CSO controls.[116] In 2001, EPA found that 34% had submitted a draft long-term control plan and 17% had documented implementation efforts.[117]

One CSO issue that has been of particular concern to POTWs is the legality of discharging "blended" waste streams. These are a mix of: (1) wastewater that has been subjected to secondary "biological" treatment; and (2) partially treated wet weather flows. The POTWs claim that blending is needed to avoid overwhelming their biological treatment systems during wet weather flows, allowing them to divert some of these flows while still meeting applicable effluent limitations at the CSO discharge point.

Until recently, there was disagreement within EPA over whether blending was permitted or whether it violated the regulatory prohibition against "bypasses," which restricts the intentional diversion of wastewater around a treatment facility unless necessary to prevent loss of life, personal injury, or severe property damage.[118] EPA's Office of Enforcement and Compliance Assurance (OECA), as well as several regional offices, had apparently taken the position that blending constituted an illegal bypass of secondary treatment requirements applicable to POTWs. EPA's Office of Water, in contrast, believed that blending was permissible in certain defined circumstances. The issue came to a head in early 2003, when OECA moved to prevent the release of a draft guidance that would have allowed blending, in the fear that it would have upset existing consent decrees which prohibited it and active enforcement actions.[119]

The lack of a coherent Agency policy on the permissibility of blending left CSO communities uncertain about the legality of this practice. To resolve this uncertainty, EPA finally released a proposed blending policy in November 2003.[120] This proposal would permit blending when six "principles" are followed. These six principles are: (1) the combined discharge must meet effluent limits based on secondary treatment; (2) the POTWs' permit application must provide "notice" of the circumstances when diversion of wet weather flows and blending would occur; (3) prior to blending, the diverted wet weather flows must be treated with "at least the equivalent of primary clarification[, i.e., solids removal]"; (4) the actual diversion and primary clarification of the wet weather flows occurs in accordance with the description provided in the permit record, and wastewater flow is only routed around biological or advanced treatment units "when the capacity of the treatment unit is being fully utilized"; (5) the permit requires monitoring and reporting "sufficient to yield data which are representative of the final blended discharge to ensure compliance with applicable water quality-based effluent limitations"; and (6) the permit requires that the permittee operate the wastewater collection system in a manner consistent with applicable regulations and, where applicable, the 1994 CSO Control Policy.[121]

While this new policy, if implemented, would provide greater certainty for POTWs, environmental organizations

110. *Id*. at 18691. *See also* U.S. EPA, Office of Water, Combined Sewer Overflows, Guidance for Nine Minimum Controls (1995) (EPA 832-B-95-003), *available at* http://www.epa.gov/npdes/pubs/owm.0030.pdf.

111. *See* 59 Fed. Reg. at 18691.

112. *See id*. at 18697; November 18, 1996, Memorandum, January 1, 1997, Deadline for Nine Minimum Controls in Combined Sewer Overflow Control Policy, from Robert Perciasepe, Assistant Administrator Office of Water, U.S. EPA, and Steven A. Herman, Office of Enforcement and Compliance Assurance, U.S. EPA, to Water Management Division Directors, Regions I-X, Regional Counsels, Regions I-X, and State Directors, *available at* http://www.epa.gov.npdes/pubs/owm0130.pdf.

113. *See* May 19, 1998, Memorandum Implementation of the CSO Control Policy, from Robert Perciasepe, Assistant Administrator Office of Water, U.S. EPA, and Steven A. Herman, Office of Enforcement and Compliance Assurance, U.S. EPA, to Water Management Division Directors 1-10, Regional Counsels, Regions 1-10, and State Directors, *available at* http://www.epa.gov/npdes/pubs/elements-to-address.pdf [hereinafter Implementation of CSO Control Policy].

114. *See* U.S. EPA, Office of Water, Report to Congress: Implementation and Enforcement of the Combined Sewer Overflow Control Policy 6-8 (2001) (EPA 833-R-01-003) [hereinafter 2002 CSO Report].

115. *See* 59 Fed. Reg. at 18691-94; U.S. EPA, Office of Water, Combined Sewer Overflows, Guidance for Long-Term Control Plan (Sept. 1995) (EPA 832-B-95-002), *available at* http://www.epa.gov/npdes/pubs/owm0272.pdf.

116. *See* Implementation of CSO Control Policy, *supra* note 112, at 3.

117. *See* 2002 CSO Report, *supra* note 113, at 6-18.

118. *See* 40 C.F.R. §122.41(m).

119. *See* December 21, 2001 Memorandum Review of Memorandum Addressing NPDES Requirements for Municipal Wastewater Treatment During Wet Weather Conditions from Michael B. Cook, Director, Office of Wastewater Management, U.S. EPA, to Water Division Directors, Regions I-X, Authorized NPDES State Program Directors, Susan Lepow (Associate General Counsel), and Eric Schaeffer (Director, Office of Regulatory Enforcement), *available at* www.casaweb.org/TriTAC/EPA%20Draft%20Wet%20Weather%20Guidance.pdf (enclosing draft policy for internal EPA and state review).

120. *See* 68 Fed. Reg. 63042 (Nov. 7, 2003) (NPDES Permit Requirements for Municipal Wastewater Treatment Discharges During Wet Weather Conditions).

121. *See id*. at 63049-50.

have argued that it will compromise public health by increasing the amount of bacteria and other pathogens discharged. POTWs have responded that a prohibition on blending would result in even worse consequences, namely, biological treatment systems would be overwhelmed and knocked off-line during peak wet weather flows, meaning no secondary treatment would occur at all during such down-time.

SSOs

The regulatory program for sanitary sewer overflows is not as developed as that for CSOs. SSOs are discharges of raw sewage from municipal sanitary sewer systems. Unlike CSOs, SSOs are not designed to collect both stormwater and sanitary flows.[122] While wet weather is not the sole cause of such discharges, SSOs are often associated with wet weather, which, through infiltration and other sources, can create overloads in the sanitary sewer system.[123]

SSOs, like other pollutant discharges, are prohibited unless specifically permitted under the Act. No specific regulatory requirements exist for SSOs, and EPA's attempt at developing a rule to govern SSOs was halted before a proposed rule could be published in the *Federal Register*.[124] The unpublished proposal would have required sanitary sewer operators to develop and implement capacity assurance, management, operation, and maintenance programs for sanitary sewers to ensure that there is adequate wastewater collection and treatment capacity and the system is properly maintained.[125] It would also have prohibited overflows except where they were caused by factors beyond their reasonable control or severe natural conditions. EPA anticipated that it would issue the proposed rule in revised form by December 2003.[126] Whatever form these new rules take, they are likely to impose more stringent requirements to control SSOs.

CAFOs

A third category of wet weather discharges that has garnered growing attention are CAFOs. In February 2003, EPA issued new rules establishing technology-based effluent limits for discharges from CAFOs and expanding the permitting requirement to about 15,500 livestock operations nationally.[127] Under these rules, all "large" and many "medium" and "small" CAFOs (operations where animals are kept and raised in confined situations for designated periods) must apply for permits, which incorporate BMP controls and submission of annual reports regarding their operations, unless they can demonstrate "no potential to discharge."[128] EPA recognizes that most CAFOs will likely be covered by general permits.[129]

The new CAFO rule comes on the heels of recent enforcement actions brought by EPA, states, and citizens focused on discharges from CAFOs.[130] These actions have resulted in several decisions, including one in which the court held that runoff from land where manure and other wastes from CAFOs have been stored is a "point source" of water pollution subject to regulation under the Act.[131] In addition, the new CAFO rule is currently being challenged by industry and environmental groups in several federal courts of appeals.[132]

Finally, recent legislative proposals would expand the scope of CAFO CWA liability. For example, members of Congress and environmental organizations have called for the addition of so-called co-permitting provisions to make large agribusiness companies that hire contractors to raise animals jointly liable with such contractors for CWA violations.[133]

The Future of General Permits

The use of general permits is a key element of EPA's and the state's control of stormwater and other wet weather discharges. EPA relies on general permits to reduce the administrative burden of permitting numerous sources, an approach which the D.C. Circuit in *Costle*[134] suggested EPA

122. *See* http://cfpub.epa.gov/npdes/home.cfm?program_id=4.

123. *Id*.

124. *See* http://cfpub.epa.gov/npdes/sso/ssorule.cfm?program_id=4.

125. *Id*.

126. *See* 68 Fed. Reg. 30942, 31091 (May 27, 2003).

127. *See* 68 Fed. Reg. 7176 (Feb. 12, 2003); http://cfpub.epa.gov/npdes/home.cfm?program_id=7.

128. 68 Fed. Reg. at 7176. Note that these permits may also impose "any more stringent requirements necessary to protect water quality." *Id*. at 7207. A large animal feeding operation (AFO), for example, has at least 700 mature cows and must obtain a permit; a medium AFO has at least 200 mature cows and would need a permit if it had a man-made ditch or pipe which carries manure or wastewater or the animals come into contact with surface water. Small AFOs would need a permit only if designated by the permitting authority.

129. *Id*. at 7232. Note, however, that the use of general permits may be threatened by recent decisions discussed *infra* in the section entitled *The Future of General Permits*, and by a petition for review in the U.S. Court of Appeals for the Second Circuit which challenges the CAFO rule as enacting an impermissible "self-regulating" scheme. *See* Waterkeeper Alliance v. EPA, *petition for review filed* (2d Cir. Mar. 7, 2003) (No. 03-1607). This appears to be similar to one of the bases on which the Ninth Circuit struck down the Phase II stormwater general permitting program.

130. *See, e.g.*, http://www.usdoj.gov/opa/pr/2003/June/03_enrd_383.htm (June 25, 2003 U.S. Department of Justice press release announcing criminal plea agreement with Tyson Foods, Inc. regarding violations of the CWA at its Sedalia, Missouri plant); Save the Valley v. EPA, 223 F. Supp. 2d 997, 1015 (S.D. Ind. 2002) (final judgment in citizen suit under the CWA ordering Indiana Department of Environmental Management to put an NPDES permit program in place for CAFOs within 120 days); Community Ass'n for Restoration of the Env't v. Henry Bosma Dairy, 305 F.3d 943, 955 (9th Cir 2002) (holding, in CWA citizen suit brought by environmental organization, that fields where manure from CAFOs is stored and ditches therein are part of the CAFO and thus "point sources" of water pollution subject to regulation under the Act).

131. *See Community Ass'n for Restoration of the Env't*, 305 F.3d at 955. Industry sources have objected to this holding on the basis that it defines "point source" so broadly as to regulate agricultural practices which are otherwise exempt from CWA permitting requirements, including BMPs for waste handling.

132. *See, e.g.*, Natural Resources Defense Council v. EPA, *petition for review filed* (9th Cir. Mar. 7, 2003) (No. 03-71041); National Pork Producers Council v. EPA, *petition for review filed* (8th Cir. Mar. 7, 2003) (No. 03-4470); *Waterkeeper Alliance*, No. 03-1607 (*see supra* note 128); Sierra Club, Inc. v. EPA, *petition for review filed* (9th Cir. Mar. 7, 2003) (No. 03-71038). These petitions for review have been consolidated with the proceedings in the *Waterkeeper Alliance* case in the Second Circuit. *See, e.g.*, May 2, 2003, Ninth Circuit orders consolidating actions Nos. 03-71041 and 03-71038 in the Second Circuit.

133. Such a "co-permitting" proposal was introduced on July 15, 2003, by Sen. John Edwards (D-N.C.) as part of S. 1407 (the Concentrated Livestock Existing Alongside Nature Act (CLEAN)). As of September 25, 2003, the bill had been referred to the Committee on Agriculture, Nutrition, and Forestry, but no hearings had been scheduled, and no U.S. senator had cosponsored the bill.

adopt. A recent decision by the Ninth Circuit, however, has thrown the future viability of general permits, at least as typically used by EPA, into doubt.

In *Environmental Defense Center, Inc. v. U.S. Environmental Protection Agency*,[135] the court considered challenges by industry, municipalities, and environmental advocacy groups to the Phase II rules for small MS4s.[136] The environmental groups alleged that the general permitting scheme adopted in that rule allows small MS4s to design stormwater pollution control plans without inadequate regulatory and public oversight, fails to require EPA review of notices of intent and does not include requirements for public participation in the permitting process.[137] The court agreed. Although the Ninth Circuit acknowledged that EPA can use general permits, it claimed that the Phase II general permitting scheme differed from EPA's traditional general permitting approach and violated requirements of the CWA in two fundamental respects.

First, the court held that the rule impermissibly allowed small MS4s to "self-regulate" without adequate review by a permitting authority. The court found that a Notice of Intent (NOI) submitted by a small MS4 went beyond the procedural correspondence which EPA had typically used in prior incarnations of general permits, and, instead "crosses the threshold . . . to being a substantive component of the regulatory regime."[138] The Phase II rule was deficient, the court held, because the permitting authority was not required to review or confirm the certification submitted by a MS4 in its NOI that the MS4 has established a program that reduces its discharges to the "maximum extent practicable." The court held that for this scheme to be legal, the permitting authority must ensure that the individual programs are consistent with the requirements of the CWA.

Second, the court held that the Phase II NOI process failed to satisfy the public participation requirements of the CWA, which, the court found, requires that all permit applications be made available to the public and be made subject to public hearings. The court felt that reliance on federal and state freedom of information laws did not guarantee public availability of NOIs, nor did it satisfy the requirement to hold public hearings. The court apparently ignored the fact that the permits are issued through a rulemaking-type process that provides ample opportunity for public input.

Although the Ninth Circuit attempted to limit the reach of its holding to the Phase II rules, the implications of its reasoning threaten the entire general permit program. At bottom, the NOI process adopted for small MS4s is not fundamentally different from the NOI process used by EPA and the states for other stormwater discharges. While the court makes much of the fact that the small MS4's certification that it has a program that meets minimum measures and that this program is neither reviewed by EPA nor made available to the public, the same can be said about the NOIs used in the industrial and construction stormwater permit programs. In such NOIs, dischargers certify implementation of BMPs and SWPPPs, but the permitting authority does not review the actual plans, nor are they generally available to the public or made subject to a public hearing.[139]

As a result, the *Environmental Defense Center* decision, if adopted by other courts or applied to other general permitting programs, has a potential to undermine the use of the general permit as a viable permitting tool.[140] The benefit of general permits is that they reduce what would otherwise be an unmanageable administrative burden in permitting thousands of dischargers. If permitting authorities have to take a more active role in reviewing these applications and hold public hearings, these benefits will be lost. As the number of facilities required to have permits will likely continue to grow, the outcome would be administrative gridlock, a result that is to no one's advantage.[141]

Conclusion—The Present and Future of Wet Weather Discharge Regulation

The first 20 years of the CWA focused on the control of process and sanitary wastewater. There can be little debate that this initial effort was successful in improving the quality of the nation's streams and lakes. Over the last 10 years, there has been a slow transition to the next phase of controls—wet weather discharges associated with industry, agriculture, silviculture, municipalities, and wastewater treatment plants. Developing and implementing feasible controls for these wet weather discharges is likely to be a key focus in the future of the CWA. Unless wet weather flows are controlled, the country will not be able to achieve the water quality goals of the CWA. The cost of such controls will not be insignificant. EPA recently estimated that it will take $181 billion to meet the objectives of the CWA.[142] Of this amount, $50.6 billion is needed to address CSOs, $13.8 billion to address nonpoint sources, and $5.5 billion for stormwater discharge controls. Whether and how these needs are met is perhaps the greatest unanswered question in the control of wet weather discharges.

EPA, however, is not waiting for the answer to this question to step up its wet weather enforcement efforts. In April 2000, EPA's OECA demanded that regions develop and implement enforcement plans to address noncompliant CSOs and SSOs.[143] More recently, EPA announced a program targeting SSOs.[144] Similarly, EPA has undertaken an enforcement initiative against stormwater discharges associated

134. 568 F.2d at 1380-82.

135. 319 F.3d 398, 33 ELR 20139, *vacated with substitute opinion at* 2003 U.S. App. LEXIS 19073 (9th Cir. Sept. 15, 2003).

136. 64 Fed. Reg. at 68722.

137. *Environmental Defense Center*, 2003 U.S. App. LEXIS 19073, at *50-*55.

138. *Id*. at *43.

139. *See*, *e.g.*, 60 Fed. Reg. at 50811 (describing contents of NOI for multi-sector general permit for stormwater discharges associated with industrial activity).

140. *See, e.g.*, Minnesota Ctr. for Envtl. Advocacy v. Minnesota Poll. Control Agency, 660 N.W.2d 427 (Minn. Ct. App. 2003) (holding, as in *Environmental Defense Center*, that general permits for small MS4s violates public participation and public hearing requirements of the CWA).

141. *See* U.S. EPA, Office of Water, Protecting the Nation's Waters Through Effective NPDES Permits, A Strategic Plan FY 2001 and Beyond 1 (2001) (EPA-833-R-01-001) (describing growth of NPDES permit program from 100,000 figures in 1972 to 400,000 facilities in 2001 and more than 500,000 facilities in the future as stormwater requirements expand).

142. U.S. EPA, Clean Watersheds Needs Survey 2000 Report (2003), *available at* http://www.epa.gov/owm/mtb/cwns/2000rtc/toc.htm.

143. *See* April 27, 2000, Memorandum, Compliance and Enforcement Strategy Addressing Combined Sewer Overflows and Sanitary Sewer Overflows, from Steven A. Herman, Assistant Administrator, Office of Enforcement and Compliance Assurance, U.S. EPA, to Water Management Division Directors Regions I-X, Enforcement

with construction activities by home builders and large retail businesses, as well as other industrial stormwater discharges. These efforts have focused on alleged noncompliance with the stormwater discharge program and the failure to develop and implement stormwater pollution prevention plans.[145] Moreover, environmental (and other) groups are likely to bring citizen suits in an attempt to spur increasingly stringent controls on wet weather discharges and to force EPA to step up its efforts to control these discharges.[146]

These two facts—growing funding needs and stepped-up enforcement efforts—are a sure sign that the age of stormwater and other wet weather discharges is upon us. With the growing recognition that many of the nation's water quality problems result from wet weather discharges regulated and unregulated under the CWA,[147] there promises to be increased scrutiny over these discharges and a growing call for greater regulation, control, and enforcement.

Division Directors, Regions I, II, VI, and VIII, and Regional Counsels, Regions I-X, *available at* http://www.epa.gov/compliance/resources/policies/civil/cwa/strat312.pdf.

144. *See* U.S. EPA, OECA, Enforcement Alert: EPA Strategically Addressing Raw Sewage Discharges Across Nation to Protect Public, Environment (2003) (EPA 300-N-03-001), *available at* http://www.epa.gov/compliance/resources/newsletters/civil/enfalert/ssos.pdf.

145. *See, e.g.*, U.S. EPA, OECA, Enforcement Alert: EPA Addresses Pollutants in Stormwater Through Systematic Enforcement Strategy (2002) (EPA 300-N-02-004), *available at* http://www.epa.gov/compliance/resources/newsletters/civil/enfalert/swpollutants.pdf.

146. *See, e.g.*, John M. Carter II, *Control of Nonpoint Pollution Through Citizen Enforcement of Unpermitted Stormwater Discharges: A Proposal for Bottom-Up Litigation*, 33 ELR 10876 (Nov. 2003).

147. *See, e.g.*, U.S. EPA, Office of Water, Strategy for Water Quality Standards and Criteria (2003) (EPA-8233-R-03-010).