



August 24, 2020

Dennis Deziel
Acting Regional Administrator
EPA New England Region
1 Congress Street, Suite 1100 Boston, MA
02114-2023

RE: Petition for a Determination that Certain Commercial, Industrial, Institutional, and Multi-Family Residential Property Dischargers Contribute to Water Quality Standards Violations in the Mystic River Watershed, Massachusetts, and that NPDES Permitting of Such Properties is Required

Dear Regional Administrator Deziel,

As the Regional Administrator of the EPA New England Region ("EPA Region 1"), the Conservation Law Foundation ("CLF") hereby petitions you for a determination pursuant to 40 C.F.R. § 122.26(f)(2) that discharges of stormwater that are not currently subject to direct permitting by EPA from privately owned commercial, industrial, institutional,¹ and multi-family residential² real properties of one acre or greater in the Mystic River Watershed ("Contributing Discharges") contribute to violations of water quality standards in the Boston Harbor Watershed, of which the Mystic River Watershed is a sub-basin, and require permits under the

¹ For the purposes of this Petition, the "institutional" land use category encompasses properties in the MassGIS "Urban Public/Institutional" land use code that are privately owned.

² For the purposes of this Petition, the "large multi-family residential" land use category encompasses properties in the MassGIS "Multi-Family Residential" land use code that are privately owned, include five or more housing units (excluding those in which 50% or more of the units are restricted at 80% Area Median Income or below), and are not currently subject to regulation under the NPDES permit program in order to restore and protect the water quality of the Mystic River watershed.

National Pollutant Discharge Elimination System (“NPDES”).

As set forth below, the facts and the law as developed by the United States Environmental Protection Agency (“EPA”) require that these unpermitted discharges must be subject to regulation under the NPDES permit program in order to restore and protect the water quality of the Mystic River Watershed.

INTRODUCTION

CLF is a nonprofit organization that works to restore the health of New England’s waterways, many of which are failing to meet basic water quality standards for public health and recreation. The CLF Clean Air and Water Program is a leader in advocating for stormwater regulation by states and EPA under the Clean Water Act to remedy severe water pollution and flooding problems throughout New England. CLF has petitioned EPA under Section 402(p)(2)(E) of the Clean Water Act, 33 U.S.C. § 1342(p)(2)(E), to require cleanup of stormwater discharges from numerous existing industrial and commercial properties in the Long Creek, Maine watershed,³ and has litigated successfully in the Vermont Supreme Court and agency tribunals to require the state’s Agency of Natural Resources to extend its Clean Water Act permitting authority to existing, unregulated stormwater pollution discharges in five badly polluted watersheds surrounding Burlington, Vermont.⁴

Across New England, stormwater pollution has emerged as the major threat to the health of our rivers, lakes, and streams. Some of our most treasured waters—used by millions for recreation, fishing, and other tourism—are suffering from toxic algae blooms, poor water quality, and unacceptably high public health risks⁵ due to pathogens brought to the waters by stormwater runoff flowing off parking lots and other paved areas. Massachusetts water quality standards (WQS) designate that all water bodies in the Mystic Watershed should be

³ See CLF’s *Petition For a Determination that Existing, Non-De Minimis, Un-Permitted Stormwater Discharges from Impervious Surfaces into Long Creek South Portland, Maine Require a Clean Water Act Permit*, filed with Robert Varney, Administrator, EPA Region 1, March 6, 2008.

⁴ See *In re Stormwater NPDES Petition*, 2006 VT 91; Judgment Order Docket No. 14-1-07 Vermont Environmental Court (Aug. 28, 2008).

⁵ *HERE’S WHAT WE DON’T WANT THE MYSTIC RIVER TO LOOK LIKE*, Mystic River Watershed Association (June 30, 2019), <https://mysticriver.org/news/2019/7/2/phosphorus-in-the-mystic-river>.

suitable for primary and secondary contact recreation,⁶ but many communities around the Mystic River Watershed do not view the water as a safe place to swim or bring their pets.⁷ The Watershed is designated to provide suitable habitat for fish, other aquatic life, and wildlife,⁸ but communities and water quality observers report that the wetland “barely functions due to eutrophication and dead zones throughout”⁹. Recently, Eastern Research Group, Inc., in Lexington, MA, concluded in a report for the EPA that “degradation of aquatic environments by nutrient pollution caused by human activity and urban development [] is a major cause of impairments in the [Mystic] watershed as evidenced by excessive algal and macrophyte growth and harmful cyanobacteria blooms.”¹⁰

Pollution in the Mystic Watershed is expected to worsen as hot days, precipitation, and stormwater runoff increase due to climate change.¹¹ Cyanobacteria blooms, also known as blue-green algae blooms, thrive in nutrient-rich water during hot weather.¹² As climate-related hot days and precipitation increase in the region, the algae can feed on more sunlight, which in turn warms the water for more algae production, fostered by stormwater runoff from heavy precipitation, all of which makes harmful algal blooms likelier.¹³ The Third National Climate Assessment recorded a 10% increase in general precipitation for the New England region over the past hundred years, and particularly extreme precipitation events have increased in the Northeast more than any other region in the United States.¹⁴ It is projected that the heavy

⁶ *Boston Harbor TMDL*, at 15.

⁷ Danielle McLean, *EPA: Mystic River Usually Boatable and Swimmable; Still Polluted*, Wicked Local Somerville (2015), <https://somerville.wickedlocal.com/article/20150724/NEWS/150727939>.

⁸ *Boston Harbor TMDL*, at 15.

⁹ Ellen Mass & Kathy Johnson, *Conditions of the Mystic River Watershed in Cambridge*, Wicked Local Cambridge (2019), <https://cambridge.wickedlocal.com/news/20191210/guest-column-conditions-of-mystic-river-watershed-in-cambridge>.

¹⁰ *Mystic River Watershed Alternative TMDL Development for Phosphorus Management - Final Report*, 2 (Jan. 2020); <https://www.epa.gov/sites/production/files/2020-05/documents/mystic-phosphorus-tmdl-development.pdf>.

¹¹ Katherine Fosburgh, *Letter to the Editor: Winchester Residents Must Step Up to Protect Local Waterways from Runoff*, Wicked Local Winchester (2019), <https://winchester.wickedlocal.com/news/20191220/letter-to-editor-winchester-residents-must-step-up-to-protect-local-waterways-from-runoff>.

¹² Barbara Moran, *Summertime, And Toxic Algae Is Blooming: Here's What You Need To Know*, 90.9 WBUR (Jul. 26, 2019), <https://www.wbur.org/earthwhile/2019/07/26/toxic-algae-cyanobacteria-charles-river>.

¹³ *Climate Change and Harmful Algal Blooms*, EPA (Dec. 17, 2019) <https://www.epa.gov/nutrientpollution/climate-change-and-harmful-algal-blooms>.

¹⁴ Horton, R., G. Yohe, W. Easterling, R. Kates, M. Ruth, E. Sussman, A. Whelchel, D. Wolfe, and F. Lipschultz, *Ch. 16: Northeast. Climate Change Impacts in the United States: The Third National Climate Assessment*, U.S. Global

precipitation and sea level rise trends will continue in the Northeast,¹⁵ increasing the 1% annual chance floodplain area by more than 30% at the end of the century.¹⁶ If a storm surge were to occur in the Mystic Watershed, communities are concerned contaminated water would flood low-income neighborhoods,¹⁷ and affect hundreds of acres of residences in Everett,¹⁸ Belmont, Cambridge, Arlington, and Somerville. The Northeast has additionally experienced more pronounced sea level rise at a rate exceeding the global average by approximately 8 inches.¹⁹

Pathogens from stormwater have well documented adverse health effects on humans. Public information from MassDEP and EPA cites significant impacts observed in humans and pets from contact with recreational waters, ingestion of drinking water, and consumption of filter-feeding shellfish.²⁰ Excessive pathogens also require expensive disinfection to produce potable water supplies, which in turn generates disinfection byproducts that further harm human health.²¹ Urgent action is needed to address these public health risks.

Water quality conditions in the Mystic River Watershed, in Massachusetts in general, and around the nation demonstrate the urgent need for leadership in residual designation authority implementation to remedy water quality impairments caused in whole or in part by existing poorly controlled and uncontrolled stormwater discharges. EPA has previously provided convincing documentation of the need for residual designation authority to control stormwater discharges in the Mystic River Watershed.²² EPA has also previously identified specific categories of large unpermitted sources of stormwater runoff as among the primary contributors of stormwater discharges.²³ EPA must act to bring these polluters into the NPDES

Change Research Program, 372, 380 (2014),

http://s3.amazonaws.com/nca2014/low/NCA3_Full_Report_16_Northeast_LowRes.pdf?download=1.

¹⁵ U.S. Global Change Research Program, *Climate Science Special Report: Fourth National Climate Assessment, Volume I*, 26 (2017), (Wuebbles, D.J., D.W. Fahey, K.A. Hibbard, D.J. Dokken, B.C. Stewart, and T.K. Maycock eds.), https://science2017.globalchange.gov/downloads/CSSR2017_FullReport.pdf.

¹⁶ *Id.* at 242.

¹⁷ Liz Neisloss, *It's Not Just the Flooding. It's What Might be in the Water*. Western Great Blue Hill (WGBH) (2019), <https://www.wgbh.org/news/local-news/2019/12/17/its-not-just-the-flooding-its-what-might-be-in-the-water>.

¹⁸ *Id.*

¹⁹ *Northeast Climate Change Impacts*, *supra* note 15, at 373.

²⁰ *Boston Harbor TMDL*, at 16.

²¹ *Id.*

²² *See generally Boston Harbor TMDL*.

²³ *Id.* at 77.

permitting program and prevent further degradation of the Mystic River sub-basin.

FACTUAL BACKGROUND

The Mystic River Watershed has Been Polluted by Stormwater Runoff Discharges Containing High Levels of Pathogens that Prevent the Watershed from Attaining and Maintaining its Designated and Existing Class B and SB Uses

The Mystic River Watershed, a sub-basin of the Boston Harbor watershed, is highly urbanized with a high level of impervious cover, which has resulted in it losing much of its natural capacity to absorb rainfall and remove pollutants by filtering the runoff through vegetative cover and the soil matrix.²⁴ Specifically, the Mystic Watershed is characterized by highly urbanized land use consisting of well above 65% developed land as of 2005,²⁵ including at least 39.9% for residential use, and at least 21.4% industrial and commercial use.²⁶ Further, these statistics from 2005 likely underestimate the current extent of developed land use, because rapid urbanization had only led to more development since.²⁷

“The Mystic River is listed as a Class B water with a Category 5 water quality rating in the Massachusetts 303(d) ‘List of Impaired Waters’ (2014) for phosphorus, arsenic, chlordane, chlorophyll, DDT, dissolved oxygen, *E. coli*, PCB in fish, Secchi depth, and sediment bio-chronic toxicity.”²⁸ The Mystic Watershed sub-basin system is composed of upper, central, and lower watersheds,²⁹ comprised of five estuarine and 9 river segments.³⁰ Based upon robust sampling and studies of the Mystic River and Boston Harbor, conducted in part by the Mystic River Watershed Association,³¹ MassDEP and EPA developed a Total Maximum Daily Load report (TMDL) in 2018 that applies to pathogens in the three sub-basins of the Boston Harbor Watershed: Boston Harbor Proper, Weymouth-Weir, and the Mystic River Watershed.³² Of the

²⁴ *Id.* at 66.

²⁵ 65% of the land in the Boston Harbor, Weymouth-Weir and Mystic watersheds, when considered together, is developed. *Boston Harbor TMDL*, at 9. However, since a bulk of undeveloped land is located in the Weymouth-Weir subwatershed, see *id.* at 12 fig. 2-1, the percentage of developed land in the Mystic watershed is necessarily well above 65%.

²⁶ *Boston Harbor TMDL*, at 10 tbl. 2-1.

²⁷ *Id.* at viii-ix.

²⁸ *Mystic River Watershed Alternative TMDL Development for Phosphorus Management - Final Report*, 16

²⁹ *Id.* at 19.

³⁰ *Boston Harbor TMDL* at 21.

³¹ *Boston Harbor TMDL* at x.

³² *Id.* at viii.

forty-two river and estuarine segments of these sub-basins, thirty-three were in violation of WQS; four estuarine and seven river segments which were impaired are located within the Mystic Watershed.³³

Stormwater runoff is a significant contributor to pathogens in the Mystic River sub-basin, as it picks up pollutants such as garbage, pet wastes and wildlife waste and deposits them into the river.³⁴ Most of the bacteria sources in the watershed are believed to be stormwater-related.³⁵ MassDEP and EPA have assessed primary and secondary contact recreation in most segments of the Mystic Watershed as impaired for chronic elevated bacteria levels posing a public health risk.³⁶ 78.5% of the measured river and estuary segments of Mystic River sub-basin are impaired.³⁷ Recreational use in some segments are additionally considered impaired for safety considerations related to the waters' Secchi depth transparency, where it is believed hazardous objects are not visible to someone diving (or falling) into the water and rescuers are unable to easily locate a possible drowning victim.³⁸ Further, heightened levels of bacteria have significantly hampered the harvesting of shellfish, which must adhere to strict quality standards for bacteria in order to protect human health. Although the watershed is rich in shellfishing reserves, many areas have been closed to shellfishing for decades due to excessive bacteria.³⁹ These impairments prohibit uses of Class B waters designated as capable of providing and supporting habitat for fish and other aquatic wildlife, and for primary and secondary contact recreation.⁴⁰ In response, the latest TMDL approved by EPA calls for "[p]articularly strident efforts" to reduce the bacteria load in the watershed.⁴¹

On May 28, 2020, EPA and MassDEP notified the public of the release of a report prepared by Eastern Research Group, Inc., in Lexington, MA, that is intended to function as an

³³ *Id.* at viii.

³⁴ *Id.* at ix.

³⁵ *Id.* at 77.

³⁶ *Id.* at 48-61.

³⁷ *Id.* at 21.

³⁸ *Id.* at 23-24, MassDEP 2018. Massachusetts Consolidated Assessment and Listing Methodology Guidance Manual, or CALM, MassDEP, Watershed Planning Program, Worcester, MA. CN 455.0.

<https://www.mass.gov/doc/2018-consolidated-assessment-and-listing-methodology-guidance/download>.

³⁹ *Id.* at ix.

⁴⁰ *Id.* at 15.

⁴¹ *Id.* at ix.

“alternative TMDL” (ATMDL) for Phosphorus in the Mystic River Watershed.⁴² The development of an ATMDL for phosphorus in the Mystic was pursued given that the compilation of a traditional TMDL would inhibit expeditious implementation of practical remedies:⁴³ “In 2013, the EPA announced a new framework (Vision) for prioritizing and implementing TMDLs and pollution control strategies . . . The Vision acknowledges that alternative restoration approaches may be more immediately beneficial or practical in achieving water quality standards than a traditional TMDL.”⁴⁴ The ATMDL examined the relationship between stormwater runoff, increases in phosphorus in the Mystic Watershed as a result, and harmful algal blooms.⁴⁵ Stormwater runoff reductions of up to 67% will be required in order for the watershed to meet WQS.⁴⁶

STATUTORY AND REGULATORY FRAMEWORK

The NPDES Program is Critical to Restoring Clean Rivers

Congress established the Clean Water Act (“CWA”) “to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.” 33 U.S.C. § 1251(a).⁴⁷ To achieve these objectives, the CWA prohibits the “discharge of a pollutant”⁴⁸ by “any person”⁴⁹ from any “point source”⁵⁰ into waters of the United States except when the discharge is

⁴² EPA Region 1, Notice to Mystic River Watershed Stakeholders (May 28, 2020); <https://www.epa.gov/sites/production/files/2020-06/documents/mystic-r-phosphorus-alt-tmdl-release-joint-ltr.pdf>.

⁴³ *Mystic River Watershed Alternative TMDL Development for Phosphorus Management - Final Report*, 16

⁴⁴ *Id.* at 3.

⁴⁵ *Id.* at 4.

⁴⁶ *Id.* at 114.

⁴⁷ The United States Supreme Court has recognized that this objective incorporates “a broad, systematic view of the goal of maintaining and improving water quality,” and that the word “integrity,” as intended by Congress in the Act’s statement of purpose, “refers to a condition in which the natural structure and function of ecosystems [are] maintained.” *United States v. Riverside Bayview Homes, Inc.*, 474 U.S. 121, 132 (1972) (quoting H.R. Rep. No. 92- 911, at 76.)

⁴⁸ In pertinent part, the Act defines the term “discharge of a pollutant” to mean “any addition of any pollutant to navigable waters from any point source.” 33 U.S.C. § 1362(12)(A); 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.”).

⁴⁹ The term “person” is defined to mean “an individual, corporation, partnership, association, State, municipality, commission, or political subdivision of a State, or any interstate body.” *Id.* §1362 (5).

⁵⁰ In pertinent part, the CWA 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).

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

The CWA further directs states to establish minimum WQS sufficient to carry out the overall purpose of the Act. 33 U.S.C. § 1313; 40 C.F.R. § 131.2. These standards define a state’s water quality goals by “designating the use or uses to be made of the water and by setting criteria necessary to protect those uses.” 40 C.F.R. § 131.2. Massachusetts has established, and EPA Region 1 has approved, WQSs pursuant to this requirement. M.G.L c. 21, § 27(3), (5); 14 CMR § 4.00 *et seq.*

The CWA also requires states to identify impaired water bodies that do not meet WQS 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 “waste load allocation” (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 considers 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 “in many cases, the TMDL analysis is the trigger for determining the source(s) of pollutants” to a water body.⁵¹ Indeed, in other guidance EPA notes the importance of determining the source(s) of pollutants to affected water bodies as part of

⁵¹ 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), <https://www.epa.gov/sites/production/files/2014-10/documents/handbook-chapter7.pdf>.

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.”⁵²

It is well settled that “[s]torm sewers are established point sources subject to NPDES permitting requirements.” *Environmental Defense Center v. U.S. Environmental Protection Agency*, 319 F.3d 398, 407 (9th Cir. 2003) (citing *NRDC v. Costle*, 568 F.2d 1369 at 1377 (D.C. Cir. 1977)). In fact, EPA expressly recognized more than a decade 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.” *National Pollutant Discharge Elimination System (NPDES) Application for Storm Water Discharges*, 55 Fed. Reg. 47,990, 47,991 (Nov. 16, 1990). NPDES permits, “while authorizing some water pollution, place important restrictions on the quality and character of that licit pollution.” *Waterkeeper Alliance, Inc. v. United States E.P.A.*, 399 F.3d 486, 491 (2d Cir. 2005). Those restrictions include categorical technology-based effluent limitations that apply to all dischargers, and more stringent individualized limitations as necessary to meet minimum WQS. See 33 U.S.C. § 1311(b).

Congress Expressly Provided for Residual Designation of Unpermitted Stormwater Polluters Under the Clean Water Act

In 1987, in recognition of the serious environmental problems caused by stormwater pollution and out of frustration with EPA’s failure to control stormwater discharges, Congress amended the NPDES provisions for stormwater, directing EPA to phase in a comprehensive national regulatory program for stormwater discharges. 33 U.S.C. §§ 1342(p)(4), (6).⁵³ Though

⁵² U.S. Env’tl. Prot. Agency, TMDLs to Stormwater Permits Handbook (DRAFT), § 3.3.2 (Nov. 2008), https://www.epa.gov/sites/production/files/2015-07/documents/tmdl-sw_permits11172008.pdf.

⁵³ Congressional dissatisfaction with the slow pace of NPDES implementation for stormwater is evident in the legislative history of the 1987 amendment, such as the following statement from Senator Durenberger during the floor debates: The Federal Water Pollution Control Act of 1972 required all point sources, including storm water discharges, to apply for NPDES permits within 180 days of enactment. Despite this clear directive, E.P.A. has failed to require most storm water point sources to apply for permits which would control the pollutants in their discharge. The conference bill therefore includes provisions which address industrial, municipal, and other storm water point sources. I participated in the development of this provision because I believe it is critical for the Environmental Protection Agency to begin addressing this serious environmental problem. 133 Cong. Rec. S752

these amendments imposed a limited moratorium on NPDES permitting for certain discharges composed entirely of stormwater, the 1987 Congress singled out five categories of high-priority stormwater discharges for immediate and ongoing regulation through NPDES permitting. *Id.* §§1342(p)(1), (p)(2)(A)-(E). These focused primarily on well-documented and significant sources of stormwater pollution, such as runoff associated with industrial activities and large urban areas. Congress, however, also created a provision for other stormwater discharges by directing EPA to require NPDES permits for any stormwater discharge that the Administrator or the State Director determines “contribute[s] to a violation of a water quality standard or is a significant contributor of pollution to waters of the United States.” 33 U.S.C. § 1342(p)(2)(E); 40 C.F.R. § 122.26(a)(1)(v).

EPA’s Phase I stormwater rule, while focused on industrial polluters and urban areas, continued to recognize the need, pursuant to CWA § 402(p)(2)(E), for “immediate permitting” of stormwater discharges that contribute to violations of WQS. *National Pollutant Discharge Elimination System Permit Application Regulations for Storm Water Discharges*, 55 Fed. Reg. 47990, 47993 (November 16, 1990). This mandate to regulate stormwater discharges that contribute to WQS violations is commonly known as EPA’s Residual Designation Authority (“RDA”).

In its Phase II stormwater rule, EPA affirmed the importance of immediately regulating stormwater discharges that contribute to water quality impairments. *See Regulations for Revision of the Water Pollution Control Program Addressing Stormwater Discharge*, 64 Fed. Reg. 68,721, 68,781 (Dec. 8, 1999), codified at 40 CFR §§ 122.26(a)(1)(v) and 122.26(a)(9)(i)(D). *See also Env’t’l Def. Ctr. v. EPA*, 344 F.3d 832, 875-76 (9th Cir. 2003) (upholding inclusion of residual designation authority against industry challenge). The Phase II rule went a step further, however, and authorized EPA 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)). This action inherently “expanded [the agency’s] authority to issue permits on a significantly broader basis, for wholesale categories of

(daily ed. Jan. 14, 1987) (emphasis added).

discharges in a geographic area.”⁵⁴ EPA explained that this broader permitting authority would “facilitate and promote” the overarching goal of “coordinated watershed planning.”⁵⁵

Importantly, exercise of “the Agency’s residual designation authority is not optional.”⁵⁶ 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). *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, and consistent with the legislative history of the 1987 Amendments to the Clean Water Act, “designation is appropriate as soon as the adverse impacts from storm water are recognized.”⁵⁷ EPA has not defined a threshold level of pollutant contribution that triggers such a finding, but the agency has acknowledged 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.”⁵⁸ This EPA analysis has been recognized as a valid interpretation of the RDA threshold by the Vermont Supreme Court.⁵⁹

RDA determinations may be made directly at the initiative of the NPDES permitting authority, or result from the development of a wasteload allocation in a TMDL analysis. *See* 40 C.F.R. § 122.26(a)(9)(i)(C). Additionally, 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).⁶⁰ Once an RDA petition is submitted to the Director⁶¹ or Regional Administrator,

⁵⁴ *In re Stormwater NPDES Petition*, 2006 VT 91, ¶ 12.

⁵⁵ 64 Fed. Reg. 68, 739. *See also In re Stormwater NPDES Petition*, 2006 VT 91, ¶ 12.

⁵⁶ *In re Stormwater NPDES Petition*, 910 A.2d 824, 835 (Vt. 2006).

⁵⁷ *Letter from Tracy Mehan, III, EPA Assistant Administrator to Elizabeth McLain, Secretary, Vermont Agency of Natural Resources re: guidance on issues related to permits for discharges to impaired waters*, Sept. 16, 2003 (citing James R. Elder, Director EPA Office of Water Enforcement and Permits, *Designation of Stormwater Discharges for Immediate Permitting* at 2 (Aug. 8, 1990)) (“Mehan Letter”).

⁵⁸ *See id.* at 3.

⁵⁹ *In re Stormwater NPDES Petition*, 2006 VT 91, ¶ 28, n.6.

⁶⁰ *See also In re Stormwater NPDES Petition*, 2006 VT 91, ¶¶ 12-14 (RDA petitions need not be made on a case-by-case basis, but may seek designation for whole classes of discharges). This petition authority is also 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 Act. U.S.C. § 1251(e).

⁶¹ The term “Director” means either the EPA Regional Administrator or the director of the state NPDES permitting authority, as the context requires. 40 C.F.R. § 122.2. Where EPA retains the authority to take certain actions even

a final decision on the petition must be made within 90 days of its receipt. 40 C.F.R. § 122.26(f)(5).

ANALYSIS

Contributing Discharges Require a NPDES Permit Pursuant to CWA § 402(p)(2)(E) and EPA Regulations Because they Contribute to Ongoing Violations of the Water Quality Standards

The CWA and EPA's implementing regulations require federal permits for all existing point source discharges composed entirely of stormwater that contribute to water quality standards violations. 33 U.S.C. § 1342(p)(2)(E); 40 CFR §§ 122.26(a)(1)(v), 122.26(a)(9)(i)(C) & (D). Many areas of the Mystic exceeded WQS for *E. coli* every year from 2002-2008.⁶² Since then, the Mystic River Watershed has continually failed to meet its state water quality standards.⁶³ MassDEP and EPA have found that stormwater runoff from highly impervious land uses like commercial, industrial, institutional, and large multi-family residential is a significant contributor to these failures.⁶⁴

MassDEP and EPA determined that greater than 90% reductions in stormwater bacteria loading from the three sub-waterbasins, including the Mystic Watershed, will be needed in order to meet the target TMDL nutrient load for the Boston Harbor.⁶⁵ The ATMDL discussed above placed the phosphorus from stormwater figure at 67% reduction for the Mystic Watershed specifically.⁶⁶ Either one of these documents individually gives rise to the conclusion that the Regional Administrator must determine pursuant to 33 U.S.C. § 1342(p)(2)(E) and 40 CFR §§ 122.26(a)(1)(v) that the Contributing Discharges contribute to water quality standards violations in the Mystic River Watershed, and issue notice to all persons responsible for these that they must obtain a NPDES discharge permit. Based on recent analysis, CLF believes that the class of Contributing Dischargers pursuant to this permit should include all commercial,

when there is an approved state program, as it does with RDA designation, 40 C.F.R. § 122.26(a)(9)(i)(C), the term Director may also mean the Regional Administrator. *Id.*

⁶² *Boston Harbor TMDL*, at 50.

⁶³ EPA 2018. "Mystic River Watershed Report Cards." Mystic River Watershed. <https://www.epa.gov/mysticriver/mystic-river-watershed-initiative#ReportCard>.

⁶⁴ *Boston Harbor TMDL* at 19.

⁶⁵ *Id.* at xviii.

⁶⁶ *Mystic River Watershed Alternative TMDL Development for Phosphorus Management - Final Report*, 114

industrial, institutional, and five or more unit multi-family residential real properties (excluding those in which 50% or more of the units are restricted at 80% Area Median Income or below) of one acre or greater within the Mystic River Watershed. Stormwater pollution from the Contributing Discharges is contributing to water quality standard violations in the Mystic River Watershed, and it would be arbitrary and capricious to find otherwise.

Eleven segments in the Mystic River Watershed fail to meet Massachusetts's water quality standards.

TMDL reports for the Mystic River Watershed indicate that water quality standards cannot be met without significant reductions in pathogens from stormwater runoff, which is the principal source of pathogens in the water.⁶⁷ The Mystic River Watershed's high levels of commercial, industrial, institutional, and multi-family residential land uses create a high percentage of impervious cover, which causes contamination from polluted stormwater runoff.⁶⁸ MassDEP water quality sampling has documented that the Mystic Sub-basin suffers from excessive concentrations of Fecal coliform, E. coli, and Enterococci bacteria levels.⁶⁹ The presence of these bacteria indicate sewage contamination⁷⁰ as well as the potential presence of other disease-causing bacteria, viruses, and protozoans.⁷¹ MassDEP monitoring identified that chronic elevated bacteria levels impair the watershed from its Class B and SB designations by presenting serious health and safety risks.⁷² Failure to control bacterial contamination threatens illness in humans, closures of shellfishing areas and bathing beaches, fish kills, unpleasant odors and visible scum, closures of shellfish beds, bathing beaches, and drinking water supplies.⁷³ The Boston Harbor TMDL determined that current controls for storm water runoff are inadequate to meet the TMDL's water quality goals for pathogens.⁷⁴ Despite

⁶⁷ *Boston Harbor TMDL*, at xii ("As the bacteria loads from SSOs and CSOs continue to decline it is anticipated that stormwater discharges from Phase I and Phase II regulated communities will remain the predominate source of bacteria pollution along with non-point sources such as failing septic systems.").

⁶⁸ *Id.* at 82-83.

⁶⁹ *Id.* at xv-xvi.

⁷⁰ *Id.* at xvi-xvii.

⁷¹ *Id.* at 15.

⁷² *Boston Harbor TMDL* at 23-24.

⁷³ *Id.* at vii.

⁷⁴ *Id.* at 62.

existing standards, 78.5% of the measured river and estuary segments of Mystic River sub-basin are impaired.⁷⁵

The ATMDL discussed above compliments the evidence that the Boston Harbor TMDL offers on its own in supporting the conclusion that EPA should find Contributing Discharges contribute to WQS violations in the Mystic Watershed. The structure of the ATMDL follows the format of a traditional TMDL regarding WLA,⁷⁶ LA,⁷⁷ and margin of safety.⁷⁸ It found that for the upper, central, and lower watersheds of the Mystic Watershed sub-basin, the “primary source of nutrient loading . . . is stormwater runoff,”⁷⁹ with discharges from the upper watersheds contributing to the lower ones as water flows from one section to the other. Harmful cyanobacteria blooms occur as a result of this stormwater runoff.⁸⁰ This supports the determinations from the Boston Harbor TMDL, and thus the conclusion that Contributing Discharges should be subject to the NPDES permit scheme.

The Boston Harbor TMDL determined that stormwater runoff constitutes a major source of elevated stormwater bacteria loading that must be controlled and/or eliminated, including from lands with higher percentages of impervious cover, *i.e.* commercial, industrial, institutional, and multi-family residential, which generate a high proportion of surface runoff.⁸¹ Because the Boston Harbor TMDL demonstrates that the Contributing Discharges contribute to ongoing violations of applicable WQS for the Mystic River Watershed, and because the EPA recognizes 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,”⁸² this petition must be granted and all persons responsible for those Contributing Discharges must be notified of their obligation to obtain NPDES permits. 33 U.S.C. § 1342(p)(2)(E); 40 CFR §§ 122.26(a)(1)(v), 122.26(a)(9)(i)(D). Further, this conclusion is supported by the ATMDL’s findings. Either of these sources is sufficient to support finding that Contributing Discharges

⁷⁵ *Id.* at 21

⁷⁶ *Mystic River Watershed Alternative TMDL Development for Phosphorus Management - Final Report*, 26

⁷⁷ *Id.* at 66.

⁷⁸ *Id.* at 102.

⁷⁹ *Id.* at 2, 20.

⁸⁰ *Id.*

⁸¹ *Id.* at 19.

⁸² *See supra*, note 59.

contribute to WQS violations in the Mystic Watershed, and together they make such a conclusion stronger. Contributing Discharges must be subjected to NPDES permitting scheme.

Residual Designation Should Include, as a Class, all Existing Non-Permitted Commercial, Industrial, Institutional, and Certain Large Multi-Family Residential Property Dischargers with one or more acres impervious surface area within the Mystic River Watershed.

To achieve the TMDL-required reductions in the Mystic River sub-basin, reductions in stormwater bacteria loads, based upon land use, must be achieved throughout the watershed.⁸³ EPA regulations provide for residual 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). In the Mystic River Watershed, EPA and MassDEP have concluded that stormwater discharges from unpermitted land uses including commercial, industrial, institutional, and large multi-family residential property dischargers contribute to the non-attainment of water quality standards in the Mystic River Watershed.⁸⁴ CLF is petitioning EPA at this time to exercise its Residual Designation Authority in order to bring currently unregulated landowners in the Contributing Discharge categories with parcels of one acre or more into the NPDES permitting program.

Aside from fulfilling the CWA's statutory and regulatory mandate for immediate permitting of stormwater discharges that contribute to non-attainment of water quality standards, residual designation of the Contributing Discharges will also meet the CWA, EPA, and the Commonwealth's goal of meeting WQS for public health and ecology and to restoring the watershed to a healthy state. Residual designation of these impervious surfaces as a category will facilitate this process in at least two ways. First, class designation would fairly and equitably assign responsibility for non-attainment among Contributing Discharges and thereby ensure the widespread participation that will be necessary for success. Second, class designation would also provide an appropriate regulatory mechanism for implementation of future restoration plans.

⁸³ Boston Harbor TMDL at xvii-xviii.

⁸⁴ Boston Harbor TMDL at 66-67.

Absent RDA designation, an inordinate regulatory burden for attainment of water quality standards falls only upon those stormwater dischargers (including municipal separate storm sewer systems, certain 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). This is not only patently unfair, but also—as indicated by the long-standing water quality violations in the Mystic River Watershed—would be unlikely to result in attainment of state water quality standards. Regulation of all Contributing Discharges is therefore not only legally required, but also the most equitable, efficient, and effective means of ensuring that the Mystic River Watershed meets its water quality standards.

Residual Designation of the Contributing Discharges Will Supplement and Enhance Existing Programs

While the sufficiency of other pollution reduction programs is not a relevant factor in a Residual Designation determination under 33 U.S.C. § 1342(p)(2)(E), it is important to note that residual designation of the Contributing Discharges would only serve to supplement and enhance the efficacy of existing NPDES permit programs affecting the Mystic River Watershed. In Massachusetts, the general permit for small municipal separate storm sewer systems (“MA Small MS4 Permit”) requires permittees in the Boston Harbor Watershed to develop a Stormwater Management Plan designed to meet the Boston Harbor TMDL pathogen loading capacity and meet the terms and conditions of the permit.⁸⁵ The MS4 permit requires permittees to develop a priority ranking of areas within the municipality for potential implementation of phosphorus control practices, and to describe the structural stormwater control measures necessary to achieve the phosphorus reduction milestones contained in the MS4 permit.⁸⁶ The description of the structural controls must include the planned measures, the areas where the measures will be implemented, and the annual phosphorus reductions in

⁸⁵ *Boston Harbor TMDL* at 133.

⁸⁶ 2016 MA Small MSA General Permit, 10 (MS4 Permit).

units of mass per year that are expected to result from their implementation.⁸⁷

Crucially, however, the Phosphorus Control Plan (PCP) requirements within the MS4 for municipalities in the Mystic River Watershed remain limited by the municipalities' toolkit of bylaws and ordinances, changes to which may be difficult to draft and promulgate if a specific outcome is not required by state or federal law.⁸⁸ The PCP requirements do not specifically address commercial, industrial, private institutional, and large multi-family residential sources. Nor do they contain different, or any specific, obligations of new or existing properties with significant impervious surface area, beyond a requirement that permittees track and offset phosphorus load increases due to development.⁸⁹

If EPA intends the MS4 permit program to result in a meaningful reduction in phosphorus loading to the Mystic River Watershed, it must require a permitting program for significant impervious surface landowners in the commercial, industrial, institutional, and multi-family residential sectors that is designed to drive participation in, and collaboration with, MS4 communities' PCPs. A permitting program from EPA in response to this Petition can and should encourage collaboration among property owners and communities to construct regional treatment systems which create efficiencies by treating runoff from multiple sites in one system. The Town of Milford, for example, recently used Clean Water Act § 319 grant funding to construct a stormwater treatment wetland to treat runoff from a 70 acres drainage area containing multiple public and private parcels.⁹⁰ Requiring stormwater permits for individual impervious landowners within each municipality would help meet the goals of the permit program by requiring unregulated significant contributors to phosphorus pollution to take affirmative action to be part of the solution.

CONCLUSION

The severe degradation of the Mystic River Watershed's water quality epitomizes the impact of urban stormwater discharges upon major waterways in Massachusetts. EPA has

⁸⁷ *Id.* at 12.

⁸⁸ *Id.* at 44.

⁸⁹ *Id.* at 45.

⁹⁰ See Horsley Witten Group, Constructed Stormwater Wetland in Milford, <https://horsleywitten.com/stormwater-wetland/> (description of project by the project's engineering firm).

known for decades that the Contributing Discharges contribute to the Mystic's failure to meet water quality standards. CLF petitions EPA to implement a NPDES permitting program for the Contributing Discharges. Further delay in regulating these sources is no longer defensible—legally, environmentally, or as a matter of public policy and equitable regulation.

Accordingly, this petition must be granted and EPA Region 1 must immediately develop NPDES permits for the Contributing Discharges. We look forward to your response, and to working with you to improve water quality in the Mystic River and its Watershed.

Respectfully submitted this 24th day of August, 2020.

On behalf of Conservation Law Foundation,

A handwritten signature in blue ink, appearing to read "Caitlin Peale Sloan". The signature is fluid and cursive, with a long horizontal stroke at the end.

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