

**BEFORE THE ENVIRONMENTAL APPEALS BOARD  
U.S. ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C.**

In re:

City of Homedale Wastewater Treatment Plant  
NPDES Permit No.: ID-002042-7

Appeal No. NPDES 13-10

**BRIEF OF *AMICI CURIAE* WET WEATHER PARTNERSHIP,**  
**NATIONAL ASSOCIATION OF CLEAN WATER AGENCIES,**  
**ASSOCIATION OF MISSOURI CLEANWATER AGENCIES,**  
**MARYLAND ASSOCIATION OF MUNICIPAL WASTEWATER AGENCIES**  
**NORTH CAROLINA WATER QUALITY ASSOCIATION,**  
**SOUTH CAROLINA WATER QUALITY ASSOCIATION,**  
**VIRGINIA ASSOCIATION OF MUNICIPAL WASTEWATER AGENCIES,**  
**WEST VIRGINIA MUNICIPAL WATER QUALITY ASSOCIATION, AND**  
**ON BEHALF OF RESPONDENT**

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## I. INTRODUCTION

Pursuant to 40 C.F.R. § 124.19(e), the Wet Weather Partnership, National Association of Clean Water Agencies, Association of Missouri Cleanwater Agencies, Maryland Association of Municipal Wastewater Agencies, North Carolina Water Quality Association, South Carolina Water Quality Association, Virginia Association of Municipal Wastewater Agencies, and the West Virginia Water Quality Association file this *amicus* brief in support of Respondent U.S. Environmental Protection Agency (EPA).

The Idaho Conservation League petitioned this Environmental Appeals Board (the “Board” or “EAB”) for review of a National Pollution Discharge Elimination Permit (“NPDES”) permit (Permit No. ID-002042-7) (the “Permit”) for the City of Homedale Wastewater Treatment Plant (“Homedale WWTP”). Petitioner argues the Permit is unlawful because it imposes effluent limitations for total phosphorous expressed as monthly and weekly average limits, rather than as a daily maximum limit. Petitioner asserts that the monthly/weekly limits are inconsistent with the daily maximum total phosphorus wasteload allocation for the Homedale WWTP in the Mid Snake River/Succor Creek Total Maximum Daily Load (April 2003) (the “TMDL”).<sup>1</sup>

Petitioner’s claims are meritless and the Petition must be denied for the following reasons: First, the Homedale WWTP’s TMDL wasteload allocation is just 0.3 percent of the daily TMDL loading. Thus, the expression of the phosphorous limits in the Permit will have no measurable effect on water quality and is merely an academic exercise which does not warrant review.

Second, the Petition is premised on the erroneous assertion that the Clean Water Act (“CWA”) requires that NPDES permits include daily maximum permit limits that mirror daily

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<sup>1</sup> Available at <http://www.epa.gov/waters/tmdldocs/Snake%20River%20Succor%20Creek%20TMDL.pdf>.

loads in applicable TMDLs. Permit limits need only be “consistent with” the assumptions and requirements of TMDLs. There is absolutely no requirement for the duration or averaging period of a permit limit to be “daily” simply because TMDLs are expressed on daily basis. *See* 40 C.F.R. § 122.44(d)(1)(vii)(B). To the contrary, for publicly owned treatment works (“POTWs”) such as *amici*’s members’ WWTPs, the same EPA regulation specifies that those consistent limits must be expressed in terms of *monthly* and *weekly* averages, unless impracticable. *See* 40 C.F.R. § 122.45(d). There has been no showing whatsoever by Petitioner that monthly/weekly average limits are impracticable, never mind that they should be replaced by a daily limit.

Third, Petitioner’s challenge to monthly/weekly limits is an impermissible collateral attack on EPA’s regulation at 40 C.F.R. § 122.45(d) requiring such limits—a claim that is within the exclusive jurisdiction of the Federal Courts of Appeals.

Fourth, the Board and other state and federal courts have previously upheld NPDES permits without daily maximum limits for nutrients such as phosphorus or nitrogen.

Finally, a ruling that daily permit limits are required would undermine existing nutrient control programs nationwide including, by way of example, here in the District of Columbia where this Board recently upheld a permit for the Blue Plains Advanced Wastewater Treatment Plant without daily maximum limits for nutrients.

## **II. INTERESTS OF AMICI**

*Amici* represent a broad coalition of local government wastewater and stormwater management agencies serving counties, cities, and towns across the United States. Many of the member agencies represented by *amici* are similarly situated to the City of Homedale. That is, their WWTPs discharge to water bodies subject to TMDLs for nutrients and other pollutants in

accordance with NPDES permits limits that are consistent with the assumptions and requirements of applicable TMDLs. To our knowledge, none of the many hundreds of NPDES permits governing facilities represented by *amici* have daily limits for nutrients. Instead, those permits primarily impose seasonal and annual average limits consistent with the CWA, EPA regulations, state laws, and permitting programs. *Amici* have dutifully planned, financed, and constructed their WWTPs to comply with those long-term average limits. If adopted by the Board, Petitioner's position—that nutrient permit limits based on TMDL wasteload allocations must be set as *daily* limits—would completely disrupt these regulatory programs and permits, past public investments, and the current operation of hundreds of WWTPs nationwide. Changing the design basis to daily at this late juncture would also literally bring pending nutrient control projects at POTWs to a screeching halt. These facts compel *amici* to file this brief.

The Wet Weather Partnership is a nationwide association of dozens of localities formed in 1989 to make a positive contribution to federal laws and regulations governing the design and operation of combined and sanitary sewer systems, WWTPs, and municipal separate storm sewer systems. The National Association of Clean Water Agencies represents the interests of nearly 300 of the nation's wastewater and stormwater management agencies serving the majority of the sewered population of the United States. The Association of Missouri Cleanwater Agencies is a statewide association of owners and operators of POTWs consisting of 14 local governments. The Maryland Association of Municipal Wastewater Agencies is a statewide association of 24 local governments and authorities that own and operate POTWs. The North Carolina Water Quality Association is an incorporated association of 31 POTW owners statewide, serving a substantial majority of the sewered population in North Carolina. The South Carolina Water Quality Association is a statewide association of owners and operators of POTWs consisting of



32 local government members. The Virginia Association of Municipal Wastewater Agencies is a statewide association of 61 local governments and authorities that own and operate POTWs. The West Virginia Water Quality Association is a statewide association of owners and operators of POTWs consisting of 25 local government members.

### **III. STANDARD OF REVIEW**

Petitioner bears the burden of demonstrating that review of a permit is warranted. *In re City of Marlborough*, 12 E.A.D. 235, 240 (E.A.B. 2005) (citing 40 C.F.R. § 124.19(a)). To meet this burden, Petitioner must show that the “permit decision either is based on a clearly erroneous finding of fact or conclusion of law, or involves a matter of policy or exercise of discretion that warrants review.” *In re Town of Newmarket*, 16 E.A.D. \_\_\_, Slip. Op. at 5 (E.A.B. NPDES Appeal No. 12-05 Dec. 2, 2013).

### **IV. ARGUMENT**

#### **A. BECAUSE THE HOMEDALE WWTP’S TMDL WASTELOAD ALLOCATION IS JUST 0.3 PERCENT OF THE TMDL, THE EXPRESSION OF THE LIMIT WILL HAVE NO MEASURABLE EFFECT ON WATER QUALITY AND THUS DOES NOT WARRANT REVIEW**

Point source discharges contribute insignificant phosphorous loadings to the relevant portion of the Snake River. The TMDL established the river’s assimilative capacity as 1,667 kg/day of phosphorous. TMDL at 177. The overwhelming majority of this capacity, 1,205 kg/day, is allocated to nonpoint sources (mostly agriculture). Natural sources contribute a background load of 453 kg/day. The entire point source category accounts for an allocated load of only 9 kg/day—0.5 percent of the capacity—of which the Homedale WWTP is allocated a fraction (5 kg/day, or 0.3 percent). A *daily* permit limit is unnecessary and logically irrelevant to meeting the phosphorous water quality criterion, which itself is a *seasonal average*. Because the Homedale WWTP contributes 0.3 percent of the seasonal loading, its contributions are

completely insignificant, and whether its discharge is on a daily basis or monthly/weekly basis during the five-month season simply does not meet the high bar to warrant review by this Board.

**B. EPA’S REGULATIONS REQUIRE POTW PERMIT LIMITS TO BE EXPRESSED AS MONTHLY AND WEEKLY AVERAGES RATHER THAN DAILY LIMITS AS SOUGHT BY PETITIONER**

Putting aside for a moment whether daily loadings are even required in TMDLs,<sup>2</sup> Petitioner’s fundamental error is that the daily average TMDL wasteload allocations are not controlling in the NPDES discharge permitting context. EPA’s regulations provide that permit limits be “consistent” with the assumptions of the TMDL. The regulations go on to specify that those “consistent” limits be expressed as monthly and weekly averages. More specifically, the governing regulation for expressing permit effluent limitations for POTWs such as those operated by the City of Homedale and *amici*’s members provides:

For continuous discharges all [NPDES] permit effluent limitations, standards, and prohibitions, including those necessary to achieve water quality standards, shall unless impracticable be stated as: ... (2) Average weekly and average monthly discharge limitations for POTWs.

40 C.F.R. § 122.45(d). The Homedale WWTP’s NPDES Permit represents a straightforward application of this regulation through its inclusion of average weekly and monthly discharge limitations for phosphorus. Indeed, as EPA recognized when it issued the Permit, the Permit

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<sup>2</sup> EPA’s current policy is that it is prudent for TMDLs to include maximum daily loads, but the Agency has stated that it does not believe that this is required under the CWA or its implementing regulations. *See* EPA, Establishing TMDL “Daily” Loads in Light of Decision by the U.S. Court of Appeals for the D.C. Circuit in *Friends of the Earth, Inc. v. EPA*, et al., No. 05-5015 (April 25, 2006) and Implications for NDPEs Permits 2 (Nov. 15, 2006). EPA’s policy position is a practical reaction to a split in the authorities in which the D.C. Circuit has held that TMDLs must include daily loads, whereas the Second Circuit has held that the concept of “daily” loads is sufficiently flexible to permit load limits to be expressed over longer periods of time. *Compare Friends of the Earth, Inc. v. EPA*, 446 F.3d 140 (2006), with *Nat. Res. Def. Council, Inc. v. Muszynski*, 268 F.3d 91 (2d Cir. 2001).

would be *inconsistent* with § 122.45(d) if it imposed the daily phosphorus limit sought by Petitioner.<sup>3</sup>

The Petition does not even attempt to distinguish or apply § 122.45(d). Petitioner failed to provide any evidence that monthly/weekly limits are “impracticable,” or that daily limits are practicable and should be imposed instead. Not surprisingly, on appeal, Petitioner are forced to turn a blind eye to § 122.45(d)(2) and argue that the Permit violates § 122.44(d). Section 122.44(d) requires that permit limits be “consistent with the assumptions and requirements” of TMDLs. 40 C.F.R. § 122.44(d)(1)(vii)(B). Petitioner argues that the Permit violates § 122.44(d) because its average weekly and average monthly phosphorus limits are inconsistent with the assumptions and requirements of the TMDL’s daily wasteload allocation for phosphorus expressed in the TMDL. *See* Petition at 4. However, § 122.44(d) and § 122.45(d) apply in equal measure, and neither can be disregarded.

The monthly/weekly permit limits requirement of § 122.45(d) is neither inconsistent with, nor trumped by, daily TMDL allocations, but rather work together as explained below. In developing TMDLs, EPA guidance specifies that for many pollutants, including nutrients such as phosphorus and nitrogen, maximum allowable loadings are most appropriately calculated “using allocation time frames greater than daily (e.g., annual, monthly, seasonal).” EPA, Options for Expressing Daily Loads in TMDLs at 3 (June 22, 2007) (“EPA Daily Loads Guidance”).<sup>4</sup> After the TMDL is determined for the ecologically-relevant timeframe (e.g., annual, seasonal, or monthly) the next step is to translate it into a daily load for TMDL purposes. However, daily

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<sup>3</sup> *See* EPA, Fact Sheet: EPA Proposes to Reissue A NPDES Permit to City of Homedale, at 23 (“Effluent limits in NPDES permits for POTWs that discharge continuously must be expressed as average monthly and average weekly limits (40 C.F.R. § 122.45(d)(2)).”). Attached to the Petition as Attachment 1.

<sup>4</sup> *Available at* [http://www.epa.gov/owow/tmdl/draft\\_daily\\_loads\\_tech.pdf](http://www.epa.gov/owow/tmdl/draft_daily_loads_tech.pdf). Although this guidance document was issued after the Mid Snake River TMDL was issued, it indicates that it does not present a “fundamental change” in the existing process for developing TMDLs. Daily Loads Memo at vii.

load expressions in TMDLs are not necessarily intended to establish inflexible regulatory limits. *Id.* at 6 (discussing “daily targets” for “tracking the progress toward meeting longer-term allocations and goals”). Daily TMDL allocations are set at levels that, if met on average, allow the ecologically-relevant annual, seasonal, or monthly load allocation to be achieved. EPA explains in its guidance that maximum daily loads expressed in TMDLs can be exceeded from time to time without jeopardizing the longer-term water quality goals from which the daily loads themselves are derived. *Id.* at 9.

Accordingly, an NPDES permit limit that is expressed as monthly/weekly averages as generally required by 40 C.F.R. § 122.45(d) and applied in this Permit, or even on a yearly basis, can be entirely consistent with the assumptions underlying the daily load allocation of a TMDL. The assumptions typically underpinning TMDLs for nutrients are that water quality will be protected if total yearly or seasonal (the case here) loadings do not exceed a certain threshold determined through the TMDL process to be protective. If daily loads expressed in the TMDL are achieved *on average* (*i.e.*, over the year or season for which loadings are ecologically significant) then the water quality standard will be met.

Here, the daily wasteload allocation of 5 kg/day total phosphorus to the Homedale WWTP should not be misunderstood to represent a concern about daily concentrations of nutrients. After all, the underlying water quality standard is (properly) a seasonal average condition. Instead, the daily load is a target allocation intended to allow the relevant portion of the Snake River to achieve an *average* water quality target of 0.07 mg/L total phosphorus concentration during the course of the growing season (May 1 to September 30). *See* TMDL at 167; *see also id.* at 164 (“Transport and deposition of phosphorus, and the resulting algal growth within the reach, is seasonal in nature.”). Numerous variables that can cause daily nutrient

fluctuations are identified in the TMDL's discussion of the phosphorus allocations, including average flow conditions, seasonal variations in natural loadings, and loadings from agricultural activities and other nonpoint sources (all of which comprise the approximately 99.5% of the daily loadings outside of the 0.5% for the two WWTPs). *See id.* at 176; *see also* Snake River-Hells Canyon Total Maximum Daily Load, at 443 (June 2004) (discussing variable factors that were incorporated into 0.07 mg/L total phosphorus concentration and resulting load allocations and qualifying that phosphorus load allocations “will apply reasonably over most water years”).<sup>5</sup>

In sum, the 5 kg/day total phosphorus allocation to the Homedale WWTP in the TMDL is simply a target based on *average* conditions over the course of an entire five-month growing season and, through the TMDL, EPA determined that phosphorus loads higher on some days or even some weeks than the daily load will have no adverse impact on achievement of the seasonal water quality goals outlined in the TMDL. Legally, the monthly average phosphorus limit of 5 kg/day in Homedale WWTP's NPDES Permit complies with both the § 122.45(d)(2) requirement for setting the limit on a monthly average basis and the § 122.44(d)(1)(vii)(B) requirement for consistency between the TMDL's assumptions and the Permit itself. In so doing, the Permit ensures that the Homedale WWTP achieves its target wasteload allocation over the ecologically-relevant time period—the growing season. Accordingly, the Petition should be dismissed because a daily permit limit is plainly contrary to the controlling regulation at § 122.45(d)(2) and is not required by § 122.44(d)(1)(vii)(B).

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<sup>5</sup> The TMDL relied on the draft of the Snake River-Hells Canyon TMDL for its total phosphorus target. *See* TMDL at 5.

**C. PETITIONER’S COLLATERAL ATTACK ON EPA’S REGULATION (WHICH SPECIFIES MONTHLY/WEEKLY LIMITS UNLESS IMPRACTICABLE) IS WITHIN THE EXCLUSIVE JURISDICTION OF THE FEDERAL COURTS OF APPEALS**

The effect of the Petition is to challenge EPA’s permit regulation at 40 C.F.R. § 122.45(d) which specifies that, unless impracticable, POTW permit limits be expressed as monthly and weekly average limits. Petitioner invites the Board, through this permit appeal, to amend the regulation to require daily limits for POTWs whenever an applicable TMDL has been established. This is an impermissible collateral attack on EPA’s regulation. Petitioner’s challenge to 40 C.F.R. § 122.45(d) must be brought exclusively in the Courts of Appeals and not as an end run through this permit proceeding.<sup>6</sup> For this reason, the Board must deny review of the Petition.

**D. THE BOARD HAS PREVIOUSLY UPHELD NPDES PERMITS WITHOUT DAILY LIMITS FOR NUTRIENTS**

EPA and state permitting authorities have issued literally hundreds of NPDES permits imposing permit limits for nutrients on a non-daily basis, notwithstanding the existence of applicable TMDLs. In fact, *amici* are not aware of a single NPDES permit imposing daily limits for nutrients on a POTW.

This Board itself has upheld an annual loading limit for nutrients in the NPDES permit for the Blue Plains Advanced Wastewater Treatment Plant. *See, e.g., In re District of Columbia Water and Sewer Authority*, 13 EAD 714 (March 19, 2008) (upholding the “4,377,580 pounds per year” annual loading limit for total nitrogen which USEPA Region 3 imposed in its permit

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<sup>6</sup> *See Nw. Envtl. Def. Ctr. v. Brown*, 640 F.3d 1063, 1069 (9th Cir. 2011) (discussing 33 U.S.C. § 1369 which provides that certain challenges to EPA regulations be filed in the applicable court of appeals within 120 days of promulgation).

for the Blue Plains Advanced Wastewater Treatment Plant). There is no seasonal, monthly, weekly or daily limit in that permit for this nutrient.

Moreover, permits containing weekly, monthly, or other longer term average nutrient limits have been challenged before this Board on a number of occasions for a variety of reasons. In those cases no party, nor this Board itself, has ever questioned the legality of expressing permit limits for nutrients in non-daily terms. *See, e.g., In re City of Attleboro*, 14 E.A.D. \_\_\_, Slip. Op. (E.A.B. NPDES Appeal 08-08 Sept. 15, 2009); *In re District of Columbia Water and Sewer Auth.*, 13 E.A.D. 714 (E.A.B. 2008); *In re City of Moscow*, 10 E.A.D. 135 (E.A.B. 2001).

Because this Board has upheld permits that implement TMDL loadings through non-daily permit limits, the Petition is contrary to legal precedent and should be denied review.

**E. REQUIRING DAILY MAXIMUM PERMIT LIMITS WILL UNDERMINE NUTRIENT CONTROL PROGRAMS NATIONWIDE**

Not only are the arguments asserted by Petitioner legally meritless, but a daily permit limit requirement would undermine nutrient reduction programs nationwide. Most nutrient reduction programs with which counsel for *amici* are familiar have been designed to reduce annual or seasonal average nutrient loadings. Permitting wastewater facilities on an annual or seasonal average basis allows more cost-effective WWTP designs by accommodating daily variability in operating conditions, rather than proscribing WWTP performance on a daily basis and the added infrastructure required to control or address those variables when there is no environmental benefit to doing so.

As briefly outlined below, the above point about the relationship between ecologically-relevant pollutant loads and WWTP design and operation is foundational to many of the largest nutrient control programs in the nation, including the multi-state Chesapeake Bay Program, Long

Island Sound Study, and Gulf Hypoxia Action Plan.<sup>7</sup> All are directed toward the goal reducing *annual* nutrient loadings to the subject waters. Many years of studies and implementation efforts and billions of dollars of federal and state grant funds, plus local tax and rate revenues, have been invested in meeting these annual goals. A ruling by the Board requiring daily limits would bring planning, design, and installation of ongoing nutrient control projects to a halt. It would also undermine existing public investments in hundreds of WWTPs which have been permitted, designed and constructed to meet seasonal or annual loadings, such as the Blue Plains Advanced Wastewater Treatment Plant and many dozens more POTWs in the surrounding Chesapeake Bay region.

Beyond WWTP design and finance, many water quality trading programs have been developed in accordance with EPA's Water Quality Trading Policy (January 13, 2003), and trades have been conducted by permittees, on the foundation of annual objectives. *See, e.g.*, Md. Code, Agriculture § 8-901 *et seq.*; 25 Pa. Code § 96.8; Ct. Gen. Stat. § 22a-521; Va. Code § 62.1-44.19:12 *et seq.* Other states such as Iowa and Mississippi are looking at starting similar trading programs. Nutrient credits are typically generated and traded for an annual period based on annualized nutrient discharge reductions. It is highly unlikely that trading would be feasible on a daily basis in the context of WWTP design and operation and, therefore, the economic benefit of these programs to citizens and water quality would be forfeited if daily limits are required.

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<sup>7</sup> Mississippi River Gulf of Mexico Watershed Nutrient Task Force, Gulf Hypoxia Action Plan 2008, at 9, *available at* [http://water.epa.gov/type/watersheds/named/msbasin/upload/2008\\_8\\_28\\_msbasin\\_ghap2008\\_update082608.pdf](http://water.epa.gov/type/watersheds/named/msbasin/upload/2008_8_28_msbasin_ghap2008_update082608.pdf) (stating task force's goal of reducing "the annual discharge of nitrogen and phosphorus into the Gulf").



## **1. Annual Nutrient Limits in the Chesapeake Bay Program and Related State Regulatory and Grant Funding Programs**

EPA's Chesapeake Bay Program Office issued a memorandum dated March 3, 2004, in which the Agency evaluated whether to express permit limits for nitrogen and phosphorous for hundreds of permits for WWTPs in the Chesapeake Bay watershed as annual average limits or whether EPA should express the limits as daily maximums, weekly averages, or monthly averages.<sup>8</sup> EPA considered the legal, scientific, and policy rationales for relying on nutrient limits of various durations. EPA determined that the characteristics of nitrogen and phosphorous, when combined with the characteristics of the Chesapeake Bay, make the imposition of daily, weekly, or monthly limits "impracticable" within the meaning of 40 C.F.R. § 122.45(d). Bay Memo at 3–5.

The memo observed that daily, weekly, or monthly limits would be virtually impossible to calculate because nutrients react differently than toxics and conventional pollutants in the Bay ecosystem. The treatment of nutrients is also highly sensitive to ambient temperature and is often not as effective at lower temperatures. Thus, effluent loading of nutrients is not constant due to seasonal temperature fluctuations. To establish appropriate daily, weekly, or monthly limits, due to the effect of temperature on treatment efficiency for nutrients, a permitting authority would have to be able to predict the temperature with great accuracy. Because of the normal variation in ambient temperature over short time periods, as well as the other unpredictable factors, EPA concluded it is not practicable—or necessary—to develop daily, weekly, or monthly permit limits for nutrients. Accordingly, the Chesapeake Bay Program has

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<sup>8</sup> EPA, Annual Permit Limits for Nitrogen and Phosphorus for Permits Designed to Protect Chesapeake Bay and its tidal tributaries from Excess Nutrient Loading under the National Pollutant Discharge Elimination System (Mar. 3, 2004), *available at* [http://www.epa.gov/npdes/pubs/memo\\_chesapeakebay.pdf](http://www.epa.gov/npdes/pubs/memo_chesapeakebay.pdf). ("Bay Memo").

relied on annual nutrient goals, which are implemented through NPDES permits, state nutrient trading programs, and other related efforts.

Consistent with EPA's March 3, 2004 memorandum, the Chesapeake Bay states have proceeded with major regulatory and grant funding programs premised on annual limits to implement the 2010 Chesapeake Bay TMDL and its predecessor plans. For example, in 2005 the Virginia General Assembly enacted a watershed general NPDES permit requirement for all so-called significant dischargers in Virginia's portion of the Chesapeake Bay watershed. This statute requires nutrient reductions and authorizes nutrient trading, all on an annual basis. Va. Code. § 62.1-44.19:14.C.1. (requiring the "annual mass load" limits in the general permit); *see also* Va. Code. § 62.1-44.19:18 (nutrient trading on an annual basis). Virginia's WWTPs are now in the second five-year permit cycle of the EPA-approved watershed general permit issued by the Virginia State Water Control Board pursuant to this statutory authority and consistent with 40 C.F.R. § 122.45(d)(2) and EPA's March 2, 2004 memorandum. *See* 9 Va. Admin. Code § 25-820-70 (General Permit for Total Nitrogen and Total Phosphorus Discharges and Nutrient Trading in the Chesapeake Watershed in Virginia; Authorization to Discharge Under the Virginia Pollutant Discharge Elimination System and the Virginia State Water Control Law). Pursuant to this statute and general permit, the Virginia Nutrient Credit Exchange Association annually updates and administers a state-approved nutrient credit trading-based compliance plan among its permittee members.<sup>9</sup> When Virginia adds concentration limits in addition to loading limits in WWTP permits, these limits must be expressed as annual averages. 9 Va. Admin. Code § 25-40-70.A. Significantly, to pay for nutrient removal technology at POTWs, localities receive partial state funding through the Virginia Water Quality Improvement Fund, which is based on

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<sup>9</sup> Va. Dep't Env'tl. Quality, VPDES Watershed General Permit for Nutrient Discharges to the Chesapeake Bay, <http://www.deq.state.va.us/Programs/Water/PermittingCompliance/PollutionDischargeElimination/NutrientTrading.aspx> (last visited Dec. 23, 2013).

annual nutrient reductions and performance standards comparable to permit limits. *See* Va. Code § 10.1-2131.C; Va. Dep’t Env’tl. Quality, Guidance Memo. No. 06-2012, at 4.<sup>10</sup> The state has invested nearly \$1 billion in this cost-sharing grant program, and a comparable investment is being made by localities and authorities.

Similarly, the State of Maryland adopted a Bay Restoration Fund in 2004 to fund the enhanced nutrient removal upgrades at the state’s 67 largest WWTPs to achieve design targets of annual average concentrations of 3 mg/l total nitrogen and 0.3 mg/l total phosphorus. Md. Code Ann., Environment §§ 9-1601(n), 9-1605.2. The state is investing well over \$1 billion in this grants programs. Maryland’s NPDES permits for these facilities also impose annual loading limits for nitrogen and phosphorus. Nearly half of Maryland’s 67 wastewater plants in the program have completed upgrades, with estimated reductions of approximately 250,000 lbs/yr phosphorus and 1,930,000 lbs/yr nitrogen. Md. Dep’t Env’t., Bay Restoration Fund Targeted Wastewater Treatment Plants (Sept. 2013).<sup>11</sup> The State of Maryland pays 100 percent of the nutrient-related upgrade costs at each WWTP. This program is at the core of Maryland’s strategy to implement the Chesapeake Bay TMDL.

The West Virginia Legislature has also created a program to fund approximately \$200 million for nutrient control technology for West Virginia’s WWTPs in the Chesapeake Bay watershed to meet annual loading limits. *See* W. Va. Code § 21-15A-17b.

Retroactively changing the annual design standard at the heart of these nutrient removal upgrades would be incredibly disruptive and costly. Most, if not all, of the dozens of WWTPs

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<sup>10</sup> Available at <http://www.deq.virginia.gov/Portals/0/DEQ/Water/ChesapeakeBay/ApplicationReviewProceduresWQIF.pdf>.

<sup>11</sup> Available at <http://www.mde.maryland.gov/programs/Water/BayRestorationFund/Documents/Web-BRF-WWTP%20Update%20for%20BayStat%20September%202013.pdf>.

that have completed these state-of-the-art or enhanced nutrient upgrades simply cannot meet daily nutrient permit limits for the reasons outlined above. Changing to daily permit limits at this late juncture—after the money has been spent, the concrete poured and the equipment installed—would be incredibly disruptive and wasteful.

## **2. Annual Nutrient Limits in Long Island Sound Program**

The Long Island Sound Study program (“LIS Program”) has been a nearly thirty-year effort to reduce hypoxia and other water quality problems in the Sound. Through the LIS Program, New York and Connecticut published a TMDL for nitrogen in 2000.<sup>12</sup> The LIS Program determined in the TMDL that nutrient allocations should be implemented on an annual basis:

[N]itrogen loadings throughout the year contribute to the pool of nitrogen available for uptake by phytoplankton. Hypoxia resulting from the ultimate decay of that phytoplankton is not sensitive to daily or short term nitrogen loadings. Instead, DO levels are a function of annual loading rates. As a result, the LIS TMDL is expressed as an allowable annual load of nitrogen.

*Id.* at 25.

As with the Chesapeake Bay Program, point source nutrient discharges in Long Island Sound have been substantially reduced through a program of annual permit limits and related nutrient removal facilities constructed at WWTPs. *See, e.g.*, Conn. Dep’t of Env’tl. Protection, General Permit for Nitrogen Discharges (Dec. 29, 2010) (setting progressive annual nitrogen discharge limits for WWTPs).<sup>13</sup> The LIS Program estimates that biological nutrient removal upgrades at public WWTPs alone accounted for a 35 million pound reduction in nitrogen

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<sup>12</sup> A Total Maximum Daily Load Analysis to Achieve Water Quality Standards for Dissolved Oxygen in Long Island Sound (Dec. 2000), *available at* <http://longislandsoundstudy.net/wp-content/uploads/2010/03/Tmdl.pdf>.

<sup>13</sup> *Available at* [http://www.ct.gov/deep/lib/deep/water/municipal\\_wastewater/2011\\_2015\\_nitrogen\\_gp.pdf](http://www.ct.gov/deep/lib/deep/water/municipal_wastewater/2011_2015_nitrogen_gp.pdf).

discharges in 2012. LIS Program, Biennial Report 2011–2012, at 6.<sup>14</sup> However, the Sound itself experiences wildly fluctuating conditions from year to year attributable to natural weather cycles. LIS Program, Sound Health 2012, at 3.<sup>15</sup> This affirms the decision in the TMDL to eschew daily (or for that matter, weekly, monthly or even seasonal average) nutrient discharge limits in favor of more appropriate annual limits. A decision here that daily loads are required to implement TMDL allocations would completely undermine the LIS Program.

### **3. Annual Limits in State Nutrient Control Programs**

*Amici's* members in other states have NPDES permits that implement nutrient TMDLs and which only impose annual average or other non-daily effluent limitations. Examples include members who discharge to the Tar-Pamlico and Neuse Rivers in North Carolina and the Catawba River in South Carolina. Similar to the Chesapeake Bay and Long Island Sounds examples discussed above, all of these nutrient control programs will be adversely affected by a requirement that permits must now impose daily limits.

### **F. DAILY MAXIMUM PERMIT LIMITS FOR NUTRIENTS WILL UNDERMINE WET WEATHER SEWER OVERFLOW CONTROL PROGRAMS**

*Amici's* members have invested billions of dollars upgrading their sewer systems and WWTPs to handle wet weather flows. These upgrades are designed to achieve average weekly, monthly, or, in many cases, annual limits, including annual frequencies of activation for combined sewer overflows pursuant to CWA § 402(q). Daily permit limits for POTWs will impose extraordinary costs and potentially technologically-infeasible upgrade requirements.

To elaborate briefly on the earlier discussion of variable operating conditions, daily limits are impracticable from a compliance standpoint because the volume of influent treated by

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<sup>14</sup> Available at [http://longislandsoundstudy.net/wp-content/uploads/2013/08/BR\\_lores\\_1213.pdf](http://longislandsoundstudy.net/wp-content/uploads/2013/08/BR_lores_1213.pdf).

<sup>15</sup> Available at [http://longislandsoundstudy.net/wp-content/uploads/2012/11/Sound\\_Health\\_2012\\_Report.pdf](http://longislandsoundstudy.net/wp-content/uploads/2012/11/Sound_Health_2012_Report.pdf).

utilities is highly variable depending largely on weather and other conditions. For example, the volume of water in combined sewer systems, which were constructed to convey both wastewater and stormwater, is largely a function of precipitation. Even in sanitary sewer systems, through inflow and infiltration, rainwater and groundwater enters the system during and after rain events. The downstream WWTP is typically designed and sized to process dry weather flows plus reasonable additional wet weather flow levels while meeting permit limits. If the WWTP must be designed to meet permit limits for nutrients each and every day no matter how much rainfall occurs, the capacity (and cost) of these systems would have to be greatly expanded. This is a key reason why EPA and the states have found monthly/weekly average effluent limit durations to be impracticable (too short) and, instead have imposed seasonal or annual limitations.

Furthermore, requiring that POTWs meet daily limits to comply with nutrient TMDLs would force POTWs to reduce wet weather flows that they treat, in many cases potentially resulting in more untreated sewage that is discharged into receiving waters. This very balancing calculation was a prominent aspect of EPA's 2008 renewal of the NPDES permit for the Blue Plains Advanced Wastewater Treatment Plant. *See* EPA, Final Fact Sheet: NPDES Permit Reissuance District of Columbia Water and Sewer Authority, at 14–15 (Aug. 31, 2010).<sup>16</sup>

Requiring daily limits in NPDES permits to implement daily wasteload allocations in TMDLs will undermine nutrient and wet weather control programs throughout the nation and bring to a halt ongoing planning, design, and construction activities. For this reason, review of the Petition should be denied.

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<sup>16</sup> Available at [http://www.epa.gov/reg3wapd/pdf/pdf\\_npdes/Wastewater/DC/DC0021199BluePlainsFactSheet.pdf](http://www.epa.gov/reg3wapd/pdf/pdf_npdes/Wastewater/DC/DC0021199BluePlainsFactSheet.pdf).

## V. CONCLUSION

For the foregoing reasons, *amici* respectfully request that this Board deny review of the Petition.

Respectfully submitted,

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### **STATEMENT OF COMPLIANCE WITH WORD LIMITATION**

I hereby certify that this Amicus Brief, including all relevant portions, contains fewer than 7,000 words.

/s/  
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**CERTIFICATE OF SERVICE**

I hereby certify that copies of the foregoing Amicus Brief were served by First Class

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