clf
conservation law foundation

For a thriving New England

CLF Rhode Island 235 Promenade Street
Suite 560, Mailbox 28
Providence, RI 02908
P: 401.351.1102
F: 401.351.1130
www.clf.org

Via Electronic Mail

November 19, 2018

Janet Coit
Director
Rhode Island Department of Environmental Management
235 Promenade St.
Providence, RI 02908-5767

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 Bailey's Brook and North Easton Pond Watersheds in Newport County, Rhode Island

Dear Director Coit:

As the Director[1] of the Rhode Island Department of Environmental Management ("DEM"), the Conservation Law Foundation[2] ("CLF") hereby petitions you to exercise your residual designation authority[3] ("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 contributors of pollutants to the Bailey's Brook and North Easton Pond watersheds

[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).

("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 Bailey's Brook and North Easton 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 Aquidneck Island watershed—particularly Bailey's Brook and North Easton Pond—exemplifies this pollution problem. Since Total Maximum Daily Loads ("TMDLs")[6] were approved for the waters of Aquidneck Island, the watershed has continued to suffer from elevated bacteria levels and excess phosphorus pollution. The Newport Water System's drinking water reservoirs "are nutrient-enriched and experience frequent algal and cyanobacteria blooms - which impact aquatic life and the reservoirs' use for drinking water purposes."[7]

Water quality conditions in the Aquidneck Island watershed 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.[8] EPA has previously provided convincing

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[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] Press Release, R.I. Dep't of Envtl. Mgmt., DEM Announces March 31st Meeting to Discuss Launch of Source Water Protection Initiative for Newport's Drinking Water Resources (Mar. 20, 2015), http://www.dem.ri.gov/news/2015/pr/0320152.htm.

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

documentation of the need for RDA to control stormwater discharges.[9] CLF looks forward to working with DEM to improve water quality on Aquidneck Island.

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. Bailey's Brook is an Impaired Water Body that is Not Suitable for Its Designated Uses

Bailey's Brook in Middletown, Rhode Island is a 4.8-mile long tributary located within the Newport Water Supply system and is designated as a Special Resource Protection Water ("SRPW"). *See* SOF at ¶¶ 1, 3, 9.

The Bailey's Brook watershed is highly developed (68 percent), with 20 percent commercial land use. *See* SOF at ¶¶ 5-7. Bailey's Brook is at extreme risk of contamination from polluted runoff, underground storage tanks, and businesses where hazardous materials may be used. *See* SOF at ¶ 7. The Bailey's Brook watershed comprises 40 percent of the Newport Water Supply system watershed, therefore its contamination from polluted runoff threatens the health of all waters on Aquidneck Island. *See* SOF at ¶¶ 7-8. DEM and EPA have determined that reductions in the nutrient load from Bailey's Brook are needed in order to meet the target nutrient load for the entire Aquidneck Island watershed. *See* SOF at ¶¶ 3, 7-8, 54.

Sampling of Bailey's Brook between 2006 and 2008 showed mean *enterococci* bacteria levels ranging from 84 to 713 colonies/100 mL, all significantly exceeding the 54 colonies/100 mL standard for bacteria. *See* SOF at ¶¶ 10-12. As a result of the elevated bacteria levels, Bailey's Brook is listed on Rhode Island's 303(d) List of Impaired Waters. *See* SOF at ¶¶ 13-15. Sources of harmful bacteria include stormwater runoff from developed areas, illicit discharges, and agricultural activities. *See* SOF at ¶ 18. The Bailey's Brook watershed is 32 percent impervious cover, which is a level where stormwater impacts are expected. *See* SOF at ¶ 20. Stormwater outfalls, sewer system leaks, illicit discharges, and agricultural runoff are additional sources of

[9] *See* U.S. Envtl. Prot. Agency, Residual Designation Pursuant to Clean Water Act - Region I (2008), https://www.epa.gov/sites/production/files/2015-03/documents/rodfinalnov12.pdf.

bacteria in the Brook. *See* SOF at ¶¶ 21-28.

Bailey's Brook contains elevated levels of the bacterium *enterococcus*, an indicator of feces carried by stormwater runoff. *See* SOF at ¶¶ 10-12, 14. The Statewide Bacteria TMDL[10] was created to mitigate these bacteria sources and restore Bailey's Brook to meet water quality standards. *See* SOF at ¶ 29. The percentage reduction required to meet the TMDL is 97 percent, including a 5 percent margin of safety. *See* SOF at ¶ 30. While the Town of Middletown has developed a watershed management plan, future mitigative activities and additional efforts are needed to protect Bailey's Brook and meet water quality standards. *See* SOF at ¶¶ 31, 35. A separate TMDL[11] (the "9 Eutrophic Ponds TMDL"), in conjunction with the existing watershed management plan, provides a strong technical basis for reducing a suite of pollutants, including bacteria. *See* SOF at ¶ 32. EPA approved the Statewide Bacteria TMDL, including the Bailey's Brook TMDL, by letter dated September 22, 2011.[12]

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

Bailey's Brook flows into North Easton Pond and is therefore part of the North Easton Pond watershed. *See* SOF at ¶ 38. North Easton Pond, which spans the municipalities of Middletown and Newport, is listed as impaired for phosphorus. North Easton Pond is included in the 9 Eutrophic Ponds TMDL, which was developed to address water quality violations with respect to phosphorus. *Id.* Inflow to North Easton Pond includes groundwater, surface water runoff, stormwater runoff, tributary inflow, and direct precipitation. *See* SOF at ¶ 41.

North Easton Pond is a long tributary located within the Newport Water Supply system. *See* SOF at ¶ 42. It has a history of development and its watershed is comprised of 12 percent commercial and mixed urban and 7 percent industrial land use. *See* SOF at ¶¶ 43-45. North Easton Pond suffers from algal blooms caused by phosphorus impairment and is listed on Rhode Island's 303(d) List of Impaired Waters for total phosphorus, excess algal growth, other flow regime

[10] *See* R.I. Dep't of Envtl. Mgmt., Rhode Island Statewide Bacteria TMDL (2011), http://www.dem.ri.gov/programs/benviron/water/quality/swbpdf/coretmdl.pdf.

[11] *See* R.I. Dep't of Envtl. 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.

[12] *See* Letter, U.S. Envtl. Prot. Agency, Approval of Rhode Island Statewide Bacteria TMDL (Sept. 22, 2011), https://ofmpub.epa.gov/waters10/attains_impaired_waters.show_tmdl_document?p_tmdl_doc_blobs_id=67761.

alterations, and total organic carbon.[13]

Bailey's Brook is the greatest source of discharge to North Easton Pond, and the largest source of phosphorus loading to the pond. *See* SOF at ¶¶ 38, 44, 54. Sampling of North Easton Pond in 2002 showed phosphorus concentrations averaging 110 ug/l—over four times the allowable load of 0.025 mg/L. *See* SOF at ¶¶ 50-51. Stormwater is likely the most significant source of external phosphorus to North Easton Pond. *See* SOF at ¶ 56.

The 9 Eutrophic Ponds TMDL establishes a waste load allocation ("WLA") of 101.0 kg/yr of phosphorus for North Easton Pond and concludes that achieving standards requires that both the volume of stormwater and its phosphorus concentration be reduced. *See* SOF at ¶¶ 65, 67. The TMDL requires a study to identify best management practices ("BMPs") specific to North Easton Pond that will reduce stormwater volumes and phosphorus loading to the pond to the maximum extent feasible. SOF at ¶¶ 66-67. The EPA approved the TMDL for North Easton Pond, explicitly including its stormwater-focused WLA, by letter dated September 27, 2007.[14]

Algal blooms, as well as high fecal coliform levels prevent the waters of Aquidneck Island from attaining respective class designations and present serious health risks, forcing state and local agencies to close the waters to shell fishing and to warn the public to avoid contact with the water. *See* SOF at ¶¶ 3, 13-15, 17, 38, 46-48, 50-53, 60. In a March 2015 assessment of Aquidneck Island's drinking water, the state of Rhode Island reaffirmed the degraded state of water bodies on Aquidneck Island.[15] DEM and the Rhode Island Department of Health launched a new "Source Water Protection Initiative" for Newport's Drinking Water Resources. *Id.* With a focus on Aquidneck Island's drinking water reservoirs, the announcement stated that these "reservoirs are nutrient-enriched and experience frequent algal and cyanobacteria blooms - which impact aquatic life and the reservoirs' use for drinking water purposes."[16]

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[13] See R.I. Dep't of Envtl. Mgmt., State of Rhode Island 2016 Impaired Waters Report – Final (March 2018), http://dem.ri.gov/programs/benviron/water/quality/surfwq/pdfs/iwr16.pdf.

[14] *See* Letter, U.S. Envtl. 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.

[15] *See* Press Release, R.I. Dep't of Envtl. Mgmt., DEM Announces March 31st Meeting to Discuss Launch of Source Water Protection Initiative for Newport's Drinking Water Resources (Mar. 20, 2015), http://www.dem.ri.gov/news/2015/pr/0320152.htm.

[16] *Id. See also* Frank Carini, Aquidneck Island Embraces Simple Actions to Help Curb Stormwater Pollution, ecoRI News (Sept. 6, 2018), https://www.ecori.org/pollution-contamination/2018/9/6/simple-actions-make-difference-in-curbing-stormwater-pollution; Frank Carini, Aquidneck Island's Waters Under Tremendous Pressure, ecoRI News

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"[17] by "any person"[18] from any "point source"[19] 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. § 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

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(Aug. 24, 2018), https://www.ecori.org/pollution-contamination/2018/8/24/aquidneck-islands-water-pressure-uncompromising

[17] 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.").

[18] 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).

[19] 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).

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.[20] 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."[21] 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."[22]

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[20] U.S. Envtl. 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.

[21] U.S. Envtl. 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.

[22] R.I. Dep't of Envtl. 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.

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."[23]

"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.[24] The Phase II rules "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

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[23] *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).

[24] *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 Envt'l Def. Ctr. v. EPA*, 344 F.3d 832, 875-76 (9th Cir. 2003) (upholding RDA against industry challenge).

of the State" is a discharge that "*shall* be required to obtain a RIPDES 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. Envtl. 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*, 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).[25] 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 Aquidneck Island watershed's water quality standards.

The CWA and DEM's implementing regulations require federal permits for all existing point source discharges composed entirely of stormwater that contribute to WQS violations. 33

[25] 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).

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 Aquidneck Island watershed has continually failed to meet its state WQSs. *See* SOF at ¶¶ 10-15, 17, 25, 38, 46-48, 50-53, 60. DEM has determined that runoff from industrial and commercial land use is the proximate cause of these failures. *See* SOF at ¶¶ 7, 56, 58, 64. Further, based on the developed TMDLs, DEM has specifically determined that stormwater runoff from direct dischargers is a significant contributor to the consistent failure to meet WQSs, leading to the serious degradation of water quality in Bailey's Brook and North Easton Pond. *See* SOF at ¶¶ 18, 20-21, 41, 56-57. Given the consistent, unanimous, and unequivocal nature of these findings, the Director must issue notice to all persons responsible for Contributing Discharges to the waters of Aquidneck Island that they must obtain a RIPDES discharge permit.

Based on the attached TMDL Attainability Analyses for Phosphorus and Enterococci for Bailey's Brook and North Easton Pond, Rhode Island ("Expert Report"), CLF believes that the class of Contributing Discharges should include all industrial, commercial, and residential parcels larger than .2 acres within the Bailey's Brook and North Easton Pond watersheds. Management of these parcels with the best available BMP technology can achieve full attainment of the phosphorus TMDL and significant progress towards attainment of the *enterococci* TMDL. *See* Expert Report at 6-7, 35.

1. Bailey's Brook in Middletown, Rhode Island and North Easton Pond in Newport, Rhode Island fail to meet Rhode Island's water quality standards.

TMDLs for the waters of Aquidneck Island indicate that WQSs cannot be met without significant reductions in phosphorus and stormwater runoff. *See* SOF at ¶¶ 39, 63, 65. The Aquidneck Island watershed is highly developed—in some areas as much as 68 percent. *See* SOF at ¶¶ 5-7, 18, 44-45. *See* SOF at ¶ 45. The high density of development, leading to high percentages of industrial land use and impervious cover, has contributed to contamination from polluted stormwater runoff. *See* SOF at ¶¶ 19-20.

The major type of pollution in the stormwater is excess bacteria caused by sewage contamination and excess nutrients. *See* SOF at ¶¶ 11-13, 22, 25, 38, 46-47, 52-54, 60, 71. Elevated levels of bacteria pose a public health risk associated with direct discharge of human septage waste from failing septic systems. *See* SOF at ¶¶ 22, 23. Elevated levels of phosphorus can lead to toxic algal blooms, a loss of dissolved oxygen, and harm to human and animal life. *See* SOF at ¶¶ 46,

60, 71. DEM water quality sampling and monitoring has documented that the Aquidneck Island watershed suffers from eutrophication caused by high levels of phosphorus. *See* SOF at ¶¶ 46-47, 53, 60, 71. The presence of algal blooms diminishes the value of the ponds for virtually all uses. Recreational use is made less appealing, aesthetic enjoyment is impaired, and habitat value is reduced. *See* SOF at ¶ 60.

2. The failure of Aquidneck Island's waters 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 Aquidneck Island watershed is incontrovertible, as set forth in the SOF. Moreover, this direct evidence is the result of detailed studies of water quality impairments in the Aquidneck Island 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 ¶¶ 4-7, 44.

i. *Statewide Bacteria TMDL*

The Statewide Bacteria TMDL aimed to achieve WQSs for Bailey's Brook by mitigating bacteria sources. *See* SOF at ¶ 29. An extensive, empirical study conducted from 2006-2008 found elevated levels of bacteria, in violation of WQSs. *SOF* at ¶¶ 10-13. Potential sources include stormwater runoff from developed areas and illicit discharges *See* SOF at ¶ 18. To meet the Statewide Bacteria TMDL for Bailey's Brook, phosphorus loading must be reduced by 97 percent. *See* SOF at ¶ 30. Both the watershed management plan and 9 Eutrophic Ponds TMDL should serve as strong technical bases for reducing pollutants in Bailey's Brook. *See* SOF at ¶ 32. Ultimately, future mitigation measures are necessary to ensure the long-term protection of Bailey's Brook and to restore the river's water quality. *See* SOF at ¶¶ 31, 35.

ii. *9 Eutrophic Ponds TMDL*

The 9 Eutrophic Ponds TMDL was developed prior to the Statewide Bacteria TMDL. To meet the 9 Eutrophic Ponds TMDL, phosphorus loading must be reduced by 78.9 percent for North Easton Pond. The TMDL for North Easton Pond is 301 kg/yr. *See* SOF at ¶ 63. The existing phosphorus load to North Easton Pond is 1470 kg/yr. *See* SOF at ¶ 61. Therefore, the necessary total percentage reduction is (1470-301)/1470 = 78.9 percent. The WLA of phosphorus loads for

North Easton Pond is 101.0 kg/yr. *See* SOF at ¶ 63. Over 33 percent of the total reduction will be allocated to point sources (WLA).

Both the TMDL and a University of Rhode Island Watershed Watch ("URIWW") study indicate phosphorus levels violate state WQSs. *See* SOF at ¶ 50. Extensive, empirical analyses were performed by DEM staff and URIWW, both finding excessive levels of phosphorus. *See* SOF at ¶¶ 51-52, 55. DEM's numerical target for total phosphorus concentration in North Easton Pond is 25 ug/l. *See* SOF at ¶ 59. DEM sampling performed in 2002 showed phosphorus concentrations averaging 110 ug/l—over 4 times the 25 ug/L standard. *See* SOF at ¶ 51. The URIWW study found that annual phosphorus loads to Bailey's Brook and North Easton Pond "significantly exceed" the allowable loads per year and that Bailey's Brook's water quality was at an extreme risk. *Id.*

The TMDL identified stormwater as the "most significant" source of phosphorus to North Easton Pond. *See* SOF at ¶ 56. In order to meet water quality standards, reductions are required for *both* stormwater and phosphorus loading. *See* SOF at ¶ 65. The 9 Eutrophic Ponds TMDL determined that a feasibility study is necessary to determine the types and locations of BMPs that will best reduce stormwater runoff volume, as well as phosphorus loading. *See* SOF at ¶ 66.

b. RDA designation should include, as a class, all existing non-permitted commercial, industrial, and residential discharges that contribute more than de minimis amounts of pollutants within the Bailey's Brook and North Easton Pond watersheds.

EPA regulations provide for RDA designation of a category of discharges within a geographic area, such as a watershed, when it is determined 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 expressly concluded that discharges from unpermitted commercial and industrial stormwater discharges, as a class, cause the non-attainment of water quality standards in the Aquidneck Island watershed. *See* SOF at ¶¶ 3, 14, 18, 38, 41, 47, 56, 60. 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 Statewide Bacteria TMDL states that 68 percent the Bailey's Brook watershed is developed and that stormwater runoff from developed areas is a potential source of harmful bacteria. *See* SOF at ¶¶ 3, 18, 21. The 9 Eutrophic Ponds TMDL states that stormwater is the most significant source of external phosphorus to North Easton Pond, which is comprised of 12 percent

commercial and mixed urban development, and 7 percent industrial development. *See SOF* at ¶¶ 33, 43, 56. Many of the stormwater drainage systems that are currently unpermitted under the RIPDES permit program include stormwater runoff from commercial and industrial land use. As stated in the TMDLs, nutrient loads from Bailey's Brook are directly responsible for phosphorus concentrations in North Easton Pond. *See* SOF at ¶¶ 38, 44, 54. Due to its size, the health of Bailey's Brook threatens all of the waters of Aquidneck Island. *See* SOF at ¶¶ 7-8. The Aquidneck Island watershed suffers from unsafe levels of human pathogens, eutrophication, excessive algae blooms (including those containing toxic cyanobacteria), and other effects of excessive bacteria and phosphorus pollution. *See* SOF at ¶¶ 25, 71. Therefore, to achieve WQSs in the Aquidneck Island watershed, reductions in stormwater phosphorus loads, based upon land use, must occur throughout the watershed. *See* SOF at ¶¶ 21, 30, 32, 35, 56, 63, 65-67.

RDA designation of the entire class of Contributing Discharges will meet EPA's goal of reducing phosphorus discharges to the Aquidneck Island watershed to support the waters' designated uses. *See* SOF at ¶¶ 29, 60. RDA designation will facilitate this process in at least two ways. 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.

Absent RDA designation, an inordinate regulatory burden for attainment of WQSs will fall upon a small minority of stormwater dischargers (including MS4s, industrial activities, and construction projects). *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 Discharges is therefore not only legally required, but also the most equitable, efficient, and effective means of ensuring that the Aquidneck Island watershed meets its water quality standards.

IV. CONCLUSION

The severe degradation of water quality in the Aquidneck Island watershed epitomizes the impact of urban stormwater discharges on many of Rhode Island's major waterways. The

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Aquidneck Island watershed'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 the Aquidneck Island watershed, placing both the environment and local residents—who rely on the Newport Water Supply—at risk. 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 on Aquidneck Island.

Respectfully Submitted,

CONSERVATION LAW FOUNDATION, INC.

By its attorney:

James Crowley (# 9405)
CONSERVATION LAW FOUNDATION
235 Promenade Street
Suite 560, Mailbox 28
Providence, RI 02908
(401) 228-1905
jcrowley@clf.org

Enclosures: Statement of Undisputed Facts
Expert Report of Robert M. Roseen

Cc: Terrence Grey (by email)
Alicia Good (by email)