Petition to the U.S. Environmental Protection Agency to Exercise Residual Designation Authority Over Stormwater Discharges Contributing to Violations of Water Quality Standards in the Great Bay Estuary Watershed[1]

> *"[T]he eutrophic cycle is self-reinforcing and any delay could mean the difference between potential recovery or collapse of the [Great Bay estuary] ecosystem . . . ."*
>
> *"[W]hat is certain is that large amounts of nitrogen contribute to water quality impairments throughout the Great Bay estuary, which is consistent with EPA's judgment that these waters have reached their assimilative capacity for nitrogen."*
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> -U.S. EPA, November 24, 2020, Response to Comments for Great Bay Total Nitrogen Permit

Pursuant to 40 C.F.R. § 122.26(f)(2), Conservation Law Foundation ("CLF") hereby petitions the U.S. Environmental Protection Agency ("EPA") to exercise residual designation authority ("RDA") under 40 C.F.R. § 122.26(a)(9)(i)(D) to regulate under the National Pollutant Discharge Elimination ("NPDES") permitting program the following categories of unpermitted discharges located in the New Hampshire portion of the Great Bay estuary watershed, on the ground that they are contributing to violations of state water quality standards in the estuary: (1) non-*de minimis* stormwater discharges from commercial, industrial, and institutional properties located in communities regulated under the New Hampshire Small Municipal Separate Storm Sewer System ("MS4") General Permit[2] and having 0.75 acres or more of impervious cover, and (2) non-*de minimis* discharges from commercial, industrial, and institutional properties located in

[1] CLF is providing herewith, and incorporates as if fully set forth herein, a Statement of Undisputed Facts ("Statement of Facts") to support this petition.

[2] The MS4 communities in the Great Bay estuary watershed, including communities that have obtained a waiver from the MS4 General Permit, are: Barrington, Brentwood, Candia, Chester, Danville, Dover, Durham, East Kingston, Epping, Exeter, Fremont, Greenland, Hampton Falls, Kingston, Lee, Madbury, Milton, New Castle, Newfields, Newington, Newmarket, North Hampton, Portsmouth, Raymond, Rochester, Rollinsford, Rye, Sandown, Somersworth, and Stratham. *See* Statement of Facts, ¶¶ 71-72.

non-MS4 communities[3] and having 1.5 acres or more of impervious cover, hereinafter referred to collectively as "Contributing Discharges."

The Great Bay estuary is a critically important and irreplaceable national resource, yet it is experiencing serious degradation due to excessive nitrogen pollution. The New Hampshire Department of Environmental Services ("NHDES") has designated waters that are part of the Great Bay estuary as impaired as a result of nitrogen and / or loss of eelgrass, and the EPA has recognized that "the entire estuary is suffering from significant and pervasive nutrient-related impacts." Statement of Facts, ¶¶ 43, 45. Most of the nitrogen in the estuary comes from stormwater point sources and non-point sources. Nitrogen discharges into the estuary from stormwater runoff are contributing to violations of water quality standards and must be regulated to protect and restore this vital estuarine ecosystem.

As set forth below, the law and facts require that these unpermitted discharges be regulated under the NPDES permit program to restore and protect the water quality of the Great Bay estuary.

I. Introduction

CLF is a non-profit environmental advocacy organization working to protect New England's environment for the benefit of all people. Working in New Hampshire and states across the region, CLF seeks solutions to protect natural resources, build healthy communities, and sustain a vibrant economy. For years, CLF has engaged in advocacy under the Clean Water Act ("CWA") to ensure our waters benefit from the full protection of the law. CLF successfully petitioned EPA under the CWA to require cleanup of stormwater discharges from numerous industrial and commercial properties in the Long Creek watershed in Maine,[4] and has successfully litigated in the Vermont Supreme Court and agency tribunals to require Vermont's Agency of Natural Resources to extend its CWA permitting authority to certain unregulated

[3] The non-MS4 communities in the Great Bay estuary watershed are: Brookfield, Deerfield, Farmington, Kensington, Middleton, New Durham, Northwood, Nottingham, Strafford and Wakefield. *See* Statement of Facts, ¶¶ 71-72.

[4] *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).

stormwater pollution discharges in five badly polluted watersheds surrounding Burlington, Vermont.[5] Most recently, CLF successfully petitioned EPA to exercise its residual designation authority and determine that CWA permits are necessary to regulate certain categories of stormwater discharges in the Charles River, Mystic River, and Neponset River watersheds in Massachusetts.[6]

CLF has long been concerned about the declining health of the Great Bay estuary and has been working for more than 15 years – through legal advocacy and our Great Bay-Piscataqua Waterkeeper program – to restore and protect this critically important resource of local, regional, and national significance. We have been particularly concerned about excessive nitrogen levels that are a significant cause of the estuary's declining health and the failure of waters throughout the estuary to attain state water quality standards. We appreciate the attention EPA and NHDES have given to the problem of nitrogen pollution in the estuary, but urgent action is needed to address more of the nitrogen load in the estuary.

Exercising its residual designation authority will allow EPA to regulate currently unregulated discharges of nitrogen that are harming the estuary. Existing mechanisms, including the Great Bay Total Nitrogen General Permit ("GBTNGP")[7] and New Hampshire Small Municipal Separate Storm Sewer System General Permit ("MS4 permit"), control for some nitrogen in the estuary, but are limited in scope and application and do not address most of the

[5] *See In re Stormwater NPDES Petition*, 2006 VT 91.

[6] EPA, Clean Water Act Residual Designation Determination for Certain Stormwater Discharges in the Charles, Mystic, and Neponset River Watersheds, in Massachusetts (Sept. 14, 2022) ("Charles, Mystic & Neponset RDA Determination"). On November 2, 2022, CLF and the Charles River Watershed Association filed a lawsuit against EPA for failing to issue the necessary permits to protect the Charles, Mystic, and Neponset Rivers. *See Conservation Law Found., Inc. and Charles River Watershed Ass'n, Inc. v. EPA*, Case No. 1:22-cv-11863 (D. Mass. Nov. 2, 2022).

[7] The GBTNGP regulates some, but not most, of the nitrogen entering the estuary by regulating discharges from thirteen wastewater treatment facilities. Critically, the GBTNGP assumes that meaningful and necessary nitrogen reductions will be achieved by other means, including voluntary reductions through stormwater and non-point source management. CLF participated extensively in the GBTNGP process, including submitting comments on the draft permit and entering into a settlement agreement with certain municipalities regarding the permit. CLF submitted a letter to EPA on March 25, 2022, commenting on municipal adaptive management plans under the permit. CLF incorporates by reference its comments and statements regarding the GBTNGP here.

nitrogen affecting the estuary. As a result, the estuary is in a state of critical decline and is becoming less and less resilient. Climate change increases and compounds estuarine stressors. Absent RDA designation, an inequitable regulatory burden falls on GBTNGP and MS4 permittees. This is not only unfair, but ineffective. Attainment of water quality standards in the Great Bay estuary will only occur when nitrogen discharges from all significant sources of pollution, including the Contributing Discharges, is regulated.

The requirements of the Clean Water Act are clear: if unregulated stormwater discharges are contributing to a water quality impairment, EPA must act to regulate or prohibit those discharges. In the Great Bay estuary watershed, stormwater point sources from the Contributing Discharges discharge excessive nitrogen to the Great Bay estuary, causing water quality impairments. EPA must use NPDES permitting to regulate the Contributing Discharges.

II. Factual Background

A statement of undisputed facts is attached to this petition and is incorporated by reference. A summary of those facts is recited below.

The Great Bay estuary is a network of rivers, bays, and harbors.

The Great Bay estuary consists of a network of tidal rivers, inland bays, and coastal harbors in New Hampshire and Maine, extending inland from the mouth of the Piscataqua River at the Atlantic Ocean. Statement of Facts, ¶ 1. The estuary covers approximately 21 square miles, with 144 miles of shoreline, and encompasses Great Bay proper and Little Bay, which are fed by the Winnicut, Squamscott, Lamprey, Oyster, and Bellamy Rivers. The estuary also includes the Upper Piscataqua River, which is fed by the Cocheco, Salmon Falls, and Great Works Rivers; the Lower Piscataqua River; Portsmouth Harbor; and Little Harbor/Back Channel. *Id.*, ¶ 2. The Great Bay estuary watershed is defined as the land area from which rainwater drains, through surface water or groundwater, into the Great Bay estuary. *Id.*, ¶ 3. The Great Bay estuary constitutes approximately 86% of all New Hampshire estuaries. *Id.*, ¶ 4.

The Great Bay estuary is a critically important and irreplaceable national resource.

The Great Bay estuary is one of 28 estuaries of national significance established under EPA's National Estuary Program. *Id.*, ¶ 5. Estuarine environments are irreplaceable natural resources that create some of the most productive environments on the planet, supporting many different communities of plants and animals specifically adapted to estuarine environments. *Id.*, ¶

6. Estuaries provide critical habitats for the survival of many species of fish, birds, and other wildlife. *Id.* Estuaries additionally provide for many recreational opportunities such as swimming, boating, fishing, and bird watching. *Id.*, ¶ 7. Estuaries have important commercial value, providing the nursery grounds for two-thirds of the nation's commercial fish and shellfish, and supporting tourism economies. *Id.*

The Great Bay estuary is an invaluable environmental, social, and economic resource. *Id.*, ¶ 8. "The Great Bay Estuary is unusual because of its inland location, more than five miles up the Piscataqua River from the ocean. It is a popular location for kayaking, birdwatching, commercial lobstering, commercial oyster aquaculture, recreational oyster harvesting, and sportfishing for rainbow smelt, striped bass, and winter flounder." *Id.*, ¶ 9. There are 169 bird, fish, and plant species that use the Great Bay estuary in different ways at different times. Twenty-three of these species are threatened or endangered at the state or federal level. *Id.*, ¶¶10, 12. The estuary is a federally recognized Essential Fish Habitat. *Id.*, ¶ 11.

<u>The Great Bay estuary is impaired due to eutrophication from excessive nitrogen.</u>

The Great Bay estuary is suffering from eutrophication caused by excessive nitrogen. *Id.*, ¶¶ 13-35. Eutrophication occurs when surface waters become enriched with nutrients, including nitrogen, which in turn increases plant and algae growth. *Id.*, ¶ 13. In estuarine environments, and in the case of the Great Bay estuary, excessive growth of seaweed and phytoplankton negatively impact eelgrass, growing so abundantly they crowd out eelgrass. *Id.* When these organisms die, oxygen is used to break down the organic matter, decreasing oxygen in the water. *Id.* Excessive algal blooms and low-oxygen waters can kill fish and seagrass and reduce essential fish habitats. *Id.* Overabundant algae and plants eventually decompose, producing large amounts of carbon dioxide, which in turn increases the acidity of the water and slows the growth of fish and shellfish. *Id.*

The Great Bay estuary exhibits all of the characteristics of eutrophication, including increasing nitrogen concentrations, low dissolved oxygen, macroalgae blooms, and disappearing eelgrass habitat. *Id.*, ¶¶ 14-17. Eelgrass, a key indicator of estuarine health and critical component of the estuarine ecosystem, has declined so severely that in some places in the estuary only half the population remains, and in other estuarine locations eelgrass has disappeared entirely. *Id.*, ¶¶ 25-33. The estuary is burdened by nitrogen levels as high as three times the

levels acceptable for eelgrass health. *Id.*, ¶ 24. Other environmental indicators provide evidence of the declining health of the Great Bay estuary, including an increase in seaweed, invasive seaweed, macroalgae and suspended sediments, and decrease in dissolved oxygen, water clarity, light penetration, migratory fish, and shellfish. *Id.*, ¶¶ 34-35. Nitrogen-fueled eutrophication in the estuary is well documented and recognized by both EPA and NHDES. *Id.*, ¶¶ 13-35.

As a result of eutrophication from excess nitrogen, waters in the Great Bay estuary are impaired and violate state water quality standards. *Id.*, ¶¶ 36-45. NHDES has designated waters in the Great Bay estuary as impaired and placed those waters on New Hampshire's 303(d) List. *Id.*, ¶ 38; *see also id.* at ¶ 43. In doing so, NHDES explained that eutrophication from excess nutrients causes violations of state water quality standards. *Id.*, ¶ 39 (NHDES, 2012 Section 305(b) and 303(d) Surface Water Quality Report (2012), at 36-37 ("Eutrophication from excess nutrients is a critical issue affecting the aquatic life designated use in the Great Bay Estuary. . . . These symptoms of eutrophication from excess nutrients impair the aquatic life designated use which is a violation of the state water quality standards for nutrients (Env-Wq 1703.14) and biological and aquatic community integrity (Env-Wq 1703.19).")). EPA has similarly stated conclusively that nitrogen is contributing to water quality impairments in the estuary, and that nutrient-related impairments are pervasive throughout the entire estuary: "it is apparent that the entire estuary is suffering from significant and pervasive nutrient-related impacts which are not isolated to the most susceptible areas." *Id.*, ¶ 45. Nitrogen-related impairments in the Great Bay estuary have increased over time. *See id.*, ¶¶ 20, 38, 43.

Nitrogen is discharged into the Great Bay estuary from wastewater treatment facilities.

As much as 33% of the nitrogen in the estuary is discharged from wastewater treatment facilities ("WWTF"). *Id.*, ¶ 46. Several WWTFs in the estuary have undergone plant upgrades to optimize nitrogen removal. While some of these upgrades have been substantial and will benefit water quality in the estuary, these actions are not enough, on their own, to restore the health of the estuary. *Id.*, ¶ 47. In 2020, EPA issued the GBTNGP to regulate nitrogen discharges from thirteen New Hampshire WWTFs that discharge wastewater into the Great Bay estuary watershed. *Id.*, ¶ 48. Importantly, the limits in the GBTNGP alone are not sufficient to address the excessive nitrogen in the Great Bay estuary, because the GBTNGP does not impose requirements on stormwater point source discharges, including the Contributing Discharges. *See id.*, ¶¶ 49-51.

Most nitrogen in the Great Bay estuary comes from stormwater point sources and nonpoint sources.

Most of the nitrogen in the Great Bay estuary – an estimated 68% – comes from sources other than WWTFs – mainly stormwater point sources and non-point sources. *Id.*, ¶¶ 52-54. As described by NHDES, nitrogen reaches the estuary "from atmospheric deposition, chemical fertilizers, human waste through septic systems, and animal wastes. These sources are then routed through surface waters, stormwater, and groundwater to the estuary as a delivered load of nitrogen." *Id.*, ¶ 53. Stormwater runoff, which increases with the addition of impervious surfaces, carries nitrogen into the estuary. *Id.*, ¶¶ 55-60. The Piscataqua Region Estuaries Partnership ("PREP") describes this process:

> Impervious surfaces are man-made features, such as parking lots, roads, and buildings, that do not allow precipitation to infiltrate into the ground. When precipitation falls on impervious surfaces, it runs off those surfaces carrying pollutants and sediments into nearby waterways. Watersheds reach a tipping point around 10% impervious cover, beyond which water quality impacts become increasingly severe.

Id., ¶ 60.

The total nitrogen load delivered from stormwater sources varies based on land use type, the amount of impervious surfaces, and precipitation patterns. *Id.*, ¶ 58. In New England, the average annual nitrogen loading from impervious surfaces ranges from 10.5 to 17 pounds per acre per year, depending on land use type. *Id.*, ¶ 59. The average annual nitrogen loading from commercial, industrial, and institutional land uses in New England is 15 pounds per acre per year. *Id.* Moreover, impervious surfaces absorb and emit heat and increase the temperature of the stormwater runoff that flows from those surfaces, heating the water temperature in the estuary. *Id.*, ¶ 66. Communities in the Great Bay estuary watershed have high levels of impervious cover, with some communities exceeding the tipping point of 10% impervious cover. *Id.*, ¶¶ 61-62.

The growing population in the Great Bay estuary watershed has increased, and continues to increase harmful stress on the estuary. As the population grows, impervious surfaces increase, along with increased stormwater runoff and greater nitrogen loading in the estuary. *Id.*, ¶¶ 81-88. In some places in the estuary watershed, growth of impervious cover outpaces population growth. *Id.*, ¶ 87.

As a result of climate change, the Great Bay region is experiencing changing precipitation patterns, more extreme storm events, and increasing colored dissolved organic matter, coastal acidification, and sea level rise. *Id.*, ¶¶ 89-90. Increased rainfall causes increased stormwater, delivering even more sediments and nutrients, including nitrogen, into the estuary. *Id.* Increased climate impacts act as additional stressors on the estuary and magnify each other to make the estuary less and less resilient. *Id.*, ¶¶ 89, 92.

Discharges of nitrogen from stormwater point sources are causing and contributing to violations of water quality standards in the Great Bay estuary. *Id.*, ¶¶ 36-45, 52-69. To protect and restore the estuary and achieve acceptable nitrogen loads, nitrogen discharges from stormwater point sources must be reduced. *Id.*, ¶¶ 73-80, 93-94.

III. Statutory and Regulatory Framework

A. The Clean Water Act Prohibits the Discharge of Pollutants Into Waters of the United States Without a Permit.

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). To achieve this important objective, the CWA prohibits the "discharge of any pollutant[8] by any person" from any point source[9] into waters of the United States, except when the discharge is authorized by permit. 33 U.S.C. § 1311(a). The discharge of any pollutant is defined to include "any addition of any pollutant to navigable waters from any point source." 33 U.S.C. § 1362(12). Discharge permits are issued pursuant to the National Pollutant Discharge Elimination System ("NPDES"), 33 U.S.C. § 1342. Certain stormwater discharges require a NPDES permit.

[8] "Pollutant" is defined as "dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water." 33 U.S.C. § 1362(6).

[9] "Point source" is defined as "any discernible, confined, and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged. This term does not include agricultural stormwater discharges and return flows from irrigated agriculture." 33 U.S.C. § 1362(14).

B. Congress Expressly Provided for Residual Designation of Unpermitted Stormwater Pollution Under the Clean Water Act.

Stormwater was not always regulated by the CWA, but 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 directed EPA to phase-in a comprehensive national regulatory program to issue NPDES permits for stormwater discharges. 33 U.S.C. §§ 1342(p)(4), (6); *Los Angeles Waterkeeper v. Pruitt*, 320 F.Supp.3d 1115, 1119 (C.D. Cal. 2018). While the CWA generally does not require a permit for discharges composed entirely of stormwater, 33 U.S.C. § 1342(p)(1), Congress amended the CWA to create five categories of high-priority stormwater discharges for immediate and ongoing NPDES regulation. 33 U.S.C. §§ 1342(p)(1), (p)(2)(A)-(E). "If a category of stormwater falls within one of the five exceptions, then it is not subject to the moratorium on regulating stormwater and is placed back within the broader rule of the statute that all discharges of pollutants must be either subject to (1) a NPDES permit or (2) totally proscribed." *Los Angeles Waterkeeper*, 320 F.Supp.3d at 1122. In other words, if stormwater discharges fall within one of the exception categories, EPA must act and either engage in permitting of the discharge or prohibit it altogether. *Id.*; citing 33 U.S.C. §§ 1311(a); 1342(p)(1)-(2).

The five categories of stormwater discharges requiring NPDES permitting focus primarily on well-documented and significant sources of stormwater pollution, such as runoff associated with industrial activities and large urban areas.[10] The final category, however, requires NPDES permits for any stormwater discharge that EPA determines "contributes to a violation of

[10] The five categories of stormwater discharges requiring NPDES permitting pursuant to 33 U.S.C. § 1342(p)(2) are:

> (A) A discharge with respect to which a permit has been issued under this section before February 4, 1987.
> (B) A discharge associated with an industrial activity.
> (C) A discharge from a municipal separate storm sewer system serving a population of 250,000 or more.
> (D) A discharge from a municipal separate storm sewer system serving a population of 100,000 or more but less than 250,000.
> (E) 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)(A)-(E).

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); *see also* 40 C.F.R.§ 122.26(a)(1)(v). This mandate to regulate stormwater discharges that contribute to water quality standard violations or that significantly contribute pollutants to waters of the United States is commonly known as EPA's Residual Designation Authority ("RDA").[11]

EPA promulgated stormwater rules in two phases. EPA's Phase I stormwater rule focused on industrial polluters and urban areas while continuing to recognize the need, pursuant to CWA § 402(p)(2)(E), for "immediate permitting" of stormwater discharges that contribute to violations of water quality standards. *Nat'l Pollutant Discharge Elimination Sys. Permit Application Regulations for Storm Water Discharges*, 55 Fed. Reg. 47990, 47993 (Nov. 16, 1990). In its Phase II stormwater rule, EPA affirmed the importance of regulating stormwater discharges that contribute to water quality impairments:

> Individual sources are subject to regulation if EPA or the State, as the case may be, determines that the storm water discharge from the source contributes to a violation of a water quality standard or is a significant contributor of pollutants to waters of the United States. This standard is based on the text of section CWA 402(p). In today's rule, EPA believes, as Congress did in drafting section CWA 402(p)(2)(E), that individual instances of stormwater discharge might warrant special regulatory attention, but do not fall neatly into a discrete, predetermined category. *Today's rule preserves the regulatory authority to subsequently address a source (or category of sources) of stormwater discharges of concern on a localized or regional basis.* For example, as States and EPA implement TMDLs, permitting authorities may need to designate some point source discharges of storm water on a categorical basis either locally or regionally in order to assure progress toward compliance with water quality standards in the watershed.

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) (emphasis added). *See also Envt'l Def. Ctr. v. EPA*, 344 F.3d 832, 875

[11] 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 total maximum daily load ("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). 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).

(9th Cir. 2003) (affirming inclusion of residual designation authority "as a legitimate exercise of regulatory authority conferred by § 402(p)."). The Phase II rule authorized EPA to issue RDA discharge-permit determinations "on 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 discharges in a geographic area." *In re Stormwater NPDES Petition*, 2006 VT 91, ¶ 12. The broader approach to stormwater permitting in EPA's Phase II stormwater rules facilitates EPA's overarching goal of coordinated watershed planning. *Id.* (citing 64 Fed. Reg. 68,739). "In promoting the watershed approach to program administration, EPA believes NPDES general permits can cover a category of dischargers within a defined geographic area. Areas can be defined very broadly to include political boundaries (e.g., county), watershed boundaries, or State and Tribal land." 64 Fed. Reg. 68,739.

C. When EPA Determines Certain Stormwater Discharges Contribute to a Violation of Water Quality Standards, It Must Exercise Residual Designation Authority.

Exercise of residual designation authority is not optional. *In re Stormwater NPDES Petition*, 2006 VT 91, ¶ 28. "The Clean Water Act [residual designation authority] provisions . . . provide that EPA must engage in the permitting process for stormwater discharges that contribute to water quality violations." *Los Angeles Waterkeeper*, 320 F.Supp.3d at 1124. Once a discharge, or a category of discharges, is determined to be contributing to a violation of water quality standards, the operator 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); *Los Angeles Waterkeeper*, 320 F.Supp.3d at 1123 ("Accordingly, once EPA determined there are sufficient data available to demonstrate that stormwater discharges are contributing to water quality impairments… the statute *required* EPA to engage in the permitting process or prohibit the discharge.") (emphasis in original, internal citations omitted).

A pair of recent federal court decisions spell out EPA's responsibilities in making an RDA determination: EPA must first determine whether the stormwater discharges contribute to a water quality violation, and, if they do, either engage in NPDES permitting or prohibit the discharges. *Blue Water Baltimore*, *Inc. v. Wheeler*, 2019 WL 1317087, *5 (D. Md. March 22, 2019); *Los Angeles Waterkeeper*, 320 F.Supp.3d at 1123. EPA cannot consider factors outside the statutory bounds when making its RDA determination, such as other programs or permitting

schemes that may address stormwater discharges. *Blue Water Baltimore*, at *5-6; *Los Angeles Waterkeeper*, 320 F.Supp.3d at 1125. If EPA concludes that stormwater discharges are contributing to water quality violations, it cannot decline to regulate because other programs may also be in place. *Id.*

The courts in *Los Angeles Waterkeeper* and *Blue Water Baltimore* based their analyses in part on the Supreme Court's decision in *Massachusetts v. EPA*, 549 U.S. 497 (2007). In *Massachusetts*, the Supreme Court ruled that, in the context of regulating greenhouse gas emissions, EPA could not consider factors outside of the Clean Air Act, including consideration of other programs that might be addressing the problem in question, to determine if regulations under that Act were necessary. The *Massachusetts* decision concluded that EPA cannot consider factors "divorced from the text" of the statute. *Massachusetts*, 549 U.S. at 532-33. Relying on *Massachusetts*, the *Blue Water Baltimore* court explained:

> Defendants argue that consideration of existing programs is a "reasonable explanation." But *Massachusetts* expressly rejected this argument. *Massachusetts* concluded that the "laundry list of reasons" EPA offered in declining to regulate greenhouse gases, including that various Executive Branch programs "already provide an effective response to the threat of global warming, . . . have nothing to do with whether greenhouse gas emissions contribute to climate change. Still less do they amount to a reasoned justification for declining to form a scientific judgment." Here too, EPA's reliance on existing programs does not amount to a reasoned justification for failing to determine whether stormwater discharges from [specific] sites contribute to violations of water quality standards.

Blue Water Baltimore, at *6 (quoting and discussing *Massachusetts*, 549 U.S. at 533-34.). EPA can only decline to exercise its RDA authority if it determines that the discharges do not contribute to the water quality violations. *Id.* ("In other words, EPA may only decline to regulate if it answers this scientific question in the negative or concludes that there is insufficient information to make this determination.")

Importantly, EPA cannot decline to exercise RDA in favor of existing or preferred methods of addressing stormwater runoff. *Los Angeles Waterkeeper*, 320 F.Supp.3d at 1125. EPA cannot abstain from RDA permitting even if existing permits are already in place that may address the stormwater discharges, including other NPDES permits such as MS4 permits. In making an RDA determination, EPA must answer "the scientific question posed by the text of § 1342(p)(2)(E) – whether the stormwater discharges at issue contribute to violations of water

quality standards." *Blue Water Baltimore,* at *5. EPA cannot consider factors beyond this scientific inquiry. *Id.* at *5-6 (citing § 1342(p)(2)(E); *Massachusetts*, 549 U.S at 534-35). If EPA determines that the stormwater discharge is contributing to water quality violations in any way that is more than *de minimis*, EPA must engage in the permitting process. *Los Angeles Waterkeeper*, 320 F.Supp.3d at 1125.

D. New Hampshire's Surface Water Quality Standards Were Enacted to Protect Public Health, Enhance Water Quality, and Serve the Purposes of the Clean Water Act.

The CWA requires states to establish minimum water quality standards sufficient to carry out the overall purpose of the CWA. 33 U.S.C. § 1313; 40 C.F.R. § 131.2. Water quality standards are meant to "protect public health or welfare, enhance the quality of water, and serve the purposes of the [CWA]."[12] 40 C.F.R. § 131.2. Pursuant to the CWA, "[a] water quality standard defines the water quality goals of a water body, or portion thereof, by designating the use or uses to be made of the water or by setting criteria that protect the designated uses." 40 C.F.R. § 131.2.

Pursuant to the CWA, New Hampshire has enacted Surface Water Quality Standards, Env-Wq 1700 et seq., to "protect public health and welfare, enhance the quality of water and serve the purpose of the [CWA]." Env-Wq 1701.01 (internal citations omitted). New Hampshire established a statutory goal "that all surface waters attain and maintain specific standards of water quality . . . ." RSA 485-A:8. Surface waters are divided into two classifications, and water quality standards vary by class: Class A (highest quality waters, acceptable for use as drinking water) and Class B (second highest quality waters, acceptable for fishing, swimming, and other recreational uses). RSA 485-A:8, I, II. As required by the state's water quality standards: "All surface waters shall be restored to meet the water quality criteria for their designated classification including existing and designated uses, and to maintain the chemical, physical, and biological integrity of surface waters." Env-Wq 1703.01(b). Additionally, "[a]ll surface waters

[12] Serving the purposes of the CWA "means the water quality standards should, wherever attainable, provide water quality for the protection and propagation of fish, shellfish and wildlife and for recreation in and on the water and take into consideration their use and value of public water supplies, propagation of fish, shellfish, and wildlife, recreation in and on the water, and agricultural, industrial, and other purposes including navigation." 40 C.F.R. § 131.2.

shall provide, wherever attainable, for the protection and propagation of fish, shellfish and wildlife, and for recreation in and on the surface waters." Env-Wq 1703.01(c).

All waters in the Great Bay estuary are classified as Class B waters. As such, they must meet the numeric water quality criterion for dissolved oxygen and satisfy the following narrative water quality criteria:

- "All surface waters shall support and maintain a balanced, integrated, and adaptive community of organisms having a species composition, diversity, and functional organization comparable to that of similar natural habitats of a region." Env-Wq 1703.19(a).
- "Class B waters shall contain no phosphorus or nitrogen in such concentrations that would impair any existing or designated uses, unless naturally occurring. Existing discharges containing phosphorus or nitrogen, or both, which encourage cultural eutrophication shall be treated to remove the nutrient(s) to ensure attainment and maintenance of water quality standards." Env-Wq 1703.14(b) & (c).

See also Statement of Facts, ¶ 37. New Hampshire's surface water quality standards define "cultural eutrophication" as "the human-induced addition of wastes that contain nutrients to surface waters, resulting in excessive plant growth or a decrease in dissolved oxygen, or both." Env-Wq 1702.15.

The CWA further requires states to identify impaired water bodies that do not meet water quality standards, and to list those waterbodies on their 303(d) lists. *See* 33 U.S.C. § 1313(d). Pursuant to the CWA, NHDES evaluates the quality of New Hampshire's surface waters every two years, and produces a list of impaired waters, called New Hampshire's 303(d) List. Statement of Facts, ¶ 36. As discussed *supra* at 5-6, NHDES has designated waters in the Great Bay estuary as impaired and placed those waters on New Hampshire's 303(d) List of impaired waters. Statement of Facts, ¶¶ 38-45.

IV. Analysis

A. The Contributing Discharges Require a NPDES Permit Because They Contribute to Ongoing Violations of Water Quality Standards.

Stormwater pollution from the Contributing Discharges is contributing to ongoing violations of water quality standards in the Great Bay estuary, and EPA must exercise RDA and require all persons responsible for those discharges to obtain a NPDES permit. There is a clear

and decisive record establishing that nitrogen from the Contributing Discharges is contributing to water quality standard violations in the Great Bay estuary. Statement of Facts, ¶¶ 13-94; *see also supra* at 5-8. As EPA has already found:

> The Great Bay estuary is composed of a complex network of tidal rivers, inland bays, and coastal harbors. The estuary receives treated wastewater effluent containing nitrogen from 17 publicly owned treatment works (POTWs) located in New Hampshire and Maine. Additionally, the estuary receives a significant nitrogen load from a variety of nonpoint sources and stormwater point sources throughout the watershed. Upon an evaluation of years of ambient monitoring data and other relevant technical and scientific information, EPA has determined that the nitrogen load is exceeding the assimilative capacity of the estuary and is causing or contributing, or has the reasonable potential to cause or contribute, to pervasive nutrient-related impairments and violations of water quality standards. EPA's conclusions are based on the weight of the evidence and draw on multiple lines of evidence. . . . These factual determinations are largely uncontested.

EPA, Great Bay Total Nitrogen General Permit, NPDES Permit No. NHG58A000, Response to Comments ("GBTNGP Response to Comments") at 5 (internal citations omitted); *see also* Statement of Facts, ¶ 69. Moreover, conditions in the estuary require immediate attention. In 2020 EPA described the eutrophic cycle in the Great Bay estuary as self-reinforcing and noted that any delay in addressing the cycle "could mean the difference between potential recovery or collapse of the ecosystem." Statement of Facts, ¶ 93 (quoting GBTNGP Response to Comments at 7-8). As a result, EPA concluded that there is an urgent need to regulate nitrogen in the estuary. *Id.*

i. Impairments due to excessive nitrogen in the Great Bay estuary are well documented.

The Great Bay estuary is suffering from eutrophication caused by excessive nitrogen. *See supra*, at 5; Statement of Facts, ¶¶ 13-35. The estuary exhibits all of the characteristics of eutrophication, including increasing nitrogen concentrations, low dissolved oxygen, macroalgae blooms, and disappearing eelgrass habitat. *Id.*, ¶¶ 17-24. Eelgrass, a key indicator of estuarine health and critical component of the estuarine ecosystem, has declined so severely that in some places in the estuary only half the population remains, and in other locations eelgrass has disappeared entirely. *Id.*, ¶¶ 25-33. The estuary is burdened by nitrogen levels as high as three times the levels acceptable for eelgrass health. *Id.*, ¶ 24. Other environmental indicators reveal the declining health of the estuary. *Id.*, ¶¶ 34-35. Eutrophication in the estuary due to excessive nitrogen is well documented and recognized by both EPA and NHDES. *See id.*, ¶¶ 13-35.

As a result of excess nitrogen, waters in the Great Bay estuary are impaired and violate state water quality standards. *Id.*, ¶¶ 36-45. NHDES has designated waters in the Great Bay estuary as impaired and placed those waters on New Hampshire's 303(d) List. *Id.*, ¶¶ 38-43. In doing so, NHDES explicitly stated that eutrophication from excess nutrients cause violations of state water quality standards. "Eutrophication from excess nutrients is a critical issue affecting the aquatic life designated use in the Great Bay Estuary. . . . These symptoms of eutrophication from excess nutrients impair the aquatic life designated use which is a violation of the state water quality standards for nutrients (Env-Wq 1703.14) and biological and aquatic community integrity (Env-Wq 1703.19)." *Id.*, ¶ 39 (quoting NHDES, 2012 303(d) Report, at 36-37). EPA has similarly stated conclusively that nitrogen is contributing to water quality impairments in the estuary. According to EPA: "what is certain is that large amounts of nitrogen contribute to water quality impairments throughout the Great Bay estuary, which is consistent with EPA's judgment that these waters have reached their assimilative capacity for nitrogen." *Id.*, ¶ 15. Moreover, EPA has concluded that nutrient-related impairments are pervasive throughout the entire estuary: "it is apparent that the entire estuary is suffering from significant and pervasive nutrient-related impacts which are not isolated to the most susceptible areas." *Id.*, ¶ 45. Nitrogen-related impairments in the Great Bay estuary have been and are increasing over time. *Id.*, ¶ 20.

ii. The Contributing Discharges contribute to violations of water quality standards in the Great Bay estuary.

Most of the nitrogen in the Great Bay estuary comes from stormwater point sources and non-point sources. *Id.*, ¶¶ 52-69; *see supra* at 6-8. NHDES estimates that 68% of the nitrogen in the estuary originates from sources other than wastewater treatment facilities. Statement of Facts, ¶ 53. NHDES identified nitrogen sources "from atmospheric deposition, chemical fertilizers, human waste through septic systems, and animal wastes. These sources are then routed through surface waters, stormwater, and groundwater to the estuary as a delivered load of nitrogen." *Id.* The Piscataqua Region Estuaries Partnership ("PREP") describes how nitrogen from stormwater reaches the estuary:

> Non-point source[13] nitrogen enters our estuaries in two major ways: 1) from stormwater runoff, which carries nitrogen from atmospheric deposition (including mobile transportation sources – cars, trucks, trains; and stationary stack emissions

[13] PREP uses the term "non-point source" to describe discharges that are both non-point source discharges and stormwater point source discharges.

> – smoke stacks), fertilizers, and animal waste to the estuaries; and 2) from groundwater contribution, which carries nitrogen from septic systems, sewer leakage, and infiltrated stormwater runoff into streams, rivers, and the estuary itself. These non-point sources (NPS) accounted for 606.6 tons per year or 67% of the nitrogen load for 2012 – 2016. It is important to understand that NPS loads are much more difficult to manage than point source loads because they come from a variety of sources, many of which are controlled by private land owners.

Id., ¶ 56.

Stormwater runoff, and associated nitrogen loading, increases with impervious surfaces. *Id.*, ¶ 60. Development decreases vegetative areas that naturally filter stormwater and increases the amount of pollutants carried by stormwater runoff and discharged into receiving waters.[14] *Id.*, ¶ 85. Because only a limited amount – 2.6% – of Great Bay estuary watershed is occupied by wetlands, which buffer pollution entering the estuary, PREP describes the estuary as "extremely vulnerable" to nitrogen loading from stormwater runoff. *Id.*, ¶ 55.

Watersheds reach a tipping point when approximately ten percent or more of the watershed is covered with impervious surfaces, beyond which adverse water quality impacts become increasingly severe. *Id.*, ¶¶ 60-61. Communities in the Great Bay estuary watershed have high levels of impervious cover, with some communities exceeding the tipping point of ten percent impervious cover, including but not limited to Portsmouth (26.7% impervious cover) and New Castle (20% impervious cover). *Id.*, ¶ 62.

Stormwater point source discharges of nitrogen from the Contributing Discharges are contributing to violations of water quality standards in the Great Bay estuary. EPA has stated:

> EPA has determined – and NHDES has concurred – that the overall nitrogen loading to the Great Bay estuary has exceeded the estuary's assimilative capacity. Given the tidal nature of the estuary, *all* significant discharges of nitrogen throughout the watershed . . . are clearly contributing to this excessive load and are, therefore, contributing to a variety of excursions of water quality standards.

[14] PREP has described this process: "Impervious surfaces are man-made features, such as parking lots, roads, and buildings, that do not allow precipitation to infiltrate into the ground. When precipitation falls on impervious surfaces, it runs off those surfaces carrying pollutants and sediments into nearby waterways. Watersheds reach a tipping point around 10% impervious cover, beyond which water quality impacts become increasingly severe." Statement of Facts, ¶ 60.

Id., ¶ 41 (quoting 2020 Fact Sheet, at 19) (emphasis added). EPA has concluded that "[t]o achieve acceptable nitrogen loads… significant point source and non-point source reductions are necessary." *Id.*, ¶ 73. According to EPA, a reduction of approximately 45% of non-point source and stormwater point source load reduction is necessary to achieve desired nitrogen levels in the estuary. *Id.*

The Contributing Discharges consist of discharges from properties meeting or exceeding impervious cover thresholds (0.75 and 1.5 acres) in three specific land use categories: commercial, industrial, and institutional. Regulating these land use types is warranted, because of the nitrogen loads they contribute. In New England, the average annual nitrogen loading from impervious surfaces ranges from 10.5 to 17 pounds per acre per year, depending on land use type (and ranges from 0.3 to 3.6 pounds per acre per year for pervious areas). *Id.*, ¶ 59. Commercial, industrial, and institutional properties have a greater pollutant loading impact – averaging 15 pounds per acre per year – as compared to residential parcels. *Id.*, ¶¶ 59, 64. In EPA's recent determination to exercise residual designation authority over certain stormwater discharges in the Charles River, Neponset River, and Mystic River watersheds in Massachusetts, EPA selected discharges from commercial, industrial, and institutional properties because of their greater pollutant loading impact on a per parcel basis. Charles, Mystic & Neponset RDA Determination, at 25.

For purposes of this petition, Contributing Discharges consist of unpermitted discharges located in the New Hampshire portion of the Great Bay estuary in the following two categories: (1) non-*de minimis* stormwater discharges from commercial, industrial, and institutional properties located in communities regulated under the New Hampshire MS4 General Permit[15] and having 0.75 acres or more of impervious cover, and (2) non-*de minimis* discharges from

[15] The MS4 communities in the Great Bay estuary watershed, including communities that have obtained a waiver from the MS4 General Permit, are: Barrington, Brentwood, Candia, Chester, Danville, Dover, Durham, East Kingston, Epping, Exeter, Fremont, Greenland, Hampton Falls, Kingston, Lee, Madbury, Milton, New Castle, Newfields, Newington, Newmarket, North Hampton, Portsmouth, Raymond, Rochester, Rollinsford, Rye, Sandown, Somersworth, and Stratham. *See* Statement of Facts, ¶¶ 71-72.

commercial, industrial, and institutional properties located in non-MS4 communities[16] and having 1.5 acres or more of impervious cover.

The lower impervious cover threshold (0.75 acres) for commercial, industrial, and institutional properties located in MS4 communities is warranted because they are in close proximity to the estuary and located in or near urbanized areas; accordingly, they have a greater nitrogen loading impact. *See* NH MS4 General Permit, at 1.1, 1.2.1; Statement of Facts, ¶ 65, 71, 82-87.[17] Stormwater discharges from properties in communities located farther from the estuary, on the other hand, have less of a nitrogen loading impact in the estuary because some nitrogen is lost through attenuation during transport in tributary rivers from the point of discharge to the estuary. *See* Statement of Facts, ¶ 65.

Parcels with large amounts of impervious cover, of at least 0.75 acres or 1.5 acres, represent a small percentage of properties in the estuary watershed, but contain a significant amount of impervious cover per parcel. Waterstone Engineering Technical Memorandum at 2.[18] Contributing Discharges with 0.75 acres or more of impervious cover are typically large commercial and industrial land uses, with impervious cover from driveways, parking lots, and rooftops. *See id.* at 3. Selecting discharges for RDA permitting based on commercial, industrial, and institutional properties with high levels of impervious cover is consistent with the approach recommended by the University of New Hampshire Stormwater Center in a report modeling the watershed effects of stormwater. *See* University of New Hampshire Stormwater Center, Technical Report on Modeling Results, Modeling the Effect of Local Stormwater Regulations on Future Pollutant Loads in the Oyster River Watershed (2015) ("UNH Stormwater Modeling

[16] The non-MS4 communities in the Great Bay estuary watershed are: Brookfield, Deerfield, Farmington, Kensington, Middleton, New Durham, Northwood, Nottingham, Strafford and Wakefield. *See* Statement of Facts, ¶¶ 71-72.

[17] If EPA determines that a Great Bay estuary watershed community currently not regulated under the MS4 permit should be designated an MS4 community, the RDA threshold for MS4 communities, 0.75 acres or more impervious cover, would then apply to Contributing Discharges in that community.

[18] To support this Petition, CLF commissioned a technical memorandum from Waterstone Engineering which provides technical support for designation of the Contributing Discharges causing nitrogen-related impairments in the Great Bay estuary. Technical Memorandum on Designation of Contributing Discharges for Nitrogen Impairment to the Great Bay, New Hampshire, Robert Roseen, PHD, PE, DWRE, Waterstone Engineering (March 21, 2022) ("Waterstone Engineering Technical Memo."), attached.

Report") at 1-2. Of course, EPA may also consider using RDA to regulate stormwater discharges from parcels with a lower threshold amount of impervious cover, which would address a greater number of properties and an even greater nitrogen load.[19] UNH Stormwater Modeling Report at 10.

B. <u>Residual Designation Will Supplement and Enhance Existing Programs.</u>

Because the Contributing Discharges are contributing to violations of water quality standards, EPA must begin permitting pursuant to its RDA authority, and EPA cannot decline to regulate the Contributing Discharges in light of existing permits already in place that address some of the nitrogen entering the estuary. *See supra*, at 11-12. While not relevant to EPA's RDA determination under 33 U.S.C. § 1342(p)(2)(E), it is important to note that permitting of the Contributing Discharges will supplement and enhance existing NPDES permit programs affecting the Great Bay estuary watershed.

Some Great Bay estuary watershed communities are covered by permits that regulate some, but not all or even most, of their nitrogen loads. EPA issued the GBTNGP in 2020 to regulate discharges containing nitrogen from 13 New Hampshire WWTFs into the Great Bay estuary. Through the GBTNGP, EPA chose to regulate nitrogen discharges across numerous WWTFs while recognizing that meaningful nitrogen reductions from other sources would be necessary. Statement of Facts, ¶¶ 48-51. In describing the GBTNGP, EPA acknowledged two limitations in the permit: first, it does not address all, or even most, sources of nitrogen in the estuary; second, where the permit does extend beyond the WWTFs, it relies on *voluntary* action by municipalities. According to EPA:

> EPA acknowledges that water quality standards will not be achieved in the Great Bay estuary by means of reductions at POTWs [publicly owned treatment works] alone due to the large amount of load from nonpoint sources and stormwater point

[19] The UNH Stormwater Modeling Report used a threshold of 5,000 square feet impervious cover. UNH Stormwater Modeling Report, at 10. A threshold of 5,000 square feet is equivalent to 0.115 acres of impervious cover. Waterstone Engineering Technical Memo., at 2. Data from NHDES and UNH demonstrate that, while the greater the size of the impervious surface, the greater the pollutant load generated, smaller impervious areas predominate and have an important cumulative effect on carrying nutrient pollution to surface waters. Waterstone Engineering Technical Memo, at 1. For example, properties with 5,000 square feet of impervious cover represent approximately 55% of all impervious surfaces in the NHDES and UNH dataset. *Id.* at 2.

> sources. . . . Critically, this approach [in the GBTNGP] is predicated on the support of NHDES and the municipalities to carry out nitrogen reductions from nonpoint sources voluntarily . . .

Id., ¶¶ 50 (quoting GBTNGP Response to Comments at 8). EPA further recognizes "that reliance on purely optional nitrogen reductions is not an effective permitting strategy toward achieving water quality standards." Statement of Facts, ¶ 51 (quoting GBTNGP Response to Comments at 53).

Some Great Bay estuary watershed communities are covered by the New Hampshire MS4 permit, which addresses some, but not all or most, of the nitrogen entering the estuary through stormwater runoff. Many communities have obtained waivers from the MS4 permit. Statement of Facts, ¶¶ 71-72. Moreover, EPA has specifically noted that the MS4 permit does not contain up to date nitrogen control requirements for all communities under that permit or in the watershed, and that estuary impairments persist despite MS4 permit requirements. *Id.*, ¶ 71. The MS4 permit also does not regulate the Contributing Discharges.

A permitting program from EPA in response to this Petition would complement and build upon the existing GBTNGP and MS4 permit to reduce nitrogen loads in the estuary.

C. Residual Designation is an Equitable Approach to Regulating Nitrogen Discharges.

Absent RDA designation, the regulatory burden for attainment of water quality standards falls only upon those stormwater dischargers and GBTNGP dischargers that are currently being regulated. *See id.*, ¶¶ 70-72. As indicated by long-standing water quality violations in the Great Bay estuary, not regulating additional sources will prevent attainment of water quality standards. The Great Bay estuary is wide ranging, covering approximately 21 square miles over numerous rivers and tributaries, and the estuary watershed extends even further. *Id.*, ¶¶ 1-4. Forty-two New Hampshire communities are completely or partially in the Great Bay estuary watershed. *Id.*, ¶ 71. In contrast, only a portion of those communities have some form of NPDES permitting, *see id*., and that permitting does not address most of the nitrogen load discharged into the estuary. Permitting under RDA would distribute more broadly the regulatory actions needed to restore the estuary's health and attain water quality standards.

D. Residual Designation is Needed to Mitigate the Effects of Climate Change on the Estuary.

The changing climate is exacerbating stressors in the Great Bay estuary. As a result of the impacts of climate change, the Great Bay region is experiencing changing precipitation patterns, more extreme storm events, and increasing colored dissolved organic matter, coastal acidification, and sea level rise. *Id.*, ¶ 89. Increased rainfall causes more stormwater, delivering even more sediments and nutrients, including nitrogen, into the estuary. *Id.*, ¶¶ 89-90. These impacts increase stress on the estuary and compound one another. *Id.*, ¶ 89. As estuarine health declines, the estuary becomes less and less resilient. Statement of Facts, ¶¶ 89, 92.

The increasing and compounding effects of climate change make the need for action in the estuary even more urgent. According to EPA: "Protective actions to increase resilience for eelgrass habitat are critical as climate science predicts an increase of stressful events, such as extreme storms with increased rains and higher winds." *Id.*, ¶ 91. Requiring better stormwater management is essential to enhancing the resilience of communities in the face of climate change and associated increase in severe storm events and flooding. *Id.*, ¶¶ 89-92. "Wet weather and heavy precipitation can have a significant effect on communities, especially in areas with high amounts of impervious cover, and climate change augments those effects. Increased (or decreased) flows of stormwater from climate change will likely lead to increased pollution, either from additional loads (from increased flows), or greater concentration (from decreased flows)." *Id.*, ¶ 90 (quoting Charles, Mystic & Neponset RDA Determination, at 19 (internal citations omitted)). As the estuary faces increased stressors, EPA must act to protect and restore the Great Bay estuary. As EPA has already concluded, urgent action to regulate nitrogen in the Great Bay estuary is necessary, and "any delay could mean the difference between potential recovery or collapse of the system . . . ." *Id.*, ¶ 93.

V. Conclusion

For the reasons stated above and in the attached Statement of Facts, the Contributing Discharges are contributing to violations of water quality standards in the Great Bay estuary. Given the consistent and unequivocal nature of these findings, EPA must determine pursuant to 33 U.S.C. § 1342(p)(2)(E) and 40 CFR §§ 122.26(a)(1)(v) that stormwater pollution from the Contributing Discharges contribute to water quality standard violations in the Great Bay estuary,

and must take all necessary actions, using its residual designation authority, to regulate those discharges under the NPDES program.

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Respectfully submitted,

Conservation Law Foundation

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