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STORMWATER & WASTEWATER UPDATE

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STORMWATER & WASTEWATER UPDATE

Recent Developments Impacting Municipalities

By Stephen J. Matzura and Adeolu Bakare[1]

I. Introduction

These program materials provide background on recent stormwater and wastewater developments that may impact municipalities in the United States. The materials only provide an overview and are not legal advice. Any particular legal issue should be addressed by the municipality's solicitor and outside environmental counsel with consideration of federal, state, and local laws and regulations.

Under the federal Clean Water Act ("CWA"), the National Pollutant Discharge Elimination System ("NPDES") permitting program makes it illegal to discharge pollutants into waters of the United States without a permit. 33 U.S.C. §§ 1311, 1342. State environmental agencies generally are responsible for administering the NPDES program through a system of "cooperative federalism." An NPDES permit, including for stormwater and wastewater discharges, imposes effluent limitations and other conditions on dischargers.

Over the past several years, the U.S. Environmental Protection Agency ("EPA") and litigants have been increasingly focused on aging municipal infrastructure, the stressors placed on it by wet weather and significant storms, and resulting pollution. EPA enforcement and citizen suits have targeted pollution from municipal separate storm sewer systems ("MS4s") and publicly owned treatment works ("POTWs"), including two types of municipal wastewater collection systems: separate sanitary sewer systems ("SSSs") and combined sewer systems ("CSSs"). MS4s are regulated because they carry pollutants from precipitation and runoff to surface waters. Insufficient capacity for MS4s could also cause flooding. SSSs and CSSs ultimately discharge to surface waters and can cause pollution exceeding POTW permit limits, particularly during wet-weather events. CSSs are designed to collect both stormwater and sanitary wastewater for delivery to the treatment plant. SSSs are designed to carry only sanitary wastewater and typically have some allowance for higher flows that occur during storm events to handle limited amounts of stormwater or groundwater that enter the system through infiltration and inflow ("I&I").[2]

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[2] *See* 83 Fed. Reg. 44623 (Aug. 31, 2018).

EPA has succinctly described the challenges faced by these systems under wet-weather conditions:

> Municipal wastewater collection systems collect domestic sewage and other wastewater from homes and other buildings and convey it to wastewater treatment plants for treatment and disposal. The collection and treatment of municipal sewage and wastewater is vital to the public health in our cities and towns. In the United States, municipalities historically have used two major types of sewer systems--separate sanitary sewer systems and CSSs.
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> Municipalities with separate sanitary sewer systems use that system solely to collect domestic sewage and convey it to a publicly owned treatment works (POTW) treatment plant for treatment. These municipalities also have separate sewer systems to collect surface drainage and stormwater, known as "municipal separate storm sewer systems" (MS4s). Separate sanitary sewer systems are not designed to collect large amounts of runoff from rain or snowmelt or provide widespread surface drainage, although they typically are built with additional allowance for some amount of stormwater or groundwater that enters the system as a result of storm events.
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> The other type of sewer system, CSSs, is designed to collect both sanitary sewage and stormwater runoff in a single-pipe system. This type of sewer system provides the primary means of surface drainage by carrying rain and snowmelt away from streets, roofs, and other impervious surfaces. CSSs were among the earliest sewer systems constructed in the United States and were built until the first part of the 20th century. While some municipalities have undertaken projects to replace CSSs with separate sanitary sewer systems, such projects can be very expensive so many CSSs still exist in the United States.
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> Under normal, dry weather conditions, combined sewers transport all of the wastewater collected to a sewage treatment plant for treatment. However, under wet weather conditions, when the volume of wastewater and stormwater exceeds the capacity of the CSS or treatment plant, these systems are designed to divert some of the combined flow prior to reaching the POTW treatment plant and to discharge combined stormwater and sewage directly to nearby streams, rivers and other water bodies. These discharges of sewage from a CSS that occur prior to the POTW treatment plant are referred to as combined sewer overflows or CSOs. Depending on the CSS infrastructure design, CSO discharges may be untreated or may receive some level of treatment, such as solids settling in a retention basin and disinfection, prior to discharge.
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> CSO discharges contain human and industrial waste, toxic materials, and debris as well as stormwater. CSO discharges can be harmful to human

> health and the environment because they introduce pathogens (*e.g.*, bacteria, viruses, protozoa) and other pollutants to receiving waters, causing beach closures, impairing water quality, and contaminating drinking water supplies and shellfish beds. CSOs can also cause depleted oxygen levels in receiving waters which can impact fish and other aquatic populations. . . .
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> CSSs serve a total population of about 40 million people nationwide. Most communities with CSSs are located in the Northeast and Great Lakes regions, particularly in Illinois, Indiana, Maine, Michigan, New York, Ohio, Pennsylvania, and West Virginia. Although large cities like Chicago, Cleveland, and Detroit have CSSs, most communities with CSSs have fewer than 50,000 people. Most CSSs have multiple CSO discharge locations (also referred to as outfalls), with some larger communities with CSSs having hundreds of CSO discharge locations.[3]

Even with the change to the administration, EPA has continued enforcement in the area of stormwater and POTWs, which remains among its National Compliance Initiatives (formerly known as the "National Enforcement Initiatives"). Information about enforcement in these areas is available on EPA's webpage.[4] This includes a long list of consent decrees for CSOs,[5] with links to individual webpages containing more information on each settlement. Civil penalties alone can total in the millions of dollars, but the real cost is in achieving and maintaining ongoing compliance. For CSOs, the Metropolitan St. Louis Sewer District was hit with a $1.2 million civil penalty, and costs of upgrades to the sewer system and treatment plant are an estimated $4.7 *billion* over 23 years.[6]

For MS4s, there have been a number of consent decrees over the past few years, which are available on EPA's webpage.[7] For example, the City of Rockford, Illinois, received a civil penalty of $329,395 for failing to comply with its MS4 permit. Stormwater compliance issues may also lead to sewage compliance issues, and vice-versa. For instance, the City of West Haven, Connecticut, originally settled with EPA in 2014 for violations related to SSO discharges,

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[3] 83 Fed. Reg. 712, 715 (Jan. 8, 2018).
[4] EPA, National Compliance Initiative: Keeping Raw Sewage and Contaminated Stormwater Out of Our Nation's Waters, https://www.epa.gov/enforcement/national-compliance-initiative-keeping-raw-sewage-and-contaminated-stormwater-out-our.
[5] EPA, Status of Civil Judicial Consent Decrees Addressing Combined Sewer System, https://www.epa.gov/sites/production/files/2017-05/documents/epa-nei-css-consent-decree-tracking-table-050117.pdf.
[6] EPA, St. Louis Clean Water Act Settlement, https://www.epa.gov/enforcement/st-louis-clean-water-act-settlement.
[7] EPA, Civil Cases and Settlements, https://cfpub.epa.gov/enforcement/cases/.

which then led to an EPA audit of stormwater and a modified consent decree in 2016 to address MS4 permitting violations.[8]

EPA's online lists are not exhaustive, as there are additional settlements and lawsuits pending, including in Houston, Texas. In a complaint filed on September 20, 2018, the United States and the State of Texas (which has primacy over the NPDES program) filed a complaint for injunctive relief and civil penalties against the City of Houston in federal district court for illegal discharges and failure to comply with its TPDES permit, as a result of I&I and SSOs from the POTW (including at least 40 wastewater treatment plants and their collection systems).[9]

On the next day, the Bayou City Waterkeeper filed a similar complaint under the citizen-suit provision of the CWA and attached a notice of intent to sue that alleged and listed 9,319 SSOs and bypass discharges from July 2013 to June 2018.[10] Under the CWA citizen-suit provision at 33 U.S.C. § 1365, citizens may provoke EPA action against a permittee, or compel a court to direct such action, if it is not being diligently prosecuted. The provisions also allow citizen claims against EPA as a defendant to the extent that EPA fails to perform a *nondiscretionary* duty under the CWA. Such citizen suits have been common in the context of both stormwater and wastewater over the past several years.

At the same time as EPA's enforcement initiatives on these topics, significant storm events have enhanced the focus on these issues. Citizen suits may become even more common. These issues are not going away without significant investment and upgrades to infrastructure, at great expense to municipalities.

II. Municipal Stormwater

In 1987, the CWA was amended to include regulation of stormwater as part of the NPDES permitting program. Permits for discharges from municipal storm sewers (i) may be issued on a system- or jurisdiction-wide basis; (ii) must include a requirement to effectively prohibit non-stormwater discharges into the storm sewers (illicit discharges); and (iii) must require controls to reduce the discharge of pollutants to the "maximum extent practicable," including management practices, control techniques and system, design, and engineering methods, and other provisions that EPA or the authorized state determines appropriate. 33 U.S.C. § 1342(p)(3)(B). This "maximum extent practicable standard" is known as "MEP," and it is intended to be a flexible standard that accounts for the difficulty in regulating stormwater runoff. It includes imposition of "best management

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[8] EPA, The City of West Haven, Connecticut Clean Water Act Settlement, https://www.epa.gov/enforcement/city-west-haven-connecticut-clean-water-act-settlement#violations.

[9] Complaint, *United States v. City of Houston*, No. 4:18-cv-3368 (S.D. Tex. Sept. 20, 2018).

[10] Complaint, *Bayou City Waterkeeper v. City of Houston*, No. 4:18-cv-3368 (S.D. Tex. Sept. 21, 2018).

practices," or "BMPs," which are a type of effluent limitation for permitting purposes.

The 1987 CWA amendments directed EPA to promulgate regulations for permitting discharges from large and medium MS4s and from additional stormwater sources that need to be regulated to protect water quality. § 1342(p)(4), (6). The primary federal stormwater regulations are found at 40 C.F.R. Part 122, Subpart B (including the Phase I and Phase II regulations described below). EPA promulgated Phase I stormwater regulations in 1990 requiring an NPDES permit for the following categories of stormwater dischargers: Large MS4s (generally, systems located in a place with population of 250,000 or more); and Medium MS4s (population of 100,000 or more but less than 250,000). *See* 40 C.F.R. § 122.26(a). In December 1999, EPA promulgated the Phase II stormwater regulations (to be implemented by December 2002) which require NPDES permits for small MS4s (generally, not large or medium; serving a population of less than 100,000). *See* § 122.26(a).

Small MS4s are now required to obtain an NPDES permit, but they are handled differently than large and medium MS4s. Generally, small MS4s will have general stormwater permits that implement and enforce a BMP watershed-based stormwater program that incorporates six elements, known as "minimum control measures" ("MCMs"): (1) public education programs on stormwater impact; (2) public involvement/participation in decision-making; (3) elimination or treatment of discharges not composed entirely of stormwater; (4) erosion and sedimentation controls for construction activities; (5) requiring BMPs for post-construction stormwater management for all new developments and redevelopment projects; (6) good housekeeping/pollution prevention for municipal operations. *See* § 122.34(b).

The Phase II regulations permit the use of existing state and local regulatory provisions to meet the NPDES MS4 requirements. Many states utilize a general NPDES MS4 permit to satisfy the majority of the MS4 requirements for the majority of systems. The Phase II regulations permit the use of existing state and local regulatory provisions to meet the NPDES MS4 requirements.

A. MS4 Developments

1. Total Maximum Daily Loads ("TMDLs") and Water-Quality Standards

TMDLs and water-quality standards are driving changes to traditional requirements for MS4 permits. Many states utilize a general NPDES MS4 permit to satisfy the majority of the MS4 requirements for the majority of systems.[11]

[11] *See, e.g.*, EPA, Massachusetts Small MS4 General Permit, https://www3.epa.gov/region1/npdes/stormwater/MS4_MA.html.

Unlike typical NPDES permits, MS4 permits generally do not require numerical effluent limitations. *Defs. of Wildlife v. Browner*, 191 F.3d 1159, 1166 (9th Cir. 1999). However, permitting authorities may include numerical limitations or limitations based on water quality standards. *See, e.g., NRDC v. Cty. of L.A.*, 725 F.3d 1194, 1199 (9th Cir. 2013) (describing MS4 permit that prohibited stormwater discharges that "cause or contribute to the violation" of incorporated water quality standards).

Under the CWA, states are responsible for setting water quality standards by assigning designated "uses" for waters (e.g., fishery) and then developing criteria to protect the uses and prevent degradation. *See* 33 U.S.C. § 1313. The CWA requires states to identify and prioritize "impaired" waters where implementation of technology-based effluent limits (NPDES permit limits) is insufficient to meet the water quality standards applicable to those waters, and to identify the specific pollutants and sources causing the impairment. 33 U.S.C. § 1313(d)(1)(A). That is, states are required to identify all waters where water quality is not sufficient to meet the designated uses for those streams, identify the pollutant(s) causing the impairment, and identify each source of the pollutant(s), including both point sources and nonpoint sources. The first such list was due in October 1992, and the states must update those lists by April 1 of every even year thereafter. 40 C.F.R. § 130.7(d).

A TMDL represents the maximum amount of pollutant loading that a waterbody can receive from all combined sources and assimilate without exceeding applicable state water quality standards, and an allocation of that amount to the various sources of that pollutant. A TMDL is expressed generally as the sum of (1) the individual wasteload allocations ("WLAs") from point sources, (2) the load allocation ("LA") for nonpoint sources, and (3) a margin of safety ("MOS"). 40 C.F.R. §§ 130.2, 130.7. In a sense, a TMDL is a pollution reduction goal and a plan (allocation scheme) to achieve that goal. TMDL = LA + WLAs + MOS. For nonpoint sources, the CWA and its regulations provide that best management practices ("BMPs") should be utilized to achieve the load allocations. For point sources, the waste load allocations are to be converted into water quality based effluent limits ("WQBELs") and incorporated into NPDES permits. *See* 40 C.F.R. § 122.44(d).

Expansive TMDLs are possible based on impairment to a larger watershed. EPA established the Chesapeake Bay TMDL in 2010 to reduce nitrogen, phosphorous, and sediment discharged to the Bay from Washington, D.C., and the six surrounding Bay states (the "Bay jurisdictions"). The Bay TMDL establishes pollutant reductions to be met by 2025 through the Bay jurisdictions' "Watershed Implementation Plans" ("WIPs") that explain how reductions will be achieved. Challenges to the Bay TMDL have been rejected by the Third Circuit. *See Am. Farm Bureau Fed'n v. EPA*, 792 F.3d 281 (3d Cir. 2015). For more information on the Bay TMDL implementation, see Stephen J. Matzura & Craig P. Wilson, *Water Quality,* Chapter 4 in Pennsylvania Bar Institute, Pennsylvania

Environmental Law and Practice, at 108-13 (8th ed. 2015) (Scott A. Gould & Andrew T. Bockis, eds.).

Impaired waters and corresponding TMDLs are present throughout the country and could affect MS4 permit conditions. MS4s are not explicitly subject to the CWA requirement that imposes effluent limitations necessary to meet water quality standards. *See* 33 U.S.C. § 1311(b)(1)(C). However, the regulations set up a permitting scheme under which small MS4 operators "must comply with any more stringent effluent limitations in [the small MS4] permit, including permit requirements that modify, or are in addition to, the minimum control measures based on an approved total maximum daily load (TMDL) or equivalent analysis." "The permitting authority may include such more stringent limitations based on a TMDL or equivalent analysis that determines such limitations are needed to protect water quality." 40 C.F.R. § 122.34(e)(1).

Accordingly, states have imposed TMDL-based requirements in stormwater permits for MS4s. For example, Pennsylvania has changed MS4 requirements for TMDL watersheds by requiring pollutant reduction plans and TMDL plans to meet limits.[12] In Maryland, several organizations challenged MS4 permits issued to counties, which are large MS4s, because the permits incorporated provisions to meet the Bay TMDL. *Md. Dep't of the Env't v. Riverkeeper*, 134 A.3d 892 (Md. 2016). The permits in *Riverkeeper* were more stringent than typical MS4 permits because they attempted to account for the Bay TMDL reductions by imposing conditions to reduce impervious surface areas. They required the counties, by the end of the five-year permit term, to restore 20% of the impervious surface areas in their watersheds that have not been restored to the MEP through use of BMPs. This requirement served as a "surrogate TMDL target," setting a minimum restoration requirement at 20%. The challengers argued that this permit condition was inconsistent with MEP under the CWA. The court disagreed, holding that this was a performance standard established by Maryland consistent with the broad authority granted to states under the CWA. The court held that the requirement complies with the MEP for MS4s standard because "33 U.S.C. § 1342(p)(3)(B)(iii) does not require a specific performance standard, and because the concepts of restoration and impervious surface 'not restored to the MEP' are sufficiently clear as to the controls that the Counties must install." *Id.* at 914-15. The court also rejected arguments that the Bay TMDL did not justify this permit condition. Maryland determined that the 20% restoration requirement is a key strategy to comply with the Bay TMDL pursuant to express provisions in its WIP. The inclusion of such requirements in Maryland's WIP satisfied the court that inclusion of similar requirements in the MS4 permits was supported by substantial evidence and not arbitrary or capricious. *Id.* at 915-16.

[12] *See* DEP, PRP/TMDL Plans, https://www.dep.pa.gov/Business/Water/CleanWater/StormwaterMgmt/Stormwater/Pages/PRPTMDL-Plans.aspx.

The types of TMDL-based requirements described above will increase the costs for municipalities with respect to their stormwater programs. For example, in *Riverkeeper*, the court noted potential funding issues, explaining that Maryland legislation had required the counties "to adopt local laws or ordinances necessary to establish an annual stormwater remediation fee and a local watershed protection and restoration fund to provide financial assistance for the implementation of local stormwater management plans." Maryland "had investigated the costs of meeting the Bay TMDL and commissioned a study that revealed that 'stormwater BMPs likely represent the largest costs to local governments in implementing the TMDL.'" *Id.* at 908. The permits in *Riverkeeper* also provided for civil and criminal penalties for failure to comply with permit conditions.

In response to developments like those described above, municipalities are continuing to form stormwater utilities and develop stormwater fees, as explained further below.

2. Citizen Suits Focused on Water Quality and Impaired Waters

Recent federal cases illustrate how interest groups are attempting to require additional stormwater regulation by EPA. The CWA regulations allow citizens to petition EPA to require an NPDES permit for stormwater discharges that contribute to violations of water quality standards. 40 C.F.R. § 122.26(f)(2). EPA may exercise its "residual designation" authority to require stormwater permits where not currently required if EPA "determines that the discharge, or category of discharges within a geographic area, contributes to a violation of a water quality standard or is a significant contributor of pollutants to waters of the United States." § 122.26(a)(9)(i)(D); *see also* 33 U.S.C. § 1342(p)(2)(E) & (6).[13]

Thus, although not directly focused on municipal stormwater, *L.A. Waterkeeper v. Pruitt*, No. 2:17-cv-03454-SVW-KS, 2018 U.S. Dist. LEXIS 150270 (C.D. Cal. Aug. 9, 2018), can be important in the regulation of stormwater more broadly. The court held that EPA acted arbitrarily and capriciously by failing to regulate unpermitted stormwater discharges from privately owned commercial, industrial, and institutional sources that indisputably contribute to violations of water quality standards. In *L.A.* Waterkeeper, interest groups filed two petitions with EPA for watersheds in the L.A. area and requested that permits be required for unpermitted stormwater discharges from privately owned commercial, industrial, and institutional sources that contribute to violations of water quality standards. EPA denied the petitions primarily because California already has stormwater permitting in place for municipalities through MS4 permits and for industrial facilities.

[13] *See, e.g.*, EPA, Residual Designation Examples, https://www.epa.gov/npdes/residual-designation-examples.

The plaintiffs filed a complaint in federal district court, arguing that EPA failed to perform a nondiscretionary duty under the CWA citizen-suit provision, 33 U.S.C. § 1365(a)(2); and in the alternative, EPA acted arbitrarily and capriciously in violation of the Administrative Procedure Act ("APA"), 5 U.S.C. § 706(2). Although the court dismissed the action based on the citizen-suit provision, it held that EPA violated the APA. Specifically, "once EPA determined 'there are sufficient data available to demonstrate that stormwater discharges are contributing to water quality impairments in the [Watersheds],' the statute required EPA to engage in the permitting process or prohibit the discharge. 33 U.S.C. §§ 1311(a), 1342(p)(1)-(2). But EPA left the stormwater discharges at issue unregulated in violation of the text of the Clean Water Act. Declining to engage in the permitting process for the stormwater discharges at issue was therefore arbitrary and capricious because it was contrary to law."[14]

Further, the court explained what EPA must do if it were to decline to regulate:

> If the EPA were to decline to engage in the permitting process, it must ground that decision in the text of the statute. *Id.* In other words, EPA's reasons for declining to issue permits must relate to whether the stormwater at issue contributes to a violation of a water quality standard. 33 U.S.C. § 1342(p)(2)(E). One of the factors EPA used in declining Plaintiffs' petitions would be permissible because it is grounded in the text of the Clean Water Act. This factor was the sufficiency of the available data on which to make a determination that stormwater discharges from the sites at issue contribute to a violation of water quality standards. Cirino Decl. Exhibit C at 5-16, Exhibit D at 5-17. EPA could decline to regulate if it determined that it had insufficient data to make a conclusive determination that the stormwater discharges at issue contributed to water quality violations. Another permissible factor might be a finding by EPA that the contribution of the stormwater discharge at issue to water quality violations was only *de minimis*. Both of these factors would be permissible because they keep EPA's focus squarely on the criterion Congress set out in the text of the statute: whether the stormwater discharges contribute to a violation of water quality standards. 33 U.S.C. § 1342(p)(2)(E).
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> EPA does not point the Court to a provision of the Clean Water Act that indicates that EPA may consider whether other federal, state, or local programs adequately address the known stormwater discharge contribution to a violation of water quality standards. Therefore, EPA acted arbitrarily and capriciously in denying Plaintiffs' petition by considering a factor "divorced from the statutory text" in its denial." *See Massachusetts*, 549 U.S. at 532.[15]

In *Blue Water Balt., Inc. v. Pruitt*, Civil Action No. GLR-17-1253, 2018 U.S. Dist. LEXIS 18456 (D. Md. Feb. 5, 2018), interest groups filed an action along

[14] *Id.* at *15.
[15] *Id.* at *18-20.

the same lines as *L.A. Waterkeeper*, but for discharges in Baltimore, Maryland, with a petition for review in the Fourth Circuit. Like the court in *L.A. Waterkeeper*, the court in *Blue Water* dismissed the claim based on the citizen-suit provision because EPA does not have a nondiscretionary duty under the CWA and regulations related to stormwater discharges under § 122.26. And, like the court in *L.A. Waterkeeper*, the court in *Blue Water* did not dismiss the APA claims. However, unlike in *L.A. Waterkeeper* where EPA had already determined that the discharges contributed to violations of water quality standards, in *Blue Water*, EPA denied the petitions without determining whether the discharges contributed to violations of water quality standards. Accordingly, the plaintiffs are seeking an order directing the EPA to determine whether the discharges contribute to violations of water quality standards in the Back River watershed. The district court determined that it has initial jurisdiction to decide the APA claims, which are pending a decision on summary judgment motions (as of the date this presentation was last updated).

In *Conservation Law Found., Inc. v. Pruitt*, 881 F.3d 24 (1st Cir. 2018), plaintiffs filed a citizen suit alleging that EPA had a nondiscretionary duty to notify certain third-party dischargers in Rhode Island and Massachusetts that individual stormwater permits were required for their discharges to impaired waters. The plaintiffs' argument relied on the TMDLs implemented for certain impaired waters, as well as a regulatory provision that allowed EPA "to determine, on a case-by-case basis, that certain . . . storm water discharges . . . that do not generally require an individual permit may be required to obtain an individual permit because of their contributions to water pollution."[16] The plaintiffs claimed that the TMDL process itself amounted to a determination by EPA that the dischargers required a permit. The court rejected this argument, including because EPA did not focus on any one particular discharger, but rather on all discharges as a whole, during the TMDL process. In other words, there was a lack of specificity in the TMDL with respect to each discharger, so EPA did not determine whether a permit is required "on a case-by-case basis" as provided in the regulation. Even assuming the TMDL was a determination that a permit is required, the court explained that EPA did not have a duty to require an individual stormwater permit, as plaintiffs argued, because a general permit was an option. This illustrated that EPA did not have a nondiscretionary duty to require permits from stormwater dischargers based on a TMDL.

3. Other MS4 Developments

EPA issued a final rule effective January 9, 2017, to amend the regulations governing small MS4s in response to a Ninth Circuit case which held that two aspects of EPA's general permitting scheme were contrary to the CWA. 81 Fed. Reg. 89320 (Dec. 9, 2016) (addressing remand in *Envtl. Def. Ctr. v. EPA*, 344 F.3d 832 (9th Cir. 2003) ("*EDC*")). The Ninth Circuit held that the general permit option under the Phase II regulations violated the CWA because:

[16] 40 C.F.R. § 124.52(a).

> It did not require controls to reduce the discharge of pollutants to the MEP standard pursuant to 33 U.S.C. § 1342(p)(3)(B)(iii), because the regulations did not require NPDES permitting authorities to review the six MCMs to ensure that the measures small MS4s selected would, in fact, reduce discharges to the MEP. *EDC*, 344 F.3d at 855. The court explained that "stormwater management programs that are designed by regulated parties must, in every instance, be subject to meaningful review by an appropriate regulating entity to ensure that each such program reduces the discharge of pollutants to the maximum extent practicable." *Id.* at 856.

It did not contain express requirements for public participation in the general permitting process and, therefore, violated the CWA's requirements for participation in the NPDES permitting process. The regulations failed to make notices of intent ("NOIs") for coverage under the general permit program "available to the public" or subject to public hearings as required by the CWA. *Id.* at 857-58. Accordingly, the court vacated and remanded these portions of the rule to EPA.

Neither the *EDC* decision, nor EPA's 2016 rule, purport to affect the substantive requirements for MS4 permits, such as the MCMs. However, they provide an opportunity for municipalities' NOIs that seek general permit coverage to be subject to more scrutiny by permitting authorities and the public. EPA's rulemaking addresses the remand by allowing two options for general permitting addressed in the regulations at 40 C.F.R. §§ 122.28 and 122.33 – 122.35.

III. Wastewater and POTWs

NPDES permits for a POTW's treatment plant generally must contain effluent limitations for secondary treatment. 33 U.S.C. §§ 1311(b)(1)(B), 1342(a); 40 C.F.R. Part 133, § 122.44(a)(1). Most POTWs use a series of processes to treat wastewater prior to discharge, which may include preliminary treatment or screening to remove large solids; primary clarification (or preliminary sedimentation) to remove floating and settleable solids; biological treatment (also referred to as secondary treatment) to remove biodegradable organic pollutants and suspended solids; and disinfection to deactivate pathogens.[17] The secondary treatment regulations do not require the use of any specific type of technology to achieve the effluent quality.[18]

NPDES permits also require meeting any more stringent effluent limitations that are necessary to meet applicable water quality standards. *See* §§ 1311(b)(1)(C), 1342(a); 40 C.F.R. § 122.44(d). Some facilities also provide more advanced treatment, which is designed to reduce constituents, such as nitrogen and

[17] *See* 83 Fed. Reg. 44623 (Aug. 31, 2018).
[18] *Iowa League of Cities v. EPA*, 711 F.3d 844, 856 (8th Cir. 2013) (citing 48 Fed. Reg. 52,258, 52,259 (Nov. 16, 1983)).

phosphorus, that are not removed in any significant quantity by traditional biological treatment processes.

The CWA separately regulates CSOs, which consist of discharges of stormwater and sanitary sewer combined into a single system. 33 U.S.C. § 1342(q). The CWA requires compliance with EPA's CSO Control Policy published in 1994 that remains in effect today.[19] SSSs and CSSs typically have "overflows" or "bypasses" whereby untreated or partially treated storm and sanitary sewer are discharged during wet-weather events. Urban areas throughout much of the Northeast and Great Lakes regions, as well as the upper Northwest, were developed with CSSs. There are over 700 combined sewers in the United States. When first implemented, these systems served the important purposes of providing for evacuation of sanitary sewer when indoor plumbing became commonplace, and preventing flooding by removing stormwater from urban areas. With the regulation of sewer discharges and requirements for treatment plants, the plants could not be appropriately sized to treat flows during severe wet-weather conditions. Overflows and bypasses were implemented to ensure evacuation of the materials, but typically result in the discharge of raw, albeit diluted, sewage to rivers, streams, and lakes. CSOs have been on EPA's priority enforcement list for much of the past decade. EPA has required various municipalities to reduce the number of CSOs, to implement green infrastructure projects to reduce the overall amount of stormwater reaching the systems, and treat certain problematic CSOs.

A POTW's NPDES permit must comply with federal regulations regarding "bypass," which is the "intentional diversion of waste streams from any portion of a treatment facility." 40 C.F.R. § 122.41(m)(1). As explained by the Eighth Circuit:

> Bypass is generally prohibited unless there are "no feasible alternatives." § 122.41(m)(4). The bypass rule "is not itself an effluent standard," but instead it "merely 'piggybacks' existing requirements." 53 Fed. Reg. 40,562, 40,609 (Oct. 17, 1988). The rule's purpose is to "ensure that users properly operate and maintain their treatment facilities . . . [pursuant to applicable] underlying technology-based standards," by requiring incoming flows to move through the facility as it was designed to be operated. *Id*. Like the more general secondary treatment regulations, the bypass rule does not require the use of any particular treatment method or technology. *Id.; see also NRDC. v. EPA*, 822 F.2d 104, 123, 261 U.S. App. D.C. 372 (D.C. Cir. 1987).[20]

The issue of CSOs and bypasses has been subject to recent regulatory developments and litigation.

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[19] 59 Fed. Reg. 18688 (April 19, 1994), available at https://www.epa.gov/sites/production/files/2015-10/documents/owm0111.pdf.

[20] *Iowa League of Cities v. EPA*, 711 F.3d 844, 859 (8th Cir. 2013).

A. POTW Developments

1. Blending

In 2013, the Eighth Circuit decided *Iowa League of Cities v. EPA*, 711 F.3d 844 (8th Cir. 2013), vacating EPA guidance documents that effectively prohibited "mixing zones" and "blending" for POTWs. "In effect, a mixing zone allows the permit holder to create a higher concentration of pollutants in navigable waters near the immediate point of discharge, as long as the discharge is sufficiently diffused as it moves through the larger body of water. The requisite water quality criteria, then, need not be met at the end of the pipe. It is undisputed that in at least some instances, states are allowed to approve discharge permit applications that incorporate mixing zones."[21] Blending is a practice to address wet-weather conditions, which the court described as follows:

> POTWs typically move incoming flows through a primary treatment process and then through a secondary treatment process. Most secondary treatment processes are biological-based, but the secondary treatment regulations do not "specify the type of treatment process to be used to meet secondary treatment requirements nor do they preclude the use of non-biological facilities." 68 Fed. Reg. 63,042, 63,046 (Nov. 7, 2003). At many POTWs, primary treatment capacity exceeds secondary treatment capacity. Biological-based processes in particular are sensitive to deviations in volume of flow and pollutant level. Correspondingly, during periods of rain and snow, large influxes of stormwater can overwhelm a facility's standard biological secondary treatment processes, potentially rendering them inoperable. *Id*. Blending can prevent this, by channeling a portion of "peak wet weather flows" around biological secondary treatment units and through non-biological units, recombining that flow with its counterpart that traveled through the biological units, and then discharging the combined [**15] stream. *Id*. at 63,045. Just like non-blended streams, the combined output must still comply with all applicable effluent limitations, including the water quality levels specified in the secondary treatment regulations. *Id*. at 63,047.[22]

The plaintiffs, Iowa League of Cities, challenged EPA letters that clarified its approach to mixing zones and blending (including "ACTIFLO," which is a process that involves use of a bonding agent to enhance settling of solids).

Regarding mixing zones, the court held that EPA's June 2011 letter "flatly proclaims that such mixing zones 'should not be permitted.' . . . The EPA eviscerates state discretion to incorporate mixing zones into their water quality standards with respect to this type of body of water. In effect, the EPA has created a new effluent limitation: state permitting authorities no longer have discretion to craft policies regarding bacteria mixing zones in primary contact recreation

[21] *Id.* at 857.
[22] *Id.* at 858.

areas."[23] The court vacated the June 2011 letter because it created a new legal norm based on EPA's authority to promulgate effluent limitations without following APA notice and comment procedures. However, the court also held that EPA's approach to mixing zones was not obviously precluded by the CWA, so EPA could promulgate such a rule if it follows appropriate procedures.

In contrast, the court vacated EPA's approach to blending in the September 2011 letter for not only failure to follow notice-and-comment procedures, but also because EPA lacked the statutory authority to impose secondary treatment on flows within facilities (rather than end-of-pipe discharge into navigable waters). EPA's position in the September 2011 letter was essentially that "ACTIFLO units fail to 'provide treatment necessary to meet the minimum requirements provided in the secondary treatment regulations at 40 CFR 133.' Because ACTIFLO by itself is not considered a satisfactory secondary treatment unit, the EPA views the practice of intentionally routing flows away from a facility's traditional biological secondary treatment units and through ACTIFLO as a bypass that would only be allowed upon a showing of no feasible alternatives."[24]

Since Iowa League of Cities, EPA made statements that it would not follow the Eighth Circuit's decision outside of that Circuit (North Dakota, South Dakota, Nebraska, Missouri, Minnesota, Iowa, and Arkansas). Interested parties have attempted to understand EPA's position on blending, but the issue remains unclear. *See, e.g.*, *Hall & Assocs. LLC v. U.S. EPA*, 315 F. Supp. 3d 519, 526 (D.D.C. 2018) ("[I]n the wake of *Iowa League of Cities*, H&A submitted a records request to the EPA under the FOIA, asking for documents relating to the agency's approach to blending *outside* of the Eighth Circuit."); *Hall & Assocs. v. U.S. EPA*, 77 F. Supp. 3d 40, 42 (D.D.C. 2014) (same). They have also attempted to challenge EPA's statements that it would limit the Eighth Circuit's interpretation geographically, but unsuccessfully to date. *See Ctr. for Regulatory Reasonableness v. EPA*, 849 F.3d 453, 454 (D.C. Cir. 2017) (holding that the D.C. Circuit lacks jurisdiction to directly review EPA's "non-acquiescence statement").

In April 2018, EPA announced it would evaluate a new Peak Flows Management Rule "to establish a transparent and lasting framework to permitting peak flow management options" during wet weather events at POTWs with SSSs.[25] On August 31, 2018, EPA published a notice soliciting input on possible approaches to updating NPDES regulations related to the management of peak wet weather flows at POTW treatment plants serving separate sanitary sewer collection systems (EPA did not propose the scope to apply to combined systems at this time). 83 Fed. Reg. 44623 (Aug. 31, 2018). Specifically, EPA is considering addressing "blending" and other methods of controlling peak flows through

[23] *Id.* at 974.
[24] *Id.* at 860.
[25] See EPA, Peak Flows at Sewage Treatment Plants, https://www.epa.gov/npdes/peak-flows-sewage-treatment-plants#rule.

regulatory action. Three planned listening sessions are planned on October 16, 24, and 30, 2018. Written comments may be posted to the docket by October 31, 2018.[26]

2. Great Lakes Basin

In January 2018, EPA finalized public notification requirements for CSO discharges to the Great Lakes Basin[27] pursuant to a directive to EPA in appropriations legislation, specifically Section 425 of the Consolidated Appropriations Act of 2016,[28] and EPA's authority under the CWA. The purpose of the legislation and rule is to provide notice so that the public can take steps to minimize potential exposure to pathogens. The legislation provides minimum requirements for notification which are implemented through changes codified at 40 C.F.R. Part 122.

The notification requirements at 40 C.F.R. § 122.38 became effective for existing permittees on February 7, 2018 (the notification requirements will be a permit condition when next reissued). By August 7, 2018, CSO permittees were required to submit a public notification plan to the NPDES permitting authority, and a plan is required as part of a permit application pursuant to § 122.38(j)(8)(iii). The notification requirements apply directly to existing permittees beginning November 7, 2018, and include the following:

- ***Signage***, including at CSO discharge points potentially impacted public access areas, that includes the name of the permittee; a description of the discharge and notice that sewage may be present in the water; and permittee contact information, including a telephone number, NPDES permit number and CSO discharge point number as identified in the NPDES permit.

- ***Initial notification of local (or state) public health department and other potentially affected public entities***, as soon as possible, but no later than four (4) hours after becoming aware by monitoring, modeling or other means that a CSO discharge has occurred. Such initial notice shall, at a minimum, include the following information: the water body that received the discharge(s); the location of the discharge(s) and identification of the public access areas potentially impacted by the discharge; the date(s) and time(s) that the discharge(s) commenced or the time the permittee became aware of the discharge(s) or when discharges are expected to occur;

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[26] EPA, Peak Flows Management Rule, Docket No, EPA-HQ-OW-2018-0420, https://www.regulations.gov/docket?D=EPA-HQ-OW-2018-0420.

[27] 83 Fed. Reg. 712 (Jan. 8, 2018).

[28] Act of Dec. 18, 2015, P.L. 114-113, Div. G, Title IV, § 425, 129 Stat. 2580 ("The Administrator shall work with affected States having publicly owned treatment works that discharge to the Great Lakes to create public notice requirements for a combined sewer overflow discharge to the Great Lakes.").

whether, at the time of the notification, the discharge(s) is continuing or has ended; and a point of contact for the CSO permittee.

- ***Supplemental notification of local (or state) public health department and other potentially affected public entities***, within seven (7) days after becoming aware by monitoring, modeling or other means that the CSO discharge(s) has ended, unless the information had been provided in an earlier notice. This includes: the measured or estimated volume of the discharge(s); and the approximate time that the discharge(s) ended.

- ***Initial notification of the public***, as soon as possible, but no later than four (4) hours after becoming aware by monitoring, modeling or other means that a CSO discharge has occurred. This notice must be provided electronically, such as by text, email, social media alerts to subscribers or by posting a notice on its public access website, and, if appropriate, by other means (*e.g.*, newspaper, radio, television). The public notice must include: the water body that received the discharge(s); the location of the discharge(s) and identification of the public access areas potentially impacted by the discharge; the date(s) and time(s) that the discharge(s) commenced or the time the permittee became aware of the discharge(s); and whether, at the time of the notification, the discharge(s) is continuing or has ended.

- ***Follow-up notification of the public***, within seven (7) days after becoming aware by monitoring, modeling or other means that the CSO discharge(s) has ended, by updating the electronic notice with the following information unless the information had been provided in an earlier notice: the measured or estimated volume of the discharge(s); and the approximate time that the discharge(s) ended, unless this information was provided in an earlier notice.

The annual notice requirements apply beginning February 7, 2019, and include:

- ***Annual notice available to the public***, by May 1 of each calendar year, describing the CSO discharges from its discharge point(s) that occurred in the previous calendar year and notice to EPA by email how the annual notice is available. The annual notice must include: a description of the location and receiving water for each CSO discharge point, and, if applicable, any treatment provided; the date, location, approximate duration, measured or estimated volume, and cause (*e.g.*, rainfall, snowmelt) of each wet weather CSO discharge that occurred during the past calendar year; the date, location, duration, volume, and cause of each dry weather CSO discharge that occurred during the past calendar year; a summary of available monitoring data for CSO discharges from the past calendar year; a description of any public access areas potentially impacted by each CSO discharge; representative precipitation data in total inches to the nearest 0.1 inch that resulted in a CSO discharge, if

precipitation was the cause of the discharge identified in (§ 122.38(b)(2)); permittee contact information, if not listed elsewhere on the website where this annual notice is provided; and a concise summary of implementation of the nine minimum controls and the status of implementation of the long-term CSO control plan (or other plans to reduce or prevent CSO discharges), including: a description of key milestones remaining to complete implementation of the plan; and a description of the average annual number of CSO discharges anticipated after implementation of the long-term control plan (or other plan relevant to reduction of CSO overflows) is completed.

By August 7, 2018, CSO permittees must also develop a public notification plan and must submit the plan to the permitting authority and as part of a permit application under § 122.21(j)(8)(iii). The plan must describe how the permittee will ensure that the public receives adequate notice per the above requirements. The permittee must provide notice of the availability of the plan and periodically provide information on how to view it (e.g., in bill mailings). The criteria are set forth in detail in § 122.38(c), and permittees must seek public input on the plan prior to submittal pursuant to § 122.38(d). Compliance dates may be extended for economic hardship pursuant to § 122.38(e).

A checklist for public notification and other guidance materials are available on EPA's website.[29]

3. TMDLs and Water-Quality Standards

Similar to the developments related to stormwater and impaired waters (described above), there have been developments related to POTWs and TMDLs. For example, in Massachusetts, several communities in the Pleasant Bay Watershed on Cape Cod obtained long-term, joint permit coverage for their wastewater systems in an effort to address the state's nitrogen limits.[30] Such regional efforts are also being considered in the Chesapeake Bay Watershed.

TMDLs and the corresponding limits imposed are often a source of litigation for permittees. In *City of Kennett v. EPA*, 887 F.3d 424, 434 (8th Cir. 2018), the City of Kennett, Missouri, challenged a TMDL for an impaired stream called Buffalo Ditch. Kennett's wastewater treatment plant discharges into Buffalo Ditch, which had low levels of dissolved oxygen. EPA had finalized a TMDL for Buffalo Ditch in 2010, which, upon Kennett's pending permit renewal, would impose

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[29] EPA, Combined Sewer Overflows Public Notification Requirements for the Great Lakes, https://www.epa.gov/npdes/combined-sewer-overflows-public-notification-requirements-great-lakes.

[30] Mass.gov, Environmental Officials Issue First-of-its-Kind Watershed Permit for Pleasant Bay Communities on Cape Cod (Aug. 3, 2018), https://www.mass.gov/news/environmental-officials-issue-first-of-its-kind-watershed-permit-for-pleasant-bay-communities.

wasteload allocations for pollutants that were more stringent than the limits its existing permit (and more costly to meet). Kennett sued EPA to vacate the TMDL, arguing that the water quality goal for dissolved oxygen was unattainable, regardless of the allocations were imposed on dischargers. The court held that Kennett had standing to challenge the TMDL even though the limits were not yet reflected in its permit, and that the case was ripe for review, but remanded the case for the district court to determine whether Kennett waived its arguments by failing to raise them during the administrative process for the TMDL. The court reasoned that the costs and other impacts for Kennett were not speculative and were immediate, as it would need to make planning decisions related to meeting the limits in its permit upon renewal.

4. Cooperative Federalism

The NPDES permitting scheme often involves questions regarding federal and state permitting reviews and decisions, which give rise to procedural and substantive issues. In *S. Cal. All. of Publicly Owned Treatment Works v. U.S. EPA*, 853 F.3d 1076, 1078-79 (9th Cir. 2017), the Ninth Circuit held that it lacked subject matter jurisdiction over a challenge to an EPA permit objection letter filed by the Southern California Alliance of Publicly Owned Treatment Works ("SCAP"). This case involved a challenge to EPA's supervisory authority under the CWA. Like most states, California has primacy to issue state NPDES permits, and EPA retains supervisory authority over the state programs, including through review of, and objections to, applications and proposed permits under 33 U.S.C. §§ 1342(d)(1)-(2). The California State Water Resources Control Board ("State Board") made the initial permitting decision for two wastewater treatment plants which had tertiary-level treatment (reclaiming water to drinking water standards). Specifically, the Los Angeles Regional Office of the State Board reviewed the permits and submitted them to EPA for review. In turn, EPA submitted comments criticizing certain aspects of the proposed permits and "stated that if the L.A. Board did not submit revised permits addressing EPA's concerns, EPA would 'acquire exclusive NPDES authority over the discharges pursuant to 40 C.F.R. § 123.44(h)(3).'"[31]

The L.A. Board then revised the permits to address EPA's objections and issued the permits in November 2014. SCAP and the permittees filed an administrative appeal of the L.A. Board's action and also filed a petition for review with the Ninth Circuit. Pursuant to SCAP's request, the State Board held the matter in abeyance until August 2017. In the petition for review before the Ninth Circuit, SCAP attempted to challenge EPA's objection letter (which formed the basis for the permit conditions at issue). The Ninth Circuit held that it lacked subject-matter jurisdiction and explained the scheme of "cooperative federalism" as follows:

[31] *Id.* at 1080.

> When a state assumes responsibility for administering the NPDES program, the state becomes the permit-issuing agency. 33 U.S.C. § 1342(b). An objection by EPA to a draft state permit is merely an interim step in the state permitting process. *Id.* EPA may decide to withdraw the objection after discussions with the state and regional board or after holding a public hearing, or the state may revise a draft permit to remedy EPA's objection and issue the permit. *Id.* In either case, the permitting decision remains the state's. The permits issued by the state are subject to administrative and judicial review in accordance with state law. *See, e.g.*, Cal. Water Code § 13330 (providing for review in California Superior Court of State Board decisions). Alternatively, the state can choose not to remedy the objection and let permitting authority pass back to EPA. 33 U.S.C. § 1342(d)(4). In that case, the state has relinquished jurisdiction over the permitting process, and EPA assumes full responsibility for the permit. If EPA issues the permit, the permit is subject to review by the EAB first and then the appropriate federal court of appeals. *City of San Diego v. Whitman*, 242 F.3d 1097, 1101 (9th Cir. 2001). Here, the L.A. Board chose to revise the Draft Permits and retain control of the NPDES permitting process for the Plants, and the permits were issued through the State of California, not EPA. The appropriate avenue for SCAP to seek redress is through the State's review process.[32]

SCAP argued that the court had jurisdiction under 33 U.S.C. § 1369(b)(1)(E) because EPA's objections effectively promulgated new effluent limitations, similar to the guidance documents in *Iowa League of Cities v. EPA*, 711 F.3d 844 (8th Cir. 2013) (described above). The court rejected this argument and distinguished *Iowa League*, reasoning that its Ninth-Circuit precedent applied and that, unlike *Iowa League*, "EPA here was commenting specifically on the Draft Permits submitted by the Plants, consistent with 33 U.S.C. § 1342(d)(1)," which was an interim step in the process, and not a response to a more general inquiry about binding policy.[33]

SCAP also argued that the court had jurisdiction under § 1369(b)(1)(F) because EPA's objections were effectively a denial of the permit. The court rejected this argument because, since amendments to the CWA, EPA objections are simply part of an ongoing process, not the end of that process. The court found this approach consistent with precedent in other circuits.[34]

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[32] *Id.* at 1081.

[33] *Id.* at 1083.

[34] *See also Am. Paper Inst., Inc. v. U.S. EPA*, 890 F.2d 869, 874 (7th Cir. 1989) ("In *Crown Simpson Pulp Co. v. Costle*, 445 U.S. 193, 63 L. Ed. 2d 312, 100 S. Ct. 1093 (1980), the Supreme Court held that EPA objection to a proposed state permit constituted a 'denial' for purposes of 33 U.S.C. § 1369(b)(1)(F), giving the federal courts of appeals jurisdiction to review EPA objections. However, we believe that the Clean Water Act amendments to the FWPCA fundamentally altered the underpinnings of the *Crown Simpson* decision."); *City of Ames v. Reilly*, 986 F.2d 253, 256 (8th Cir. 1993).

5. Enforcement Actions and Consent Decrees

Even once municipalities enter into consent decrees with EPA, there may be ongoing issues that spark litigation. While litigation by EPA and consent decrees generally prevent citizen suits under the "diligent prosecution" bar, that does not always deter plaintiffs from continuing to challenge issues as they arise along the road to compliance. For example, in *Pitroff v. United States*, No. 16-cv-522-PB, 2017 U.S. Dist. LEXIS 133761 (D.N.H. Aug. 22, 2017), the City of Portsmouth, New Hampshire, had entered into a consent decree (and two modifications to the decree) to require upgrades and meet NPDES permit requirements for secondary treatment and CSOs. In 2012, the parties lodged the first modification to the consent decree because of the City's financial conditions, and the Conservation Law Foundation and other parties continued to lobby for further oversight by the court, which the court rejected. Then, in 2016, the parties sought a second modification because the City was unable to meet its March 2017 deadline for construction of secondary treatment, which caused citizens to challenge the actions. The court approved the second modification, and citizens challenged the design for the upgrade and argued it would not meet the permit conditions. However, the court dismissed the citizen suit because EPA was diligently prosecuting civil enforcement against the City pursuant to the consent decree. This case illustrates that litigation may continue when interested person disagree with the design or the timeline for construction and compliance.

6. Groundwater Regulation

A hot topic under the CWA is whether, and under which circumstances, groundwater can be regulated under the CWA. In *Hawai'i Wildlife Fund v. Cty. of Maui*, 881 F.3d 754, 765 (9th Cir. 2018), the Ninth Circuit affirmed violations of the CWA by the County of Maui for discharging municipal wastewater from its treatment plant into groundwater wells, which reached the Pacific Ocean. The County injected about three to five million gallons per day of treated wastewater into four different groundwater wells as a means of disposal. It was undisputed that some of the effluent reached the Pacific Ocean, and this was confirmed with dye tracer tests for two wells. The parties also did not dispute that the wells were point sources under the CWA, but the County argued that the CWA does not apply to discharges to groundwater (and only indirectly to the Pacific Ocean). The court held the County was liable "because (1) the County discharged pollutants from a point source, (2) the pollutants are fairly traceable from the point source to a navigable water such that the discharge is the functional equivalent of a discharge into the navigable water, and (3) the pollutant levels reaching navigable water are more than *de minimis*."[35]

The *Maui* case has opened up debate regarding whether, and under which circumstances, groundwater can be regulated under the CWA. As demonstrated in *Maui*, this may directly affect disposal of wastewater for some treatment plants

[35] *Hawai'i Wildlife Fund v. Cty. of Maui*, 881 F.3d 754, 765 (9th Cir. 2018).

that utilize injection techniques. In some jurisdictions, however, discharges to groundwater is already regulated under state laws (e.g., the Clean Streams Law in Pennsylvania). The scope of such decisions and the potential impact is subject to ongoing developments in case law and regulation. Shortly after the *Maui* decision, EPA solicited comment on pollution reaching jurisdictional surface waters via groundwater or other subsurface flow (with a direct hydrologic connection to the surface water).[36] Additional decisions have since given rise to a circuit-court split on the issue.

Cases in the Fourth Circuit have clarified the issue in some respects. In *Upstate Forever v. Kinder Morgan Energy Partners, L.P.*, 887 F.3d 637, 652 (4th Cir. 2018), the court expressly held, under the circumstances in that case, that "an alleged discharge of pollutants, reaching navigable waters located 1000 feet or less from the point source by means of ground water with a direct hydrological connection to such navigable waters, falls within the scope of the CWA." On the other hand, in *Sierra Club v. Va. Elec. & Power Co.*, Nos. 17-1895, 17-1952, 2018 U.S. App. LEXIS 25831 (4th Cir. Sept. 12, 2018), the Fourth Circuit reversed violations of the CWA by Dominion Energy Virginia for contamination of the Elizabeth River and Deep Creek by way of seepage from Dominion's coal ash landfill and ponds. Plaintiffs argued the seepage violated the CWA as an unauthorized discharge into navigable waters under a "hydrologically connected" theory. Plaintiffs also asserted that Dominion had violated two provisions of its NPDES permit issued by the state agency. In reversing the district court, the Fourth Circuit reasoned that a "simple causal link" between the coal ash ponds and contamination in nearby waterways "does not fulfill the Clean Water Act's requirement that the discharge be *from a point source*" as the discharges did not originate from a "discernible, confined and discrete conveyance." Rather, the seepage was a generalized, site-wide condition that "allowed rainwater to distribute the leached arsenic." Finally, the court rejected plaintiffs' argument that the coal ash ponds were "containers" regulated under the CWA. The court concluded that, even if the coal ash ponds were "containers," "the source must still be functioning *as a conveyance*," thus requiring the discharge to be discernible, confined, and discrete. The court did not overturn its earlier *Upstate Forever* decision (wherein the addition of a pollutant to a navigable water via groundwater could constitute a violation of the CWA).

In companion opinions issued in September 2018, Sixth Circuit arrived at a similar conclusion for ash ponds, but the reasoning was quite different, creating a circuit split with the Ninth and Fourth Circuits. In *Kentucky Utilities All. v. Kentucky Utilities Co.*, No. 18-5115, 2018 U.S. App. LEXIS 27238 (6th Cir. Sept. 24, 2018), the Sixth Circuit affirmed in part and reversed in part the district court's ruling that dismissed environmental groups' lawsuit against Kentucky Utilities ("KU") concerning water contamination emanating from coal ash ponds to Herrington Lake. Plaintiffs sued KU under both the CWA and RCRA relating to KU's operation of two coal ash ponds. Plaintiffs raised a "hydrological

[36] 83 Fed. Reg. 7126 (Feb. 20, 2018).

connection" theory wherein groundwater served as a medium through which pollutants pass and are discharged into navigable waters. The court rejected the arguments reasoning that a point source, per the CWA's language, must be a "discernible, confined and discrete conveyance." The court held:

> The CWA defines effluent limitations as restrictions on the amount of pollutants that may be "discharged from point sources into navigable waters." Id. § 1362(11) (emphasis added). The term "into" indicates directness. It refers to a point of entry. See Into, Webster Third New International Dictionary, Unabridged. 2018.. Web.21 Aug. 2018 ("[E]ntry, introduction, insertion."); Into, Oxford English Dictionary (2d ed. 1989) ("Expressing motion to a position within a space or thing: To point within the limits of; to the interior of; so as to enter.") (emphasis added). Thus, for a point source to discharge into navigable waters, it must dump directly into those navigable waters—the phrase "into" leaves no room for intermediary mediums to carry the pollutants.
>
> Moreover, the CWA addresses only pollutants that are added "to navigable waters from any point source." 33 U.S.C. § 1362(12)(A) (emphasis added). Accordingly, the CWA requires two things in order for pollution to qualify as a "discharge of a pollutant": (1) the pollutant must make its way to a navigable water (2) by virtue of a point-source conveyance. Under the facts of this case, KU is discharging pollutants into the groundwater and the groundwater is adding pollutants to Herrington Lake. But groundwater is not a point source. Thus, when the pollutants are discharged to the lake, they are not coming from a point source; they are coming from groundwater, which is a nonpoint-source conveyance. The CWA has no say over that conduct.[37]
>
> Neither the coal ash ponds or karst terrain underlying the ponds qualify as point sources according to the court. Likewise, the court reasoned that, although water may move more quickly through karst terrain, the groundwater flows remain "neither discernable, discrete, nor confined." The court reinstated plaintiffs' RCRA claims as the proper statute for bringing an action against KU's operation of coal ash ponds.

Similarly, in *Tenn. Clean Water Network v. TVA*, No. 17-6155, 2018 U.S. App. LEXIS 27237 (6th Cir. Sep. 24, 2018), the Sixth Circuit reversed violations of the CWA by the Tennessee Valley Authority ("TVA") for contamination of the Cumberland River by way of leaks from a series of unlined coal ash ponds. TVA stores coal ash in unlined ponds that sit atop karst terrain, allegedly allowing water contaminated by coal ash to infiltrate into the groundwater and then into the Cumberland River indirectly. A citizen suit alleged that TVA had violated its NPDES permit and the CWA based on flows from the coal ash ponds through hydrologically connected groundwater to the river. On appeal, the court reversed

[37] *Id.* at *19-20.

the district court's ruling. First, citing to the companion *Kentucky Utilities* opinion, the court reasoned that the CWA prohibits discharges from point sources "*into*" navigable waters, thus an indirect discharge via a non-point source (*including groundwater*) would not constitute a CWA violation. Second, the court noted that the CWA and RCRA are meant to be read as consistent with one another; identifying the coal ash ponds as regulated by the CWA would exempt the sites from regulation under RCRA, thus frustrating the purpose of RCRA and regulations adopted under RCRA. The court ruled similarly on claims relating to violations of TVA's NPDES permit as karst-related leaks are not discharges, thus no violation of the NPDES permit occurred.

Notably for sewage systems, the TVA case also involved a distinction between the coal-ash discharges and SSOs from the facility. The district court had held that TVA violated the CWA based on its NPDES permit provisions dealing with sanitary sewers, essentially equating the coal-ash pollutants with sewage. In reversing the district court, the Sixth Circuit distinguished the different types of pollutants and held that the coal-ash pollutants were not subject to the same permit provisions:

> While the Permit does not define sewage, it treats it as a distinct type of "Pollutant" distinct from "industrial wastes, or other wastes." See 33 U.S.C. §1362(6) (defining "pollutant" as including "sewage" as well as "chemical wastes"). This distinction is consistent with the EPA definition of sanitary-sewer overflow as involving "[a]n untreated or partially treated sewage release from a sanitary sewer system." The EPA's NPDES Permit Writers' Manual states that "occasional, unintentional spills of raw sewage from municipal sanitary sewers occur in almost every system. Such types of releases are called sanitary sewer overflows (SSOs)." The district court, by treating coal ash wastewater as a sanitary-sewer overflow, ignored the plain meaning of sewage. Further, the Permit treats these types of pollutants differently. Industrial wastes like "discharge ash transport water" and "ash sluice water leakage" are authorized with limitations while "Sanitary Sewer Overflows are prohibited." Thus, karst-related leakage cannot be a violation of this provision.[38]

As illustrated above, these groundwater cases may impact POTWs to varying degrees. This is also dependent, in part, on whether groundwater is already regulated by state law.

IV. Addressing Funding Issues

As discussed above, municipal utilities face increasingly stringent regulatory compliance obligations. Traditionally, water and sewer utilities have funded operations primarily through user fees consisting of both fixed customer charges and per-unit or “volumetric” charges. However, various challenges, including

[38] *Id.* at *26-27.

aging infrastructure, expanding regulatory compliance obligations and declining end-use consumption are driving municipal utilities to consider alternative ratemaking mechanisms.

While alternative ratemaking mechanisms are more commonly adopted by investor-owned public utilities, some measures have been adopted by municipal utilities as well. Some alternative ratemaking mechanisms adopted by public utilities across the country include revenue stabilization or decoupling mechanisms, which automatically adjusting rates to maintain periodic revenue targets. Lost revenue adjustment mechanisms are similar to revenue stabilization mechanisms, but LRAMs adjust rates only to capture revenue shortfalls associated with conservation measures. While public utilities have historically adjusted rates based on historical data, incorporating future test years allows public utilities to capture emerging and anticipated trends in rates in order to reduce regulator lag. Finally, I would be remiss not to mention the Distribution System Improvement Charges, which originated in my home state of Pennsylvania as a surcharge mechanism to recover capital improvement costs on an ongoing dollar-for-dollar basis in between general rate increases. The mechanisms are applied to stabilize revenues for all manner of public utilities, including municipal water and sewer systems.

In addition to the alternative ratemaking mechanisms described above, many utilities are also adopting entirely new rate structures to fund increasingly critical stormwater infrastructure. Historically, many municipalities fund stormwater management through a combination of wastewater and general fund revenues. In recent years, an increasing number of municipalities have developed stormwater utilities to efficiently recover stormwater costs in direct proportion to customers' impact on the municipality's stormwater infrastructure.

Stormwater rates generally conform to one of two basic rate structures. Under a flat fee rate structure, each parcel pays the same per-parcel fee. More typically, stormwater utilities adopt a dual fee structure where residential parcels pay either a higher flat fee or a per-square footage fee based on the individual parcel area, usually based on Geographic Information System ("GIS") measurements.

The appropriate rate structure for municipal utilities varies based on local laws and regulations, policy objectives, environmental conditions, customer demographics, and other factors. Careful consideration of evolving rate structure options can help municipal utilities cope with the complex challenges facing water, sewer, and stormwater systems.