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Water Issues: New Requirements For Development Projects and EPA's Proposed Rule Re-Defining "Waters of the U.S." Will Have Major Cost and Operational Impacts for Municipalities

Stormwater Runoff: How Municipalities Are Being Asked To Do More

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Introduction

This presentation explores the regulatory framework by which localities, particularly those that operate a regulated municipal separate storm sewer system (MS4), bear the primary responsibility for combating the negative impact of stormwater runoff on the nation's waterbodies. The discussion begins by exploring stormwater runoff, its sources, and its impact. Then, it will identify elements of the Clean Water Act (CWA) that affect localities and developers of construction sites. And lastly, the presentation will address how the CWA makes localities accountable for the degradation or preservation of the water quality of waterbodies within their jurisdiction caused by stormwater runoff.

WHAT IS STORMWATER AND WHY IT MATTERS

Stormwater, in a general sense, is the overland flow of water conveyed by natural and manmade conveyances.[1] Regulated stormwater is typically limited to manmade facilities or devices that collect, convey, and discharge water but does not include water that runs over and is infiltrated in the soil.[2] In either case, stormwater is a major source of water pollution and waterbody degradation in the United States.[3] Therefore, as waterbodies remain in poor condition, local governments, particularly in urban areas, will be faced with reducing the negative impact of stormwater, regardless of how it is characterized.

Urbanization is commonly associated with significant increases in impervious coverage. Increases in impervious coverage, in turn, are closely correlated with the degradation of waterbodies.[4] In a pre-development condition, rain water typically infiltrates the ground or is consumed through the process of evaporation and plant transpiration.[5] As imperviousness increases, however, these processes are diminished. The result is that rainwater flows rapidly over the landscape, collects pollution along the way, and discharged into waterbodies at increased volumes and at higher rates than the receiving water body is designed to accommodate.[6]

Stormwater is a major pollutant source for nitrogen, phosphorus, and sediment, which are among the pollutants most commonly associated with waterbody impairments.[7] In fact, restoration of the Chesapeake Bay is focused entirely on reducing these three pollutants.[8]

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[1] NATIONAL RESEARCH COUNCIL, URBAN STORMWATER MANAGEMENT IN THE UNITED STATES 12 (2008).
[2] *Id.*
[3] *See generally*, NATIONAL RESEARCH COUNCIL, URBAN STORMWATER MANAGEMENT IN THE UNITED STATES (2008).
[4] *Id.* at 11-17.
[5] *Id.* at 131.
[6] *Id.* at 144-45.
[7] *Id.* at 17; *see also* John H. Minan, General Industrial Storm Water Permits and the Construction Industry: What Does the Clean Water Act Require?, 9 Chap. L. Rev. 265 (2009) (citing the National Water Quality Inventory: 2000 Report (EPA Aug. 2002), available at http://www.epa.gov/305b/2000report/).
[8] Chesapeake Bay Total Maximum Daily Load for Nitrogen, Phosphorous, and Sediment (Dec. 29, 2010) (available at http://www.epa.gov/reg3wapd/tmdl/ChesapeakeBay/tmdlexec.html).

Stormwater runoff from construction sites, in particular, is a significant source of sediment, and the urban landscape facilitates the delivery of this pollutant to waterbodies.[9] The introduction of pollutants through stormwater runoff, however, is not the only harm. As impervious cover increases, so too does the volume and flow rate of water in streams. These stressors cause instream erosion that alters the stream channel and function, and increases sediment deposition within the stream.[10] In fact, the physical and biological impact of urban stormwater has given rise to the phenomenon known as "Urban Stream Syndrome."[11]

The CWA is the primary piece of federal legislation responsible for protecting the quality of the nation's waterbodies, and controlling the discharge of pollutants from industrial processes was its central purpose. Despite the identification and regulation of these pollution sources, however, the nation's waters remain in generally poor condition.[12] As a result, EPA has shifted its focus to regulating the sources of stormwater pollution.[13]

The Clean Water Act

The purpose of the CWA is "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters.[14] This goal is achieved by prohibiting all discharges of pollutants into waterways unless such discharges are authorized by National Pollutant Discharge Elimination System (NPDES) permit.[15]

NPDES PERMITS

NPDES permits impose effluent limitations on point source discharges.[16] A point source is "any discernible, confined, and discrete conveyance . . . from which pollutants are or may be discharged."[17] An effluent limitation is a restriction on the quantity, rate, and concentration of pollutants discharged in to waterways.[18] The CWA, therefore, successfully creates a framework to identify and control discrete sources of pollutants to protect the Nation's waters.

However, after adoption of the Clean Water Act in 1972, the Environmental Protection Agency exempted most stormwater discharges from regulation.[19] In *Natural Res. Def. Council, Inc. v. Costle*, 568 F.2d 1369, 1380-81 (D.C. Cir. 1977), the EPA argued that it was infeasible to

[9] *Id.* at 154-55.
[10] ***Id.*** at 148-50.
[11] ***Id.*** at 24.
[12] ***Id.*** at 17-20.
[13] *See* Christine Chestnut, Building on Individual Strengths: Achieving Greater Success in Stormwater Pollution Prevention Through Collaboration, Hastings W.-N.W. J. of Envtl. L. & Pol'y, 123, 126 (2003).
[14] 33 U.S.C. § 1251(a).
[15] *Id.* at 1311(a).
[16] *Id.* at 1311(b).
[17] *Id.* at § 1362(14).
[18] *Id.* at § 1362(11).
[19] Natural Res. Def. Council, Inc. v. Costle, 568 F.2d 1369, 1372 (D.C. Cir. 1977).

impose effluent limitations on stormwater discharges as if they were end of pipe discharges from an industrial operation.[20] Rejecting this argument, the court determined that the CWA did not authorize the EPA to exempt any point source pollutant discharges from the NPDES permit requirement.[21] This decision set in motion a fifteen year effort by the EPA to reconcile the NPDES permit requirement for point source pollutant discharges and the administrative difficulty of regulating millions of stormwater point source discharges.[22]

Eventually, in 1987, Congress amended the CWA to add provisions that specifically address NPDES permits for stormwater discharges from industrial activities and municipal storm sewers.[23] Industrial stormwater discharges resulting from industrial activities are subject to effluent limitations of 33 U.S.C. § 1311.[24] Industrial activities, by definition, include some construction and development (C&D) activities, specifically those site development activities that cause land disturbance (clearing, grading, excavation) of more than one acre of land.[25] NPDES permits issued by EPA or state regulators to operators of C&D sites are known as General Construction Permits (GCP) because they are not tailored to the specific site or permit holder.

NPDES permits for municipal stormwater discharges differ from industrial stormwater discharges in that they do not typically include effluent standards.[26] Rather, such permits have the following elements: they (i) may be issued on a system- or jurisdiction-wide basis; (ii) shall include a requirement to effectively prohibit non-stormwater discharges into the storm sewers; and (iii) shall 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 such other provisions as the Administrator or the State determines appropriate for the control of such pollutants.[27] Consequently, the CWA explicitly imposes upon municipalities the burden of managing the environmental consequences of precipitation, particularly if the MS4 permit terms prohibit discharges that contribute to the violation of water quality standards.

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[20] *Id.* at 1377.
[21] *Id.* at 1381-82.
[22] Defenders of Wildlife v. Browner, 191F.3d 1159, 1163 (9th Cir. 1999).
[23] 33 U.S.C. § 1342(p); *see Costle*, 568 F.2d at 1372
[24] *Id.* at § 1342(p)(3)(A).
[25] 40 C.F.R. §§ 122.26(b)(14)(x) and (15)(i).
[26] Under Bldg. Indus. Ass'n of San Diego Cnty. v. State Water Res. Control Bd., 124 Cal. App. 4th 866, MS4 permits could include effluent limitations necessary to meet water quality standards. This finding is supported by dicta in City of Abilene v. U.S. E.P.A., 325 F.3d 657, 661 (5th Cir. 2003), and *see also Defenders of Wildlife*, 191F.3d, at766.
[27] 33 U.S.C. § 1342(p)(3)(B).

WATER QUALITY STANDARDS

The CWA requires states to establish water quality standards (WQS),[28] and identify those waters within its boundaries that do not meet these water quality goals.[29] Waterbodies that fail to meet WQS are known as impaired waters. For each impaired water body or segment thereof, a state is required to establish a total maximum daily load (TMDL) for specific pollutants identified by EPA.[30] A TMDL for a pollutant must be established at a level necessary to implement the applicable water quality standard(s).[31] In other words, a TMDL is a pollution diet that establishes the amount of a pollutant that can be introduced in a water body per day without violating the water quality standards.[32] The pollutant reductions are distributed among the present and future point and nonpoint sources.[33] The TMDL, however, is not self-executing. Rather, each NPDES permit issued to a permittee within the watershed of the impaired water must contain effluent limitations that are necessary to achieve the WQS.[34] Therefore, as impaired waters are identified, municipalities that possess MS4 permits become accountable for the negative impacts of urban stormwater runoff, including from C&D activities within their jurisdictional boundaries.

HOW MS4 PERMITTEES ARE ACCOUNTABLE FOR THE IMPACT OF STORMWATER RUNOFF

Given that MS4s collect and discharge stormwater runoff, MS4 permittees are among the regulated parties responsible for the discharge of pollutants and damaging rates and volume of water. In combination with other sources of pollutants, waterbodies may become impaired, which gives rise to the development and incorporation of TMDLs in NPDES permits, including MS4 permits. Effectively, the MS4 permittee becomes the primary party responsible for mitigating the consequences of urbanization.

This transfer of responsibility was exemplified by the Total Maximum Daily Load for Benthic Impairments in the Accotink Creek Watershed, which was issued by EPA on April 18, 2011, to Fairfax County, Virginia (Accotink TMDL).[35] The Accotink TMDL attempted to regulate the flow rate of water as a proxy for sediment, which was the pollutant of concern. Had the TMDL been upheld[36], the County, through its MS4 permit, would have been required to develop and implement controls capable of limiting the rate at which stormwater within the

[28] *Id.* at § 1313(a)-(c); 40 C.F.R. §§ 130.3, 131.2, and 131.3(i).
[29] *Id.* at § 1313(d)(1)(A).
[30] *Id.* at 1314(a)(2)(D).
[31] *Id.* at § 1313(d)(1)(C).
[32] See 40 C.F.R. § 130.2(e)-(i).
[33] *Id.*
[34] 40 C.F.R. § 122.44(d)(1)(vii)(B).
[35] Available at http://www.epa.gov/waters/tmdldocs/va/VA_AccotinkCreekBenthic_AL_TMDL.pdf.
[36] Va. Dept. of Trans., et al., v. U.S. E.P.A., et al., 1:12-CV-775, 2013 WL 53741 (E.D. Va. Jan. 3, 2013).

watershed entered Accotink Creek and its tributaries.[37] It remains to be seen whether the negative water quality trends in urban streams caused by stormwater runoff can be reversed or managed through TMDL implementation.

EPA is also trying to better manage the impact of stormwater runoff by modifying the pollutant reduction measures contained in the GCP, and, in some cases, shifting initial enforcement responsibilities to localities. Until recently, the GCP required developers to simply use best management practices to control pollutant discharges and develop individualized stormwater pollution prevention plans, which set forth the developer's plan for controlling stormwater discharges.[38] The requirements of the GCP proved to be legally deficient under the CWA for failing to include effluent limitations.[39] EPA subsequently published a final rule for GCPs that imposed numeric effluent limitations for turbidity, which is a measurement of water clarity that is correlated with sediment concentration in water.[40] The rule was withdrawn for further administrative review after it was challenged by multiple industry groups.[41] Ultimately, EPA adopted regulations, effective May 5, 2014, requiring GCPs to include effluent limitations in the form of best practicable technology (BPT) but excluded numeric limitations.[42]

The GCP, under the new regulations, must include the following BPTs: (1) the design, installation, and maintenance of effective erosion and sediment controls to minimize the discharge of pollutants[43], (2) the provisions for the immediate stabilization of disturbed areas upon the permanent or temporary (greater than 14 days) completion of the land disturbing activity; (3) the prohibition against dewatering unless managed by appropriate controls; (4) a pollution prevention measures to minimize the discharge of pollutants from equipment and vehicle washing and minimize the exposure of on-site materials to stormwater; and (5) prohibition against specific pollutant discharges. [44]

One would assume that the permitting authority would assess compliance with and enforce the GCP. However, as has happened in Virginia[45] and was suggested in NATIONAL RESEARCH COUNCIL, URBAN STORMWATER MANAGEMENT IN THE UNITED STATES 430-52 (2008), enforcement authority over GCPs are being shifted to localities for administrative reasons. In Virginia, for example, as of July 1, 2014, a majority of counties are required to become Virginia

[37] Accotink TMDL, *supra* note 35, at 6-8 – 6-10.
[38] *See* Andrew King, Leading the EPA to Stormwater: The long Road to Construction Stormwater Regulation and the Role of Numeric Effluent Limitations, 24 Tul. Envtl. L. J. 335, 348 (2011).
[39] *See generally*, Natural Resource Defense Council, Inc. v. E.P.A., 542 F.3d 1235 (9th Cir. 2008).
[40] King, supra note 38, at 356.
[41] *Id.* at 358.
[42] C.F.R. § 450.10 et seq.
[43] The erosion and sediment controls include, among other things, controlling stormwater volume and velocity to minimize soil erosion; controlling peak flow rates and total stormwater volume to minimize channel and stream bank erosion and scour in the immediate vicinity of discharge points; minimize the amount of soil exposed during construction.
[44] 40 C.F.R. § 450.21.
[45] Va. Code Ann. 62.1-44.15:24 et seq. (Supp. 2014).

Stormwater Management Authorities by adopting a local ordinance consistent with state law and regulations. As a result of this legislation, construction site inspectors are required to assess compliance with the GCP. Failure to comply with the GCP is a violation of the local ordinance, giving rise to the prospect of the locality taking enforcement actions against violators. This obligation cannot be taken lightly for localities that are also MS4 permittees.

MS4s programs must include procedures to control pollution resulting from construction activities[46] and adequate legal authority to control discharges of pollutants to the MS4 by industrial activities. Therefore, failure by the MS4 permittee to actively enforce the GCP is, at a minimum, a program deficiency and, at worst, a permit violation.

CONCLUSION

Managing the negative impacts of stormwater runoff associated with urbanization under the CWA is the next frontier towards improving the water quality of the nation's waterbodies. Municipalities will be at the forefront of this effort by virtue of their MS4 permit restrictions and the role they play in overseeing land development within their jurisdiction.

[46] 40 C.F.R. § 122.26(d)(v)(A).