



For a thriving New England

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Via Electronic Mail

November 19, 2018

Janet Coit
Director
Rhode Island Department of Environmental Management
235 Promenade St.
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RE: Petition for DEM to Perform Its Non-Discretionary and Mandatory Duty to Notify and Require RIPDES Permitting of Unpermitted Commercial, Industrial, and Residential Dischargers in the Mashapaug Pond Watershed in Providence County, Rhode Island

Dear Director Coit:

As the Director¹ of the Rhode Island Department of Environmental Management (“DEM”), the Conservation Law Foundation² (“CLF”) hereby petitions you to exercise your residual designation authority³ (“RDA”) and perform your non-discretionary and mandatory duty to:

- (1) notify those responsible for certain unpermitted commercial, industrial, and residential discharges which contribute to a violation of a water quality standard or are significant

¹ In regulations cited throughout this petition, the term “Director” means either the EPA Regional Administrator or the director of the state NPDES permitting authority (here, DEM Director Janet Coit) as the context requires. 40 C.F.R. § 122.2. Where EPA retains the authority to take certain actions even when there is an approved state program, as it does with RDA designation under 40 C.F.R. § 122.26(a)(9)(i)(C), the term “Director” may also mean the Regional Administrator. *Id.*

² CLF is a 501(c)(3) nonprofit, member-supported organization dedicated to the conservation and protection of New England’s public health, environment, and natural resources. CLF is a regional organization with about 5,000 members throughout New England including over 300 members in Rhode Island.

³ “Residual designation authority” refers to the authority of the Director of DEM to require permitting for stormwater discharges where the Director “determines that the stormwater discharge contributes to a violation of a water quality standard or is a significant contributor of pollutants to waters of the United States” under 33 U.S.C. § 1342(p)(2)(E). *See also* 40 C.F.R. § 122.26(a)(9)(i)(C)-(D); R.I. Admin. Code § 25-16-14:31(a)(1)(vii)-(viii).

contributors of pollutants to the Mashapaug Pond watershed (“Contributing Discharges”)⁴ of their responsibility to obtain discharge permits under the Rhode Island Pollutant Discharge Elimination System (“RIPDES”),⁵ and

(2) send applications for permit coverage in accordance with 40 C.F.R. § 124.52(b).

As set forth below, the law and the facts, as developed by the United States Environmental Protection Agency (“EPA”) and DEM, require that DEM regulate these unpermitted discharges under the RIPDES permit program to restore and protect the water quality of Mashapaug Pond.

As DEM recognizes, stormwater pollution is a major threat to New England’s waters, which suffer from toxic algae blooms and poor water quality due to nutrient-laden stormwater runoff flowing off of parking lots and other paved areas. The Mashapaug Pond watershed exemplifies this pollution problem. Since Total Maximum Daily Loads (“TMDLs”)⁶ for dissolved oxygen and phosphorus in Mashapaug Pond were approved (the “Mashapaug Pond TMDL”),⁷ Mashapaug has continued to suffer low dissolved oxygen, algae blooms (including those containing toxic cyanobacteria), and other effects of excess phosphorus pollution.⁸ Water quality conditions in Mashapaug Pond demonstrate the urgent need for RDA implementation to remedy water quality impairments caused in whole or in part by existing poorly or uncontrolled stormwater discharges.⁹ EPA has previously provided convincing documentation of the need for RDA to

⁴ See 40 C.F.R. § 122.26(a)(9)(i)(D) (requiring permitting where the Director “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.”)

⁵ In Rhode Island, the Director of DEM has been delegated authority to implement the NPDES permit program, which in Rhode Island is called the Rhode Island Pollutant Discharge Elimination System or “RIPDES.” See R.I. Gen. Laws § 46-12-3; see also R.I. Admin. Code § 25-16-14 (RIPDES regulations).

⁶ TMDLs are like pollution budgets. They identify the maximum amount of a pollutant that a body of water can receive while still meeting water quality standards.

⁷ See R.I. Dep’t of Env’tl. Mgmt., Final Total Maximum Daily Load for Dissolved Oxygen and Phosphorus - Mashapaug Pond, Rhode Island (2007), https://ofmpub.epa.gov/waters10/attains_impaired_waters.show_tmdl_document?p_tmdl_doc_blblo_id=72360.

⁸ See Press Release, R.I. Dep’t of Health, RIDOH and DEM Recommend Avoiding Contact with Mashapaug Pond; Lift Restrictions for Pleasure Lake (Sept. 12, 2017), <http://www.ri.gov/press/view/31414>; see also Press Release, R.I. Dep’t of Health, Blue-Green Algae Bloom Found in Mashapaug Pond in Providence (Sept. 11, 2014), <http://www.ri.gov/press/view/22893>; see also *State Warns of Toxic Algae Bloom in Cranston Pond*, Providence J. (Sept. 10, 2018), <http://www.providencejournal.com/news/20180910/state-warns-of-toxic-algae-bloom-in-cranston-pond> (describing blue-green algae pollution in neighboring Spectacle Pond, immediately upstream of Mashapaug Pond).

⁹ EPA notes that “[o]f the 11 pollution source categories listed in EPA’s *National Water Quality Inventory: 2000 Report to Congress*, urban runoff/storm sewers was ranked as the fourth leading source of impairment in rivers, third

control stormwater discharges.¹⁰ CLF looks forward to working with DEM to improve water quality in Mashapaug Pond.

I. FACTUAL BACKGROUND

A statement of the undisputed facts and underlying supporting documents is attached to this petition and is incorporated by reference. *See* Statement of Undisputed Facts (“SOF”), attached hereto. A summary of these facts is set forth below.

a. Mashapaug Pond is Located in an Environmental Justice Community

Mashapaug Pond is located in the Reservoir Triangle neighborhood of Providence, Rhode Island, which is part of a DEM-designated Environmental Justice¹¹ (“EJ”) Area. *See* SOF at ¶ 1. Following an approach developed by EPA Region 1, DEM has designated EJ areas in Rhode Island by using the 2000 Census Block Group Boundary layer to identify block groups with percentages in the top 15 percent of the region for low-income residents and/or non-white populations.¹² Based on this analysis, DEM classifies Mashapaug Pond and surrounding neighborhoods as part of an EJ area. *Id.*

In 1994 President Clinton issued Executive Order 12898, ordering each federal agency to “make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations.” Exec. Order No. 12,898 - Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, 59 Fed. Reg. 7629 (Feb. 11, 1994). According to 2010 U.S. Census Bureau data, Census Tract 15—which includes Mashapaug Pond and surrounding

in lakes, and second in estuaries.” Press Release, U.S. Env’tl. Prot. Agency, Wentworth N.H. Sawmill Cited for Clean Water Violations (May 16, 2006), https://archive.epa.gov/epapages/newsroom_archive/newsreleases/40408ad9087cd182852571700068bf2e.html.

¹⁰ *See* U.S. Env’tl. Prot. Agency, Residual Designation Pursuant to Clean Water Act - Region I (2008), <https://www.epa.gov/sites/production/files/2015-03/documents/rodfinalnov12.pdf>.

¹¹ EPA defines environmental justice as “the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation and enforcement of environmental laws, regulations and policies.” *Learn About Environmental Justice*, U.S. Env’tl. Prot. Agency, <https://www.epa.gov/environmentaljustice/learn-about-environmental-justice> (last visited Aug. 26, 2018).

¹² *See Static Map of EJ Areas*, R.I. Dep’t of Env’tl. Mgmt., <http://www.dem.ri.gov/envequity/graphics/ejareas.jpg> (last visited Aug. 26, 2018).

neighborhoods—has a 71.7 percent minority population.¹³ 2011-2015 U.S. Census and American Community Survey (“ACS”) data shows a median household income for Census Tract 15 of \$48,517, with 16.1 percent of the population below the poverty level. *Id.*

EPA has examined demographic and environmental factors to establish a mapping and screening tool, EJSCREEN,¹⁴ that provides a mechanism for comparing the burdens facing a community on state, regional, and national levels. EPA uses EJSCREEN in support of its implementation of programs including permitting, enforcement, and compliance.¹⁵ The EJSCREEN reports show environmental indicators, demographic indicators, and an EJ Index, which summarizes how the indicators come together in a location. A high EJ Index indicates a high combination of environmental burdens and vulnerable populations. Using EJSCREEN to examine the zone within 1 mile of Mashapaug Pond—an area of 8.03 square miles with a population of approximately 77,837—produces EJ Index results above the 75th percentile in the U.S. in all variables, above the 85th percentile statewide in all variables, and above the 90th percentile in EPA Region 1 in all variables.¹⁶ EJSCREEN reports even higher indexes for this area for National-Scale Air Toxics Assessment (“NATA”) Air Toxics Cancer Risk, NATA Respiratory Hazard Index, and Wastewater Discharge Indicator.

b. Mashapaug Pond is an Impaired Water Body that is Not Suitable for Its Designated Uses

Mashapaug Pond is the largest freshwater lake in Providence, with a surface area of approximately 31 hectares (77 acres) and an average depth of 3 meters (9.8 ft). *See* SOF at ¶¶ 2-3. Located in the southwest quadrant of Providence, Mashapaug Pond’s development dates back to 1636. *See* SOF at ¶ 2. The watershed is highly urban, essentially fully developed, and has an impervious cover of 61 percent. *See* SOF at ¶¶ 4-6. Land uses in Mashapaug Pond’s direct runoff draining areas range from 11.1 to 95.1 percent industrial. *See* SOF at ¶ 5.

¹³ *See Census Tract 15 Overview*, Providence Plan, <http://profiles.provplan.org/profiles/census-tract/44007001500/overview/> (last visited Aug. 26, 2018).

¹⁴ EJSCREEN was developed pursuant to Executive Order 12898, which ordered federal agencies to “collect, maintain and analyze information assessing and comparing environmental and human health risks borne by populations identified by race, national origin or income.” Exec. Order No. 12898, 59 Fed. Reg. 7629 § 3-302(a).

¹⁵ *See How Does EPA Use EJSCREEN?*, U.S. Env’tl. Prot. Agency, <https://www.epa.gov/ejscreen/how-does-epa-use-ejscreen> (last visited Aug. 26, 2018).

¹⁶ *See EPA’s Environmental Justice Screening and Mapping Tool (Version 2018)*, U.S. Env’tl. Prot. Agency, <https://ejscreen.epa.gov/mapper> (last visited Aug. 26, 2018).

Mashapaug Pond is listed on Rhode Island’s 303(d) List of Impaired Waters for excess algal growth, dissolved oxygen, total phosphorus, and fecal coliform.¹⁷ Phosphorus is the primary nutrient of concern impairing Mashapaug Pond’s waters because it is the limiting nutrient for algae growth. *See* SOF at ¶¶ 9, 15-16. Mashapaug Pond is a Class B water body, meaning that it is “designated for fish and wildlife habitat and primary and secondary contact recreational activities. [It] shall be suitable for compatible industrial processes and cooling, hydropower, aquacultural uses, navigation, and irrigation and other agricultural uses. [Its] waters shall have good aesthetic value.” R.I. Admin Code § 25-16-25:8(B)(1)(c). However, algal blooms and fecal coliform levels prevent Mashapaug from attaining its Class B designation by presenting serious health risks, forcing state and local agencies to warn the public to avoid contact with the water. *See* SOF at ¶¶ 9-11, 18-21. Mashapaug Pond’s water quality suffers as a result of runoff, including from industry, transportation, fertilization, domestic waste, wildlife waste, and atmospheric deposition. *See* SOF at ¶ 7. The largest sources of phosphorus, and of eutrophication, are flows from neighboring Spectacle Pond (discussed *infra*) and six storm drains conveying direct discharges to Mashapaug Pond. *See* SOF at ¶¶ 24-26.

c. The Mashapaug Pond TMDL

The Mashapaug Pond TMDL was developed to address water quality violations for phosphorus and dissolved oxygen not currently met in Mashapaug Pond. *See* SOF at ¶¶ 16, 22. The purpose of the TMDL is to restore and protect Mashapaug Pond. *See* SOF at ¶¶ 14, 16. Elevated phosphorus levels in Mashapaug Pond “contribute to algae concentrations, which in turn contribute to low dissolved oxygen concentrations that impair fish and animal survival and loss of habitat.” Mashapaug Pond TMDL at 5. Excess phosphorus levels also “contribute to the growth of blue-green algae species . . . that have been identified as hazardous to humans (through skin contact), making the pond unsafe for swimming.” *Id.* These concerns are persistent, and safety has not improved since the approval of the TMDL. *See* SOF at ¶ 8.

Stormwater runoff is a significant source of phosphorus load to Mashapaug Pond. *See* SOF at ¶¶ 28, 48. The largest phosphorus source to Mashapaug Pond is the flow from Spectacle Pond (47 percent), which contains stormwater runoff. *See* SOF at ¶¶ 26, 41. The second largest source

¹⁷ See R.I. Dep’t of Env’tl. Mgmt., State of Rhode Island 2016 Impaired Waters Report – Final (March 2018), <http://dem.ri.gov/programs/benviron/water/quality/surfqw/pdfs/iwr16.pdf>.

of phosphorus is direct discharges from six storm drains (22 percent). *See* SOF at ¶ 24. Additionally, direct overland runoff is responsible for 13 percent of the phosphorus load to the pond. *See* SOF at ¶ 27.

Phosphorus concentrations in Mashapaug Pond in 2001 averaged 0.039 mg/L, which is over 1.5 times the applicable water quality standard of 0.025 mg/L. *See* SOF at ¶¶ 31-32. Based on the numeric target for dissolved oxygen and current natural dissolved oxygen conditions, a 62 percent reduction in modeled existing phosphorus loads from storm drains and direct overland flow is necessary. *See* SOF at ¶ 29-30. The TMDL establishes a Waste Load Allocation (“WLA”) expressed as “a 62% reduction in stormwater point source loads,” plus a 3 percent margin of safety, and characterizes both discharges from storm drains and direct stormwater discharges as point sources subject to this WLA. *See* SOF at ¶ 34-36. The WLA requires additional controls to achieve a total phosphorus reduction of 65 percent. *See* SOF at ¶ 34, 37.

d. Pollution from Spectacle Pond Contributes to the Failure of Mashapaug Pond to Meet Water Quality Standards

DEM and EPA have determined that reductions in the nutrient load from Spectacle Pond are necessary in order to meet water quality standards in Mashapaug Pond. *See* SOF at ¶¶ 15, 26, 34, 36, 39, 49-50. Spectacle Pond is located within the Pawtuxet River watershed, immediately upstream of Mashapaug Pond, and in a highly urbanized area. *See* SOF at ¶ 40-41, 44. Nineteen storm drains and thirteen areas of concentrated surface water flow discharge to Spectacle Pond and hydrologically connected waters. *See* SOF at ¶ 42.

Spectacle Pond is impaired for phosphorus, and is covered under a separate TMDL addressing violations of water quality standards relating to phosphorus impairment.¹⁸ This TMDL (the “9 Eutrophic Ponds TMDL”)—which includes both Spectacle Pond and other ponds—states that “the volume of stormwater generated by the large amounts of impervious areas within the eutrophic pond watersheds suggest that it is the major source of impairments to the eutrophic ponds.” 9 Eutrophic Ponds TMDL at 55. Spectacle Pond is located “in a highly urbanized area” where “commercial and industrial land use make up 17% and 10% of the watershed, respectively.” *See* SOF at ¶ 44.

¹⁸ *See* R.I. Dep’t of Env’tl. Mgmt., Total Maximum Daily Loads for Phosphorus To Address 9 Eutrophic Ponds in Rhode Island (2007), <http://www.dem.ri.gov/programs/benviron/water/quality/rest/pdfs/eutropnd.pdf>.

The 9 Eutrophic Ponds TMDL requires that the phosphorus load to Spectacle Pond be reduced by 68 percent and establishes a WLA of 38.6 kg of phosphorus per year to meet this requirement. *See* SOF at ¶¶ 49-50. The TMDL states that both pollutants and the volume of direct stormwater discharges must be reduced in order to achieve water quality standards in Spectacle Pond. 9 Eutrophic Ponds TMDL at 55. In particular, the TMDL requires a focus on priority outfalls and a feasibility study “to determine the types and locations of Best Management Practices (“BMPs”) that will be most effective in reducing stormwater volumes and phosphorus loading to [Spectacle] Pond to the maximum extent feasible.” *Id.* at 77. In addition, commercial and industrial property owners must be made aware of their responsibility to institute good housekeeping practices. *See* SOF at ¶ 55.

EPA approved the Mashapaug Pond and 9 Eutrophic Ponds TMDLs, explicitly including the stormwater WLAs, in a letter dated September 27, 2007. *See* Letter, U.S. Evtl. Prot. Agency, Approval of 9 Eutrophic Ponds and Mashapaug Pond TMDLs (Sept. 27, 2007), https://ofmpub.epa.gov/waters10/attains_impaired_waters.show_tmdl_document?p_tmdl_doc_blobs_id=67876.

II. REGULATORY FRAMEWORK

a. Residual Designation Authority under the Clean Water Act

Congress established the Clean Water Act (the “CWA”) “to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.” 33 U.S.C. § 1251(a). To achieve these objectives, the CWA prohibits the “discharge of a pollutant”¹⁹ by “any person”²⁰ from any “point source”²¹ into waters of the United States except when the discharge is authorized pursuant to a NPDES permit. 33 U.S.C. § 1311(a) (“Except as in compliance with ... section ... 1342 ... of this title, the discharge of any pollutant by any person shall be unlawful.”); 33 U.S.C.

¹⁹ In pertinent part, the CWA defines the term “discharge of a pollutant” as “any addition of any pollutant to navigable waters from any point source.” 33 U.S.C. § 1362(12)(A); *see also* 40 C.F.R. § 122.2 (stating that this definition “includes additions of pollutants into waters of the United States from: surface runoff which is collected or channeled by man.”).

²⁰ The term “person” is defined as “an individual, corporation, partnership, association, State, municipality, commission, or political subdivision of a State, or any interstate body.” 33 U.S.C. § 1362(5).

²¹ In pertinent part, the Act defines “point source” as “any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit...from which a pollutant is or may be discharged.” *Id.* § 1362(14).

§ 1342(k) (“Compliance with a permit issued pursuant to this section shall be deemed compliance ... [with section 1311] ... of this title.”).

The CWA provides that no discharge permit is required “for discharges composed entirely of stormwater” with some exceptions; among the exceptions is “[a] discharge for which the Administrator or the State, as the case may be, determines that the stormwater discharge contributes to a violation of a water quality standard or is a significant contributor of pollutants to waters of the United States.” 33 U.S.C. § 1342(p)(2)(E). The language of section 1342(p)(2)(E) is repeated near-verbatim at 40 C.F.R. § 122.26(a)(1)(v), and is known as residual designation authority (“RDA”).

b. DEM’s Obligations Under the Clean Water Act

The CWA directs all states to establish minimum water quality standards (“WQSs”) sufficient to carry out the overall purpose of the statute. 33 U.S.C. § 1313(c). The WQSs must: (1) designate uses of the waterway; (2) set water quality criteria; and (3) contain an anti-degradation policy that protects existing uses. *See* 33 U.S.C. § 1313; 40 C.F.R. §§ 131.10-12. Rhode Island has established, and EPA Region 1 has approved, water quality regulations pursuant to this requirement. *See* R.I. Admin Code § 25-16-25 (Water Quality Regulations); R.I. Gen. Laws § 46-12-3(11).

The CWA also requires states to identify impaired water bodies that do not meet WQSs after the implementation of technology-based controls, and to prioritize and schedule them for development of TMDLs. 33 U.S.C. § 1313(d); 40 C.F.R. § 130.7. Each TMDL is designed to reduce the pollution flowing to the water body covered by the TMDL from the entire land area that eventually drains into that water body. This area is referred to as the “watershed” for that water body. TMDLs set the maximum pollutant load that a body of water can receive while still maintaining the WQSs, and TMDLs must account for all contributing sources of pollution. 33 U.S.C. § 1313(d).

The CWA and its implementing regulations require that TMDLs include: (1) the WLA, or the portion of the pollutant load allocated to existing or future “point sources”; (2) the “load allocation” (“LA”), or the portion of pollutant load allocated to nonpoint sources; and (3) a margin of safety that takes into account any lack of knowledge concerning the relationship between pollution controls and water quality. 33 U.S.C. § 1313(d); 40 C.F.R. §§ 130.7(c)(1), 130.2(g), (h) & (i).

EPA guidance explains that “[i]n many cases, the TMDL analysis is the trigger for determining the source(s) of pollutants” to a water body.²² Indeed, other EPA guidance notes the importance of determining the sources of pollutants to affected water bodies as a part of the TMDL development process: “It is also important to understand the stormwater conveyance methods for each stormwater source in a watershed to determine whether the source is discharging to or affecting the impaired waterbody.”²³ DEM has acknowledged that “[i]n general, the actual sources of impairment are not determined until a TMDL or similar analysis is conducted on the waterbody.”²⁴

It is well settled that “[s]torm sewers are established point sources subject to NPDES permitting requirements.” *Envtl. Def. Ctr. v. EPA*, 319 F.3d 398, 407 (9th Cir. 2003) (citing *NRDC v. Costle*, 568 F.2d 1369, 1377 (D.C. Cir. 1977)). Indeed, EPA expressly stated more than ten years ago that “[f]rom a legal standpoint . . . most urban runoff is discharged through conveyances such as separate storm sewers or other conveyances which are point sources under the CWA.”²⁵

“NPDES permits . . . while authorizing some water pollution, place important restrictions on the quality and character of that illicit pollution.” *Waterkeeper Alliance, Inc. v. EPA*, 399 F.3d 486, 491 (2d Cir. 2005). Those restrictions include categorical technology-based effluent limitations that apply to all dischargers, as well as more stringent individualized limitations that are necessary to meet minimum water quality standards. 33 U.S.C. § 1311(b).

c. Invoking RDA to Require Permits for Contributing Discharges is Non-Discretionary

In its later Phase II stormwater rules, EPA again affirmed the importance of immediately regulating stormwater discharges that contribute to water quality impairments.²⁶ The Phase II rules

²² U.S. Env'tl. Prot. Agency, *Water Quality Standards Handbook, Chapter 7: Water Quality Standards and the Water Quality-based Approach to Pollution Control*, at 6 (Jan. 2015), available at <https://www.epa.gov/sites/production/files/2014-10/documents/handbook-chapter7.pdf>.

²³ U.S. Env'tl. Prot. Agency, *TMDLs to Stormwater Permits Handbook (DRAFT)*, § 3.3.2 (Nov. 2008), available at https://www.epa.gov/sites/production/files/2015-07/documents/tmdl-sw_permits11172008.pdf.

²⁴ R.I. Dep't of Env'tl. Mgmt., *Consolidated Assessment and Listing Methodology for the Preparation of the Integrated Water Quality Monitoring and Assessment Report, 2014 Assessment and Listing Cycle*, § 5.5.2, available at <http://www.dem.ri.gov/programs/benviron/water/quality/pdf/calm14.pdf>.

²⁵ *National Pollutant Discharge Elimination System (NPDES) Application for Storm Water Discharges*, 55 Fed. Reg. 47990, 47991 (Nov. 16, 1990) (codified at 40 C.F.R. pts. 122-124).

²⁶ See *Regulations for Revision of the Water Pollution Control Program Addressing Stormwater Discharge*, 64 Fed. Reg. 68721, 68781 (Dec. 8, 1999) (codified at 40 C.F.R. §§ 122.26(a)(1)(v) and 122.26(a)(9)(i)(D)). See also *Env't'l*

“expanded [the agency’s] authority to issue permits on a significantly broader basis, for wholesale categories of discharges in a geographic area.” *In re Stormwater NPDES Petition*, 2006 VT 91, ¶ 12. This allows the agency to issue RDA discharge permit determinations “on a geographic or a categorical basis within identified geographic areas such as a State or watershed.” 64 Fed. Reg. 68,736 (codified at 40 C.F.R. § 122.26(a)(9)(i)(D)). EPA has explained that this broader permitting authority would “facilitate and promote” the overarching goal of “coordinated watershed planning.” *Id.* at 68,739. *See also In re Stormwater NPDES Petition*, 910 A.2d 824, 830 (Vt. 2006).

Exercise of “the Agency’s residual designation authority is not optional.” *Id.* at 835. Once a discharge, or a category of discharges, is determined to be contributing to a violation of water quality standards, the operator(s) of those discharges “*shall* be required to obtain a NPDES permit.” 40 C.F.R. § 122.26(a)(9)(i)(D) (emphasis added). A discharge determined “to contribute to a violation of a water quality standard” or to be “a significant contributor of pollutants to waters of the State” is a discharge that “*shall* be required to obtain a NPDES permit.” R.I. Admin. Code § 25-16-14:31(a)(1)(vii) (emphasis added). *See also* 33 U.S.C. § 1342(p)(2)(E) (requiring NPDES permits for discharges composed entirely of stormwater that are determined to contribute to a violation of a water quality standard). As EPA has explained, “designation is appropriate as soon as the adverse impacts from stormwater are recognized.” Letter from Tracy Mehan, III, Asst. Adm’r, U.S. Env’tl. Prot. Agency, to Elizabeth McLain, Sec’y, Vt. Agency of Natural Res. (Sept. 16, 2003) (citing Memorandum from James R. Elder, Director, EPA Office of Water Enforcement and Permits, *Designation of Stormwater Discharges for Immediate Permitting* 2 (Aug. 8, 1990)) (“Mehan Letter”). EPA has stated that it “would be reasonable to require permits for discharges that contribute more than *de minimis* amounts of pollutants identified as the cause of impairment to a water body.” Mehan Letter at 2.

RDA determinations may be made directly by the NPDES permitting authority or result from the development of a WLA in a TMDL analysis. *See* 40 C.F.R. § 122.26(a)(9)(i)(C); R.I. Admin. Code § 25-16-14:31(a)(1)(viii). Any person may petition the “Director” or “Regional Administrator” to designate a discharge or category of dischargers under RDA. 40 C.F.R. § 122.26(f)(2); R.I. Admin. Code § 25-16-14:31(g)(2); *see also In re Stormwater NPDES Petition*,

Def. Ctr. v. EPA, 344 F.3d 832, 875-76 (9th Cir. 2003) (upholding RDA against industry challenge).

910 A.2d at 829-831 (explaining that RDA petitions need not be made on a case-by-case basis, but may seek designation for whole classes of discharges).²⁷ Once an RDA petition is submitted to the Director or Regional Administrator, a final decision on the petition must be made within 90 days of its receipt. 40 C.F.R. § 122.26(f)(5). *See also* R.I. Admin. Code § 25-16-14:31(g)(8) (“The Director shall make a final determination on any petition received under this section within a reasonable period of time after receiving the petition...”).

III. ANALYSIS

a. **The Contributing Discharges require a RIPDES permit pursuant to the CWA and EPA regulations because they contribute to ongoing violations of the Mashapaug Pond watershed’s water quality standards.**

The CWA and DEM’s implementing regulations require permits for all existing point source discharges composed entirely of stormwater that contribute to WQS violations. 33 U.S.C. § 1342(p)(2)(E); 40 C.F.R. §§ 122.26(a)(1)(v), 122.26(a)(9)(i)(C)-(D); R.I. Admin. Code § 25-16-14:31(a)(1)(vii)-(viii). Throughout the last several decades, the Mashapaug Pond watershed has continually failed to meet its state WQSs. *See* SOF at ¶¶ 7-11, 16-23. DEM has determined that runoff from industrial and commercial land use is the proximate cause of these failures. *See* SOF at ¶¶ 4-7, 44, 55. Based on the two developed TMDLs, DEM has specifically determined that stormwater runoff from direct dischargers is a significant contributor to the consistent failure to meet water quality standards, leading to the serious degradation of water quality in Mashapaug Pond. *See* SOF at ¶¶ 7-9, 25-28, 41, 47, 54. Given the consistent, unanimous, and unequivocal nature of these findings, the Director must issue notice to all persons responsible for Contributing Discharges to the Mashapaug Pond watershed that they must obtain a RIPDES discharge permit.

Based on the attached TMDL Attainability Analyses for Phosphorus and Fecal Coliform for Mashapaug Pond, Rhode Island (“Expert Report”), CLF believes that the class of Contributing Discharges should include all industrial, commercial, and residential parcels larger than 1 acre within the Mashapaug Pond watershed. Management of these parcels with the best available BMP

²⁷ This petition authority also is compelled by Congress’s mandate that EPA and the states provide for and encourage “public participation in the development...and enforcement of any regulation, standard, effluent limitation, plan or program” established under the CWA. 33 U.S.C. § 1251(e).

technology can achieve full attainment of the phosphorus TMDL and significant progress towards attainment of the fecal coliform TMDL. *See* Expert Report at 6-7, 34.

1. The Mashapaug Pond watershed fails to meet Rhode Island's water quality standards.

TMDLs for Mashapaug Pond and Spectacle Pond indicate that WQSs cannot be met without significant reductions in phosphorus and stormwater runoff. *See* SOF at ¶¶ 28, 30, 34-36, 49-50, 52-54. Mashapaug Pond's high density of development, leading to high percentages of industrial land use and impervious cover, causes contamination from polluted stormwater runoff. *See* SOF at ¶¶ 5, 6. Further, excess bacteria, caused by sewage contamination and excess nutrients, washes into Mashapaug Pond through stormwater. *See* SOF at ¶¶ 6-7, 12, 39, 46. Runoff from urban activities, including industry and transportation, fertilization, domestic, wildlife waste, and atmospheric deposition are seriously degrading water quality in Mashapaug Pond. *See* SOF at ¶ 7. Elevated levels of phosphorus can lead to toxic algal blooms, a loss of dissolved oxygen, and harm to human and animal life. SOF at ¶¶ 7, 19. DEM water quality sampling and monitoring has documented that both Mashapaug Pond and Spectacle Pond suffer from eutrophication, and that high levels of phosphorus contributes to the growth of toxic blue-green algae. *See* SOF at ¶¶ 7-11, 17-18, 20-21, 46.

2. The Mashapaug Pond watershed's failure to meet water quality standards is a direct result of the Contributing Discharges.

The direct evidence that the Contributing Discharges are the cause of ongoing water quality violations in the Mashapaug Pond watershed is definitive, as set forth in the SOF. Moreover, this direct evidence is the result of detailed studies of water quality impairments in the Mashapaug Pond watershed by DEM and by EPA—each of which concluded that stormwater discharges from commercial and industrial facilities contribute to the ongoing impairment of the watershed and violations of water quality standards governing bacteria and phosphorus in several Rhode Island water bodies. *See* SOF at ¶¶ 3, 5, 44, 47, 54-55.

i. Reducing Dissolved Oxygen and Phosphorus in Mashapaug Pond

The Mashapaug Pond TMDL was established to “restore the pond and protect it from future degradation.” *See* SOF at ¶ 13. These objectives will be accomplished by meeting the water quality goals of reducing average total phosphorus concentration in the pond to 20 ug/l; eliminating hypoxia; reducing algal abundance; and reducing excess fecal coliform caused by wet weather.

See SOF at ¶ 20. In order to meet the TMDL objectives, phosphorus inputs must be reduced. See SOF at ¶ 52. The volume of stormwater direct discharges must also be reduced. See SOF at ¶ 54.

To achieve the necessary reduction of stormwater and nutrient discharge, the Mashapaug Pond TMDL indicates that a combination of BMPs are necessary. See SOF at ¶ 37. Key land uses, including commercial and industrial property owners, must become aware of both their responsibility to operate under such BMPs, as well as the impairment caused by their uses. See SOF at ¶ 55. To meet the Mashapaug Pond TMDL, phosphorus loading must be reduced by 65 percent across the watershed, including all storm drains and direct overland runoff areas, as well as flow from Spectacle Pond. See SOF at ¶ 34-36. The Mashapaug Pond TMDL requires a 53.5 percent reduction in total phosphorus loading, or a reduction from the total existing load of 231.60 kg/yr to the TMDL of 107.70 (kg/yr). See SOF at ¶ 34.

Certain loads—such as groundwater and atmospheric deposition—are more difficult to reduce, therefore controllable loads must have a higher reduction. *Id.* Achievement of the Mashapaug Pond TMDL numeric target for dissolved oxygen (2 mg/L or greater in the hypolimnion) requires a 62 percent reduction in existing phosphorus loads. See SOF at ¶ 30. A nutrient load reduction of 62 percent includes all storm drains, direct overland runoff areas, and flow from Spectacle Pond. See SOF at ¶ 34. In addition to the 62 percent reduction, the TMDL accounts for a 3 percent margin of safety—slightly more than 5 percent of the TMDL—to ensure the target is met. See SOF at ¶ 35.

An extensive, empirical study conducted during the summer of 2001 identified the greatest sources of phosphorus loading to Mashapaug Pond. The majority of the total phosphorus loading to Mashapaug Pond comes from base flow entering from Spectacle Pond (47 percent) and direct overland runoff (13 percent). See Mashapaug Pond TMDL at viii. The 2001 monitoring study concluded that six storm drains convey an additional 22 percent of the total phosphorus to Mashapaug Pond. *Id.* Ultimately, the TMDL determines that accomplishing the TMDL goals requires a 65 percent reduction in nutrient loads from controllable sources, such as storm drains, direct overland runoff, and base flow from Spectacle Pond. See SOF at ¶ 36. In particular, the TMDL determined that “efforts are needed within the Spectacle Pond watershed in Cranston along with in-lake management techniques to control the release of phosphorus from the sediments to reduce the phosphorus load from Spectacle Pond into Mashapaug Pond.” See SOF at ¶ 38.

ii. Reducing Phosphorus in Spectacle Pond

The 9 Eutrophic Ponds TMDL—which includes Spectacle Pond—was developed at the same time as the Mashapaug Pond TMDL. To meet the 9 Eutrophic Ponds TMDL, phosphorus loading must be reduced by 68 percent for Spectacle Pond. 9 Eutrophic Ponds TMDL at 52-53. The 9 Eutrophic Pond TMDL establishes a target concentration of 20 ug/l for Spectacle Pond, which results in a 28.5 kg/yr estimated total load to Mashapaug Pond. *See* SOF at ¶ 49. The Mashapaug Pond TMDL had established a total load of 38 kg/year, with a target concentration of 42 ug/l from Spectacle Pond. *Id.* Sampling conducted for the Mashapaug Pond TMDL identified stormwater as a significant source of total phosphorus in Spectacle Pond. *See* SOF at ¶ ¶ 48. The Mashapaug Pond TMDL determined that a feasibility study was necessary to determine the types and locations of BMPs that will best reduce stormwater runoff volume, as well as phosphorus loading. *See* SOF at ¶ 51.

In summary, DEM and EPA have expressly determined that the Contributing Discharges are a primary cause of water quality violations in the Mashapaug Pond watershed. Because all evidence conclusively determines that the Contributing Discharges contribute to ongoing violations of applicable WQSs for the Mashapaug Pond watershed this petition must be granted and all persons responsible for those Contributing Discharges must be notified of their obligation to obtain RIPDES permits pursuant to 40 C.F.R. § 124.52(b).

b. RDA designation should include, as a class, all existing unpermitted commercial, industrial, and residential discharges that contribute more than de minimis amounts of pollutants within the Mashapaug Pond watershed.

EPA regulations provide for RDA designation of a category of discharges within a geographic area, such as a watershed, when it determines that discharges from that category contribute to a violation of a water quality standard. 40 C.F.R. § 122.26(a)(9)(i)(D). Here, EPA and DEM have already concluded that discharges from unpermitted commercial and industrial dischargers, as a class, cause the non-attainment of WQSs in the Mashapaug Pond watershed. *See* SOF at ¶¶ 9-11, 46. Additionally, EPA has stated that it “would be reasonable to require permits for discharges that contribute more than de minimis amounts of pollutants identified as the cause of impairment to a water body.” Mehan Letter at 2.

The Mashapaug Pond TMDL attributes 22 percent of the total annual phosphorus load to

Mashapaug Pond to six storm drains,²⁸ directly conveying stormwater runoff, and 47 percent of the total load to tributary flow entering from Spectacle Pond. *See* SOF at ¶¶ 24-26. Many of these stormwater drainage systems are currently unregulated by the RIPDES permit program. These systems include stormwater runoff from commercial, industrial, and residential land use. As acknowledged by the TMDLs, nutrient loads from Spectacle Pond are directly responsible for the phosphorus concentrations of Mashapaug Pond. *See* SOF at ¶¶ 26, 34-36. The Mashapaug Pond watershed continues to suffer eutrophication, excessive algae blooms (including those containing toxic cyanobacteria), and other effects of pollution. *See* SOF at ¶ 22. Therefore, to achieve the required reductions in the Mashapaug Pond watershed, reductions in stormwater phosphorus loads, based upon land use, must be decreased throughout the watershed. *See* SOF at ¶¶ 28, 30, 34-36, 50, 52, 54.

RDA designation of the entire class of Contributing Discharges will meet DEM's goal of reducing phosphorus discharges to Mashapaug Pond to restore the watershed to a healthy state and protect the pond from future degradation. *See* SOF at ¶¶ 14-16, 28, 36, 52. First, class designation would fairly and equitably assign liability for non-attainment among all contributing sources and thereby ensure the widespread participation that is necessary for success. Second, class designation would also provide an appropriate regulatory mechanism for implementation of any future restoration plan.²⁹

Absent RDA designation, an inordinate regulatory burden for attainment of water quality standards will fall upon a small minority of stormwater dischargers (including MS4s, industrial activities, and construction projects) that currently fall under CWA jurisdiction. *See, e.g.,* 33 U.S.C. § 1342(p)(3)(A) (permits for stormwater discharges associated with industrial activity, including construction activities, must meet the CWA § 301(b)(1)(C) mandate to include any more stringent limitation necessary to meet water quality standards). Aside from being unfair, such a set-up is unlikely to result in achievement of state WQSS. Regulation of all Contributing

²⁸ Although discharges of pollutants associated with the storm drains are described as “non-point” sources, legally stormwater from such sources that is discharged through a conveyance is a “point source” under the CWA. *See, e.g., Sierra Club v. Abston Construction Co.*, 620 F.2d 41 (5th Cir. 1980).

²⁹ Currently, a small number of operators in Mashapaug Pond's watershed fall within CWA jurisdiction either on a temporary (construction activity) or permanent (MS4 or industrial activity) basis. Most operators, however, presently are not regulated under the CWA, nor are they subject to state regulations.

Discharges is therefore not only legally required, but also the most equitable, efficient, and effective means of ensuring that the Mashapaug Pond watershed meets its water quality standards.

IV. CONCLUSION


The severe degradation of Mashapaug Pond's water quality epitomizes the impact of urban stormwater discharges upon many of Rhode Island's major waterways. Mashapaug Pond's decades-long failure to meet its mandated water quality standards is well documented, and both EPA and DEM have unequivocally determined that the Contributing Discharges significantly contribute to this failure.

CLF is filing this petition because neither EPA nor DEM have required RIPDES permits for these Contributing Discharges. This delay in the implementation of the CWA has exacerbated the pollution and degradation of Mashapaug Pond. CLF understands that the health of Rhode Island's waters is a priority for DEM, and that DEM must work within its limited resources. Nonetheless, we believe that any further delay is unwarranted. Accordingly, this petition must be granted, and DEM must issue notice to all persons responsible for the Contributing Discharges that they must obtain RIPDES permits for these Contributing Discharges. We look forward to your response, and to working with you to improve water quality in Mashapaug Pond.

Respectfully Submitted,

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Enclosures: Statement of Undisputed Facts
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