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September 24, 2009

Mr. Peter Silva

Assistant Administrator, Office of Water

U.S. Environmental Protection Agency

1200 Pennsylvania Avenue, NW (MC4101M)

Washington, DC 20460

Dear Mr. Silva:

Thank you again for meeting with members of NACWA's Executive Committee and beginning a dialogue on the many clean water challenges we will face together in the months and years ahead. As we mentioned during our meeting, nutrient over-enrichment is a top priority for the Association and we are very interested in working with your office to find a workable solution. As you know, your office is currently working to respond to the Petition for Rulemaking on Secondary Treatment Standards for Nutrient Removal submitted by the Natural Resources Defense Council (NRDC) on November 27, 2007. NACWA submitted a letter to EPA with its initial comments on the petition on February 29, 2008. Since that time, NACWA has continued to engage its members and to consider the legal and technical assertions in the NRDC petition. Recently, NACWA and EPA representatives met to discuss the key legal, technical and policy reasons that EPA should deny NRDC's petition and NACWA has made its members available to the Agency as technical resources.

The recent Inspector General report, *EPA Needs to Accelerate Adoption of Numeric Nutrient Water Quality Standards*, (Report No. 09-P-0223, August 26, 2009), suggests ways to focus the Agency's limited resources to improve the pace of the water quality-based programs that will be most effective at addressing nutrient pollution. NACWA continues to believe that selection of a one-size-fits-all technology-based approach to nutrient control, as suggested in the NRDC petition, will waste EPA and municipal resources and not address the root cause of the problem. Instead, renewed and reinvigorated efforts are needed to provide the states with tools and resources they need to work with key stakeholders to develop meaningful water quality standards that will drive the Clean Water Act's (CWA) water quality-based programs. Based on the technical and legal analysis NACWA has conducted over the past year, this letter provides a written summary of the reasons EPA should deny NRDC's petition.

NRDC has alleged that EPA has obligations to publish information and to establish new effluent limitations for nitrogen and phosphorus under the CWA secondary treatment provisions, and that EPA has failed to fulfill these obligations. NACWA strongly disagrees. NRDC's petition improperly seeks to have EPA impose, under the guise of the CWA's secondary treatment authority, uniform nutrient limits that require the use of advanced treatment technologies. NRDC's legal and technical arguments are erroneous and should be rejected for the following key reasons:

- The structure and legislative history of the CWA indicate that advanced treatment technologies such as nutrient removal are not included and were never meant to be included in the Act's secondary treatment provisions. Congress understood that secondary treatment technology was focused on biological removal of solids and oxygen-demanding material, and that advanced technologies beyond secondary treatment would be required for nutrient removal. Although Congress originally intended for EPA to consider nutrient removal requirements for Publically Owned Treatment Works (POTWs) on a case-by-case basis for utilities that received federal grants to fund these advanced treatment technologies, Congress never established a uniform advanced technology requirement for POTWs, and it repealed the case-by-case advanced technology requirements in 1981. Thus, nothing in the text, structure or legislative history of the CWA provides any authority for EPA to expand the definition of secondary treatment to include advanced treatment technologies.
- The CWA's secondary treatment provisions authorize EPA to establish effluent limits for POTWs based on levels of effluent reduction attainable by the use of secondary treatment technology, not based on the removal capabilities of advanced treatment technologies. NRDC overstates the scope of the CWA's secondary treatment requirements and thus ignores the limits Congress placed on this program. Most fundamentally, NRDC is mistaken that meaningful nutrient removal is attainable by the application of secondary treatment technologies. The reality is that nutrient removal technologies are additional to secondary treatment technologies and are designed to accomplish pollutant reductions that secondary treatment cannot achieve. The nutrient limits proffered by NRDC could only be met if POTWs added new biological and chemical treatment processes, at considerable cost, to existing secondary treatment facilities. Such advanced treatment is not "based upon" or attainable by secondary treatment. Therefore, NRDC is simply wrong that nutrient removal can be accomplished by, and therefore deemed to be part of, secondary treatment.
- A one-size-fits-all approach to nutrient control at POTWs is contrary to the CWA, as noted, and would impose costly technology upgrades at all POTWs without commensurate water quality benefits. By contrast, the CWA authorizes EPA's current case-by-case approach to nutrient reductions at POTWs pursuant to the statute's water-quality based programs. A realistic comparison of costs and benefits reveals that NRDC's proposals are not technically justified and ignore a key source of nutrient impairments, namely non-point sources. Imposing uniform nutrient controls on POTWs will not solve the water quality problems cited by NRDC. NRDC's dissatisfaction with the pace of the CWA's water quality-based requirements is an insufficient basis for overturning EPA's well-considered conclusion that technology-based standards to regulate nutrients are not appropriate under the CWA's secondary treatment authority. Moreover, the secondary treatment rule is a technology-based standard – not one based upon water quality.

Congress made this distinction clearly in 1972, and EPA has been faithful to Congress's intent.¹ NRDC's focus on nutrient water quality issues as a driver for expanding secondary treatment to include advanced nutrient removal technology, is, therefore, misplaced. EPA must reject the expensive and impractical one-size-fits-all approach proposed by NRDC.

- NRDC's arguments are not new and have been rejected by the one court that has interpreted the CWA's secondary treatment provisions. Furthermore, NRDC has not offered any new information that EPA has not already considered in determining that a case-by-case approach to nutrient reduction, rather than a uniform standard, is the most appropriate regulatory approach under the CWA.

The remainder of this letter discusses each of these points in further detail. Again, we want to work with you on this important issue and would be happy to discuss these points with you and your staff in more detail.

1. The structure and legislative history of the CWA indicate that advanced treatment technologies such as nutrient removal are not included and were never meant to be included in the Act's secondary treatment provisions.

CWA § 301 provides that effluent limitations for POTWs are to be "based upon secondary treatment as defined by the Administrator pursuant to section 304(d)(1)." Section 304(d)(1) directs the Administrator to "publish within sixty days after October 18, 1972 (and from time to time thereafter) information, in terms of amounts of constituents and chemical, physical, and biological characteristics of pollutants, on the degree of effluent reduction attainable through the application of secondary treatment." 33 U.S.C. § 1314(d)(1). The CWA does not define the term "secondary treatment." However, secondary treatment, in 1972 and today, has a well-understood and common technical meaning: it is the two-stage process of wastewater treatment used to convert dissolved and suspended pollutants into a form that can be removed, producing a highly treated effluent.²

The 1972 CWA amendments originally required POTWs to meet technology-based standards in two phases. In the first phase, POTWs were obligated to meet uniform secondary treatment standards by 1976 (a deadline later extended to 1977). In the second phase, POTWs would be required, on a case-by-case basis tied to federal grants, to implement advanced treatment, or best practicable waste treatment technology (BPWTT), by July 1, 1983.³ In 1981, Congress repealed the provisions calling for implementation of these Phase II technology

¹ S. Rep. 92-414, at 43-44 ("The application of Phase I technology to . . . publicly owned sewage treatment works is based upon secondary treatment. It is not based upon ambient water quality considerations."); 38 Fed. Reg. 22,297, 22,298 (Aug. 17, 1973) ("[T]he Act and its legislative history clearly show that the regulation is to be based on the capabilities of secondary treatment technology and not ambient water quality effects.").

² EPA's implementing regulations have long recognized that secondary treatment normally utilizes biological treatment processes, such as activated sludge or trickling filters, followed by settling in clarifiers, to remove approximately eighty-five percent of the biological oxygen demand (BOD) and suspended solids in wastewater.

³ Federal Water Pollution Control Act Amendments of 1972, Pub. L. No. 92-500, § 301(b), 86 Stat. 816, 845 (1972). CWA § 201(g)(2)(A) required POTWs seeking federal grants for construction to demonstrate that "alternative waste management techniques have been studied and evaluated and the works proposed for grant assistance will provide the application of best practicable waste treatment technology over the life of the works consistent with the purposes of this title."

standards.⁴ Thus, Congress long ago rejected the imposition of uniform technology standards for nutrients and made clear its intent that advanced treatment technology was not part of secondary treatment.

The legislative history to the 1972 Amendments reflects Congress's understanding that secondary treatment would not address nutrient removal, and that nutrient reductions would be achieved, if at all, through the implementation of the Phase II, or BPWTT, standards.⁵ Consistent with Congressional directives, EPA thereafter developed secondary treatment rules that primarily addressed the removal of total suspended sediments (TSS) and biological oxygen demand (BOD).⁶ While Congress indicated that the pollutants EPA could consider for effluent limitations as part of secondary treatment were not necessarily limited to BOD and TSS,⁷ it vested EPA with considerable discretion to decide which pollutants warranted regulation under the secondary treatment provisions. Moreover, Congress' statements regarding nutrient removal, *see* note 4, *supra*, indicate that Congress intended any nitrogen and phosphorus removal to occur in the Phase II BPWTT requirements, not as part of the secondary treatment regulations. This reflects the technical reality that secondary treatment technology does not result in meaningful nutrient reduction, and the fact that advanced treatment technologies, such as nutrient removal, were to be carefully evaluated by EPA on a case-by-case basis in order to justify the use of federal funds to pay for these expensive upgrades.

As noted above, in 1981 Congress repealed these advanced treatment provisions. At the time of the 1977 Amendments to the CWA, there was growing concern over the amount of time and money needed for municipalities to comply with the secondary treatment requirements. As a result, Congress established a national study commission to advise it on whether to maintain the Phase II BPWTT requirement, given the delays and funding issues associated with meeting the Phase I secondary treatment standards by the 1977 deadline. In 1981, based upon the recommendations of the study commission, Congress repealed the Phase II standards. The change to the statute was made out of concern over costs and the ability of POTWs to meet the standards.⁸ The federal construction grants program was itself phased out and replaced in the late 1980s by the current State Revolving Fund program.⁹ Thus, by the end of the 1980s, Congress had in effect limited the national technology-based effluent limits for POTWs to secondary treatment as reflected in EPA's rules at that time.¹⁰

⁴ Municipal Waste Treatment Construction Grant Amendments of 1981, Pub. L. No. 97-117, § 21(b), 95 Stat. 1623, 1623 (1981).

⁵ Report of the Committee on Public Works, H.Rep. 92-911, at 89 (Mar. 11, 1972) (advising that, in "defining [BPWTT] . . . consideration must be given to new and improved treatment techniques . . . ready for full scale application. . . includ[ing] . . . phosphorus and nitrogen removal."); Senate Public Works Committee Report, S. Rep. 92-414, at 24 (promoting alternative waste treatment methods through the § 201 grant program in part to address "the nutrient content of effluent *after* secondary treatment....")(emphasis added).

⁶ *See, e.g.*, H. Rep. 92-911, at 101 ("Secondary treatment as considered in the context of a publicly owned treatment works is generally concerned with suspended solids and biologically degradable, oxygen demanding materials (BOD).").

⁷ *Id.* at 108. ("The Committee intends that the term "secondary treatment" shall be utilized for the purposes of this section in its broadest context. The Committee does not mean secondary treatment to include only the treatment of suspended solids and BOB [sic].").

⁸ *See, e.g.*, Report of Senate Committee on Environment and Public Works, S. Rep. No. 97-204 at 17 (Oct. 7, 1981) (discussing the removal of the Phase II deadline for achieving BPWTT due to insufficient funding and the difficulties communities were having meeting even the secondary treatment requirements).

⁹ *Id.*; Water Quality Act of 1987, Pub. L. No. 100-4, §§ 1381-1387, 101 Stat. 7 (1987).

¹⁰ Although NRDC complains that EPA has not revised its secondary treatment rules since the 1980s, this legislative and rulemaking history provides a clear explanation for EPA's actions, namely, that Congress ratified the status quo and it would have been irrational for EPA to expend scarce Agency resources revisiting a rule that was working as Congress intended. That same conclusion holds true today, as well.

EPA's longstanding regulations and guidance echo the distinction Congress made between secondary treatment and advanced treatment capable of resulting in nutrient removal. In early regulations, EPA observed that secondary treatment does not effectively remove nutrients, and more recent guidance reiterates this fact.¹¹ EPA has consistently defined secondary treatment in terms of BOD, suspended solids, and pH.¹² Congress was aware of the scope of EPA's secondary treatment rule when it enacted the 1977 and 1981 amendments to the CWA.¹³ Yet, when it repealed the BPWTT provision in 1981, Congress did not amend the scope of secondary treatment in the CWA or otherwise indicate that the Agency should include nutrient removal or other forms of advanced treatment as part of the secondary treatment rules.

Instead, Congress has repeatedly narrowed the uniform technology obligations that the CWA imposes on POTWs. In 1977, it created a waiver to the secondary treatment requirement for direct ocean discharges from POTWs and allowed a time extension for POTWs to meet the secondary treatment standards in some instances.¹⁴ In 1981, Congress expanded the waiver for POTW discharges to oceans and repealed the Phase II BPWTT standard for POTWs.¹⁵ In each instance where Congress directed a narrowing of POTW obligations under secondary treatment, EPA responded by modifying its secondary requirements to account for factors such as cost, variable need based upon water quality impacts, energy usage, and technical feasibility.¹⁶ These changes to the original 1972 CWA secondary treatment requirements reflect Congress' recognition over time that one-size-fits-all technology-based solutions do not uniformly provide sufficient water quality benefits to justify their cost in all cases.

Thus, contrary to NRDC's suggestion that Congress intended the secondary treatment program to be technology-forcing like the effluent limitations program for industrial point sources, the legislative history summarized above demonstrates the opposite. Congress consistently placed limits on the nature and scope of secondary treatment requirements and, in addition to reducing the scope of these Phase I requirements, repealed altogether the Phase II or BPWTT requirement for EPA to consider advanced technology such as nutrient removal at POTWs.

¹¹ 48 Fed. Reg. 52273, 52272 (Nov. 16, 1983) (noting that "nutrients (*i.e.* phosphorus and NH₃) were not specified for inclusion, because secondary treatment, under normal conditions, does not effectively or consistently remove them"); EPA, *Primer for Municipal Wastewater Treatment Systems*, EPA 832-R-04-001 (Sept. 2004) at 17 ("Nitrogen in one form or another is present in municipal wastewater and is usually not removed by secondary treatment.").

¹² *E.g.*, 49 Fed. Reg. 36987, 36987 (noting that secondary treatment regulations define "secondary treatment" as attaining an effluent quality for BOD, suspended solids, and pH); 38 Fed. Reg. 22298, 22298 (Aug. 17, 1973) (promulgating the original secondary treatment regulations for BOD, pH, TSS, and fecal coliform). EPA removed the fecal coliform limit from the rule in 1976 citing concerns over the variable need for disinfection (*e.g.*, it was not needed on a uniform basis) and the unnecessary expenditure of energy and monetary resources that would result from a one-size-fits-all approach. 41 Fed. Reg. 30786, 30787 (July 26, 1976).

¹³ Report of the House Public Works and Transportation Committee, H.Rep. No. 95-139 at 16 (Mar. 29, 1977) ("EPA's definition of secondary treatment in regulations includes limitations on BOD, suspended solids, pH, and fecal coliform bacteria."); S. Rep. No. 97-204 at 17 (Oct. 7, 1981).

¹⁴ Pub. L. No. 95-217, (1977).

¹⁵ Pub. L. No. 97-117, §§ 21, 22 (1981).

¹⁶ In the 1977, 1984, 1985, and 1989 rule modifications, EPA relaxed the suspended solids treatment requirements for small treatment facilities, amended the regulations governing treatment equivalent to secondary treatment pursuant to section 304(d)(4), relaxed percent removal requirements for certain parameters out of concern that the existing requirements would prove overly costly and that technology did not exist to allow facilities to meet the requirements, and altered secondary treatment percent removal requirement during dry weather for treatment facilities served by separate sewers. See 42 Fed. Reg. 54,529, 54,664 (Oct. 7, 1977); 49 Fed. Reg. 36,986, 36,986 (Sept. 20, 1984); 50 Fed. Reg. 23,382, 23,382 (June 3, 1985); 54 Fed. Reg. 4,224 (Jan 27, 1989). These changes were all direct responses to Congress' narrowing of the uniform secondary treatment requirements over time.

In sum, when Congress enacted the secondary treatment provisions of the CWA in 1972, it considered nutrient removal to be an advanced treatment technology that would be pursued, if at all, on a case-by-case basis if cost-justified under the Phase II BPWTT provisions. Congress subsequently repealed the BPWTT provisions. Congress has clearly distinguished secondary treatment from advanced treatment technologies, and never authorized or intended any confusion between the two. As a result, the CWA provides no authority for EPA to consider nutrient removal – or any other advanced treatment technology – to be a part of secondary treatment. To do so would ignore the Congressional distinctions and decisions summarized above.

2. The CWA's secondary treatment provisions authorize EPA to establish effluent limits for POTWs based on levels of effluent reduction attainable by the use of secondary treatment technology, not based on the removal capabilities of advanced treatment technologies.

As noted in its February 29, 2008 letter, NACWA disputes the NRDC petition's statement that various technical advancements in wastewater treatment that relate to nutrient removal "clearly qualify" as secondary treatment. Many of these technologies constitute advanced and tertiary treatment, going well beyond both Congress's intent as expressed in the CWA provisions and legislative history discussed above, and longstanding EPA regulations defining the scope of secondary treatment.

Secondary treatment processes do not remove nutrients from wastewater, except for a small fraction of nitrogen and phosphorus required for biological growth. Additional processes, known as advanced treatment or tertiary treatment, are required for the removal of ammonia, nitrogen, and phosphorus. Contrary to the theme of NRDC's Petition, it is not possible to achieve significant reductions in nutrient loading by merely tweaking a secondary treatment system. Instead, the adoption of advanced treatment at a facility requires capital investments, modification to treatment processes, and increased inputs in terms of energy, chemicals, labor, and maintenance. As recently as 2008, EPA acknowledged the distinct nature of secondary treatment and nutrient removal, and the substantial costs involved in adding nutrient removal technology to secondary treatment.

[C]onventional secondary biological treatment processes do not remove the phosphorus and nitrogen to any substantial extent. Tertiary treatment can remove nitrogen and phosphorus through carefully designed chemical reactions that generate easily isolated products such as precipitates and gases, though it is considered a costly technology.

Advanced treatment technologies can be extensions of conventional secondary biological treatment to remove nitrogen and phosphorus. Biological treatment processes called biological nutrient removal (BNR) can also achieve nutrient reduction, removing both nitrogen and phosphorus. Most of the BNR processes involve modifications of suspended growth treatment systems so that the bacteria in these systems also convert nitrate nitrogen to inert nitrogen gas and trap phosphorus in the solids that are removed from the effluent.¹⁷

¹⁷ EPA, *Municipal Nutrient Removal Technologies Reference Document: Vol. 1*, EPA 832-R-08-006 (Sept. 2008) at I-2.

In short, secondary treatment addresses different pollutants and constitutes a different treatment process than nutrient removal. Advanced treatment processes such as nutrient removal are specifically designed to address pollution reductions that secondary treatment cannot achieve. Adding the types of nutrient reduction technology described in NRDC's petition would require major changes to publicly-owned utilities at great expense. To install the type of nutrient removal technology required to meet NRDC's preferred effluent limits for phosphorus and nitrogen, POTWs and their communities would be required to spend billions of dollars in new construction, operation, and maintenance costs over and above secondary treatment costs. Even then, there is no guarantee that the utilities would consistently achieve the proposed reductions. NACWA member utilities that have implemented advanced treatment systems for nutrient reduction report variability in treatment outcomes due to the complexity of the technology and a variety of external factors, including weather conditions and flow rates.

As noted above, the CWA directs that uniform technology-based effluent limits for POTWs must be based upon and attainable by secondary treatment technology. The nutrient limits proffered by NRDC could only be met if POTWs added new biological and chemical treatment processes – at considerable cost – to existing secondary treatment facilities. Such advanced treatment is not based upon or attainable by secondary treatment. Therefore, the CWA does not allow, and NRDC is simply wrong in asserting, that nutrient removal can be accomplished by, and therefore deemed to be part of, secondary treatment.

3. A one-size-fits-all approach to nutrient control at POTWs is contrary to the CWA, as noted, and would impose costly technology upgrades without commensurate water quality benefits. By contrast, the CWA authorizes EPA's current case-by-case approach to nutrient reductions at POTWs pursuant to the statute's water-quality based programs.

NRDC's technical discussion is also misguided, as it tries, on the one hand, to argue that nutrient removal technology is part of secondary treatment, while nevertheless acknowledging throughout the petition that such technology is a significant addition to secondary treatment. Although NRDC tries to downplay this difference by referring to such additional technology as "minor retrofits," "improvements to conventional biological treatment," and the like, such characterizations are misleading. This is because the type of nutrient removal technology that would be required to meet NRDC's preferred effluent limits for phosphorus and nitrogen would require POTWs and their communities to spend billions of dollars in new construction, operation and maintenance costs over and above secondary treatment costs. NRDC's proposed technology would not merely tweak secondary treatment; it would add an entirely new treatment process. In addition, NRDC's assessment of nutrient removal technology erroneously suggests that adding this technology at all POTWs is uniformly cost-effective. Because the costs and benefits of nutrient removal are highly dependent on site-specific factors, NRDC's generalizations about the costs and effectiveness of these new technologies are unconvincing.

In general, the costs of implementing nutrient reduction technology to meet the nitrogen and phosphorus limits suggested by NRDC are high.¹⁸ The addition of advanced treatment to secondary treatment facilities requires capital investments, modifications to existing treatment processes, additional energy, chemicals,

¹⁸ See also, Letter from NACWA to B. Grumbles (EPA) Feb. 29, 2008 at 3 (disputing the cost values assigned by NRDC and detailing the NACWA members' actual and estimated costs of nutrient removal technology).

maintenance, materials, and labor. Costs for new or retrofitted treatment facilities will be highly dependent upon existing infrastructure and the extent to which facility modifications would be required to meet nitrogen and phosphorus effluent limits. Beyond initial capital costs, advanced treatment increases operation and maintenance costs, and results in the generation of additional solids that must be managed in biosolids utilization or disposal programs. The management of the additional solids results in further increases to capital, operating, and disposal costs for wastewater treatment. Given the variability in these costs, it is difficult to accurately generalize, as NRDC has attempted, about the costs of modifications required for uniform nutrient removal. Instead, costs must be assessed on a site-by-site basis, as EPA currently does through its water quality standards program. Beyond the monetary costs that POTWs and their communities would be forced to bear under NRDC's proposal, a uniform secondary treatment standard will result in increased energy use, land consumption, and inputs, all of which have unintended environmental consequences, including an increase in the carbon footprint of wastewater treatment plants.¹⁹

Furthermore, the petition is silent on a critical issue -- namely, the fact that most of the national, widespread nutrient water quality problems NRDC complains of are caused by nonpoint sources (NPS). In ignoring the substantial contribution of NPS to nutrient impairments across the country, NRDC proposes a solution - extending technology-based nutrient controls to all POTWs on a uniform basis - that demonstrably will not solve these problems. By ignoring this critical element of nutrient water quality issues, NRDC's proposal significantly overstates the beneficial effects on water quality that implementation of its very expensive proposal could potentially accomplish. It also ignores non-point source nutrient reduction measures that are far more effective in addressing the nutrient problem in many water bodies and often at a lower cost. Thus, NRDC's approach places a high burden on communities that are among the smallest sources of nutrients to waterways while proposing nothing for the largest source of nutrient impairment. This is an irrational approach, and EPA should reject it.

While NRDC's petition understates the potential costs associated with a national nutrient standard, it vastly overstates the environmental benefits that can reasonably be expected from such a standard.²⁰ In most waterbodies, point source wastewater discharges represent only a small portion of the total nutrient loading to a watershed. According to EPA, most watersheds are impaired by a combination of point sources and nonpoint sources of pollution or are predominantly impaired by nonpoint sources.²¹ The variability of nutrient sources and loadings to different waters highlights the need for careful consideration of site-specific water quality conditions and the selection of localized management tools to protect and improve water quality. Imposing a nationally applicable, uniform effluent limitation for nitrogen and phosphorus on POTWs will at best have highly variable impacts on water quality because point source wastewater discharges are responsible for only a fraction of nutrient discharges in many watersheds. Even the imposition of strict controls on POTWs will have little impact on the water quality of the receiving waterbody if non-point sources are not addressed. In addition, the impact of nutrient loadings on a receiving waterbody is highly variable, and it depends upon the waterbody's hydrodynamics, assimilative capacity, and intended uses. In turn, the assimilative capacity depends upon the time of year, the depth of the water column, the flushing rate of the

¹⁹ See also, Letter from NACWA to B. Grumbles (EPA) Feb. 29, 2008 at 4 (detailing the unintended environmental costs associated with NRDC's proposal).

²⁰ E.g. NRDC Petition at 7 ("Protection of the nation's rivers, lakes, streams, and estuaries depends on technology-based requirement to minimize releases from known nutrient sources.").

²¹ EPA-Region 4, Total Maximum Daily Load Program (2001), available at http://www.p2ad.org/files_pdf/EPA_TMDL_Presentation.pdf.

water body, the sedimentation rate, and the form and type of nutrients. The location of the POTW's discharge point may also play a role. A uniformly applied standard cannot, by definition, consider this variability in potential benefits.

In contrast to NRDC's proposal, EPA's current approach imposes nutrient control requirements on individual POTWs where the water quality authorities of the CWA justify doing so. This is a rational and legally justifiable approach that provides local communities and permitting authorities the necessary flexibility to effectively address nutrient discharges in a cost-sensitive manner. NACWA is confident that, with a realistic comparison of costs and benefits, EPA will conclude, as it has previously, that nutrient controls are most effectively and efficiently imposed on a case-by-case basis under the water quality standards provisions of the CWA. EPA should reject NRDC's invitation to impose uniform effluent limits that are sure to result in exorbitant costs, but little water quality improvement, in many of the nation's waters.

4. NRDC's arguments are not new and have been rejected by the one court that has interpreted the CWA's secondary treatment provisions.

NRDC's effort to have EPA revisit the well-established secondary treatment regulatory program is not novel. Twice before, EPA has considered and rejected similar petitions to revise its secondary treatment regulations to include nutrient-driven effluent limits. EPA's rejection of one of these petitions was challenged in court and upheld by the Tenth Circuit Court of Appeals. *Maier v. EPA*, 114 F.3d 1032 (10th Cir. 1997). EPA denied a similar petition by the Chesapeake Bay Foundation in 2005, using similar reasoning to that upheld by the court in *Maier*.²² NRDC presents no new arguments, and EPA should reject NRDC's petition, just as it has with these similar petitions.

In *Maier*, several environmental organizations and individuals petitioned EPA to establish nutrient limits as part of the secondary treatment regulations. Similar to NRDC, the petitioners argued that new treatment technology made it "feasible and cost effective" to control nitrogenous biochemical oxygen demand (NOD) and, therefore, that EPA was required to revise its definition of secondary treatment to include new effluent limitations for NOD.²³ EPA denied the petition.

The Tenth Circuit's consideration of the CWA secondary treatment provisions yielded several important principles that definitively undermine NRDC's arguments:

- The court rejected the argument that the mere availability of a new technology for controlling a pollutant means that EPA must issue generally applicable effluent limitations to control that pollutant.²⁴ Thus, even if it were feasible to control nitrogen and phosphorus through secondary treatment (which as noted above, is not the case), the CWA would not require EPA to include such reductions in the definition of secondary treatment. Based on this reasoning, NRDC errs in its

²² Chesapeake Bay Foundation, Petition for Rulemaking (Dec. 1, 2003); *Decision on Petition for Rulemaking to Address Nutrient Pollution from Significant Point Sources in the Chesapeake Bay Watershed* (2005), available at <http://www.epa.gov/water/cbfpetition/petition.pdf> [hereinafter EPA Denial of CBF Petition]

²³ 114 F.3d at 1036.

²⁴ *Id.* at 1041-1042.

claim that EPA is required to address all pollutants that secondary treatment technology may be capable of reducing.

- Even if a pollutant can be reduced by the application of secondary treatment technology, EPA is not required to establish new effluent limitations for it.²⁵ “[T]he statute does not on its face require that the generally-applicable effluent limitations address all pollutants that might be reduced by secondary treatment.”²⁶ NRDC’s argument that EPA must issue uniform effluent limitations for nutrients merely because the technology to control nutrients exists fails under this holding.
- EPA may consider the variable effects of a pollutant on water quality in determining whether to set effluent limitations for all POTWs to control discharges of that pollutant.²⁷ NRDC’s argument that EPA should not consider the variable effects of nutrients on receiving waters because the reasoning applies equally to all pollutants, including those which are currently part of secondary treatment, fails under the reasoning of the Tenth Circuit in *Maier*. NRDC’s arguments also fail to recognize that Congress’ focus in the secondary treatment provisions on BOD and TSS was intended to set a national floor for these pollutants, regardless of water quality impacts, while the BPWTT consideration of advanced technology requirements would be case-by-case, taking into account water quality impacts as well as costs.
- The court found reasonable EPA’s approach to regulating nutrient discharges from POTWs on a case-by-case basis under the CWA’s water quality based programs. The court’s reasoning supports EPA’s long-standing determination that generally applicable effluent limitations for nutrients will lead to over-regulation in some areas where nutrients do not cause serious water quality impacts and under regulation in some areas where the impacts of nutrient loadings are serious.²⁸ The Tenth Circuit endorsed EPA’s variable impacts analysis by finding EPA acted properly in deciding not to impose effluent limitations for nutrients based in part on EPA’s concern that doing so would impose costly controls on certain POTWs with little benefit to the water quality in those areas.²⁹ EPA reasserted this position in its 2005 denial of the CBF petition, and this conclusion remains true today.

Similarly, in 2005, citing *Maier*, EPA denied a CBF petition to amend the secondary treatment regulations to establish a technology-based effluent limitation for nitrogen removal. EPA noted the essential holdings in *Maier* that are discussed above, and provided four specific reasons for its decision to deny the CBF petition. First, the impacts of nutrients on water quality varies based on the characteristics of the receiving waterbody, making it appropriate to evaluate limitations on POTW discharges of nitrogen on a case-by-case basis rather than to assign a uniform value.³⁰ Second, EPA pointed out that its programs were already regulating nutrient

²⁵ *Id.* at 1043.

²⁶ *Id.*

²⁷ *Id.* at 1044-45 (upholding EPA’s determination that a national technology standard for NOD was not warranted because NOD varies greatly in its effects on water quality).

²⁸ See, e.g., EPA Denial of CBF Petition at 25.

²⁹ See *Maier*, 114, F.3d at 1044.

³⁰ EPA Denial of CBF Petition at 26 (“Because the effect of any nutrients (including phosphorus as well as nitrogen compounds) on water quality varies greatly with the characteristics of the receiving water, the water quality-based approach described above will provide

discharges from POTWs on a case-by-case basis.³¹ Third, EPA determined that its limited resources should not be devoted to initiating a lengthy and controversial rulemaking to impose nutrient limits on POTWs.³² Finally, EPA stated that, even if it did institute rulemaking to impose a nationally applicable limit on nutrients, EPA would not set such a limit at 3 mg/L.³³ EPA concluded that technology was not currently available to achieve a limit of 3 mg/L on a uniform basis at all POTWs, and that, even if such technology were available, it would be extremely expensive.³⁴

All of the reasons upheld in *Maier* and articulated again by EPA in response to the subsequent CBF nutrients petition remain valid today. In addition, neither *Maier* nor EPA's response to the CBF petition clearly account for the statutory framework and legislative history summarized earlier in this letter. In responding to NRDC's present petition, EPA must take into account the statutory limits of the secondary treatment program in determining its course of action.

Finally, NRDC is incorrect that EPA's duty to publish information regarding secondary treatment is commensurate with a duty to impose effluent limitations based on secondary treatment technology. The CWA sets forth the requirement to publish information on the level of pollutant reduction attainable by secondary treatment separately from the requirement to establish effluent limitations based on secondary treatment. Moreover, as described above, nutrient removal is not a form of secondary treatment, so CWA § 304 creates no obligation to publish information about it. Finally, even if one assumed for the sake of argument that CWA § 304 applies to advanced treatment technologies such as nutrient removal, NRDC's allegations would fail. This is because EPA has published guidance on nutrient removal treatment capabilities at POTWs as recently as 2008. EPA, *Municipal Nutrient Removal Technologies Reference Document: Vol. 1*, EPA 832-R-08-006 (Sept. 2008). This guidance indicates that nutrient removal is attainable not through secondary treatment, but through advanced nutrient removal technologies. Indeed, the 2008 publication reaffirms EPA's long-standing evaluation that the degree of nitrogen and phosphorus removal attainable by secondary treatment is negligible. Even under a generous reading of the CWA, therefore, NRDC's duty to publish claim is, at best, moot.

In sum, NRDC has not presented any new information that would lead to any different conclusions than those made by EPA in response to the previous secondary treatment petitions described above. Furthermore, the arguments NRDC presents have been rejected twice by EPA and they run contrary to the Tenth Circuit Court of Appeal's analysis in *Maier*. In contrast, each of the reasons EPA provided to deny prior petitions remain valid today and support a determination to deny NRDC's petition.

(Continued ...)

a more well-tailored response to the water quality issues in the Bay watershed than would technology-based regulations that would be promulgated on a general, categorical basis (i.e., Bay-wide or even nationwide).").

³¹ *Id.* at 26-27.

³² *Id.* at 27.

³³ *Id.*

³⁴ *Id.* at 28-29.

Conclusion

For the reasons summarized in this letter, NACWA respectfully urges EPA to deny NRDC's petition to modify the secondary treatment regulations to include new, uniform limits for nitrogen and phosphorus. NRDC's arguments are both legally and technically flawed, would result in poor policy choices, and would do little to improve nutrient water impairments in individual watersheds impacted significantly in many cases primarily by non-point source pollution.

Utilities need to be part of the discussion on this issue and, as appropriate, part of the solution. NACWA looks forward to working with you on this and would be pleased to meet with you and your staff at your convenience to further discuss the points raised in this letter.

Sincerely

A handwritten signature in black ink, appearing to read "K Kirk". The "K" is large and stylized, followed by "Kirk" in a cursive script.

Ken Kirk
Executive Director