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April 21, 2010

Peter Silva  
Assistant Administrator of the Office of Water  
Environmental Protection Agency  
Ariel Rios Building  
1200 Pennsylvania Avenue, NW  
Mail Code: 4101M  
Washington, DC 20460

Dear Assistant Administrator Silva:

In November 2007, the Natural Resources Defense Council, the Environmental Law and Policy Center of the Midwest, the Sierra Club, the Waterkeeper Alliance, the Missouri Coalition for the Environment, Midwest Environmental Advocates, the Prairie Rivers Network, the Iowa Environmental Council, the Minnesota Center for Environmental Advocacy, American Rivers, and the Gulf Restoration Network joined to petition the Environmental Protection Agency (EPA) to publish information on the state of effluent treatment technology for publicly owned treatment works (POTWs) and to issue generally-applicable nitrogen and phosphorus removal requirements for wastewater treatment plants.<sup>1</sup>

In response to this petition, the National Association of Clean Water Agencies (NACWA) wrote to EPA on February 29, 2008 and again on September 24, 2009 objecting to the suggestion that EPA would mandate nutrient pollution control from POTWs. As we understand it, NACWA has three principal areas of concern: the fiscal and environmental impacts of adding nutrient removal capabilities to existing wastewater treatment plants; the fact that wastewater treatment facilities are responsible for only a portion of nutrient pollution; and NACWA's understanding of the Clean Water Act (CWA) and EPA precedent. This letter addresses each in turn.

- I. The potential benefits of generally-applicable nitrogen and phosphorus removal requirements for wastewater treatment plants are significant and the fiscal and environmental costs are manageable.

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<sup>1</sup> NRDC et al., Petition for Rulemaking Under the Clean Water Act: Secondary Treatment Standards for Nutrient Removal (Nov. 27, 2007) (hereinafter "Secondary Treatment Nutrient Petition").



Though NACWA recognizes the “potentially significant environmental issues caused by excess nutrient levels” and cites this problem as a top priority for the Association, NACWA spends much of its letter shirking responsibility for nutrient pollution. In particular, it argues that implementing nutrient removal technology at POTWs would be expensive and that EPA therefore should ignore the tools in the Clean Water Act to restrict sewage plants’ nitrogen and phosphorus discharges. In fact, cutting nutrient pollution from wastewater facilities is appropriate.

- A. The cost of implementing nutrient control technology is reasonable and can be defrayed in several ways.

The prior petition contains specific data regarding actual costs at facilities currently utilizing nutrient removal technologies as well as figures from studies which evaluated the projected costs of adopting nutrient removal technology at a cross section of waste treatment facilities. The supporting research showed nutrient removal can be cost effective. Unlike the reasonable estimated costs cited in the petition, NACWA projects astronomical costs to its members to implement nutrient reduction. NACWA does not provide any information on the methods by which these estimates were reached or regarding the communities and facilities which will allegedly incur these costs.

Recently, the State-EPA Nutrient Innovations Task Group released “An Urgent Call to Action,” an important report which focuses on the importance of nutrient pollution and identifies a host of tools to help address the pressing problem. The Task Group identified overhauling technology-based effluent limits – including the “secondary treatment” standards – as a major potential tool in the fight to curb nutrient pollution.

The Task Group report estimates that the cost to upgrade all POTWs nationwide to achieve 3 mg/L for nitrate and nitrite and 0.1 mg/L for phosphate would be approximately \$54 billion.<sup>2</sup> An EPA report released in 2009 estimated that upgrading Chesapeake Bay area facilities to achieve enhanced nutrient removal would cost an average of less than \$17 million per significant municipal facility.<sup>3</sup>

However, it is important to note that the groups’ petition did not request specific levels of control to be established as “secondary treatment” for nutrients. To the contrary, while we identified 3 mg/L total nitrogen and 0.1 mg/L total phosphorus as practicable (though representing the limits of technology at that time), we urged EPA to establish the requirement at the level of nutrient control that represented “secondary treatment.” We pointed out that the EPA Science Advisory Board had considered the benefits of requiring POTWs to achieve 3 mg/L total nitrogen and 0.3 mg/L total phosphorus using

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<sup>2</sup> U.S. EPA, An Urgent Call to Action: Report of the State-EPA Nutrient Innovations Task Group, at 14 available at <http://www.epa.gov/waterscience/criteria/nutrient/nitgreport.pdf> (last visited Apr. 14, 2010) (hereinafter Urgent Call).

<sup>3</sup> U.S. EPA, The Next Generation of Tools and Actions to Restore Water Quality in the Chesapeake Bay: A Revised Report Fulfilling Section 202a of Executive Order 13508, at 29 & 31 (Sept. 9, 2009) (stating that “[t]he total capital cost associated with those loading reductions could be as high as \$6.8 billion for significant municipal facilities,” and indicating that there are 402 significant municipal facilities in the Chesapeake Bay watershed).



current technology. We also argued that levels of 8 mg/L total nitrogen and 1.0 total phosphorus, averaged yearly, could be met even if “secondary treatment” were limited to biological treatment.

It is unclear what limits NACWA had in mind when it reported that costs to a single POTW could run as high as \$2.7 billion.<sup>4</sup> Indeed, as noted above, NACWA’s cost figures are largely unexplained and entirely unattributed, making a critical review of them impossible; we urge EPA to obtain the information that NACWA used to generate its estimates. Nevertheless, using the Task Group’s estimate as a benchmark and taking the fact that there are some 16,500 POTWs operating in the U.S.,<sup>5</sup> simple mathematics indicate that costs on the high end of NACWA’s estimates will be exceedingly rare, if they ever occur. In the face of ample data regarding the costs of implementing nutrient removal technology, NACWA has failed to show that nutrient removal is cost prohibitive.

There will, of course, be some added costs associated with improving existing technologies. However, these costs are not unlike the other costs routinely borne by POTWs and can be defrayed in a variety of ways.

First, and most importantly, increased federal funding may be available to help POTWs make the transition to better technology. In the recent economic recovery package, many environmental groups fought hard to ensure that Congress devoted significant federal resources to infrastructure improvements, and the final bill directed \$4 billion to the Clean Water State Revolving Fund (CWSRF), of which 20 percent is available for projects that include “environmentally innovative activities,” such as nutrient removal.<sup>6</sup> Similarly, with conservation community backing, the Obama administration pushed for and secured a substantial increase in the annual appropriation for the CWSRF; Congress passed a \$2.1 billion appropriation for the CWSRF for fiscal year 2010, an increase of approximately 200% from the level in fiscal years 2008 and 2009 (\$689.1 million).<sup>7</sup> The administration’s proposed fiscal year 2011 budget likewise invests significantly in clean water, and would incorporate the 20 percent set-aside for certain kinds of projects.<sup>8</sup> The State-EPA Task Group Report recommends providing economic incentives like grants and low interest loans for implementing these controls.

Second, because of ordinary population growth as well as the need to meet other environmental requirements, wastewater systems commonly need to expand or otherwise invest in modifications to treatment plants. Indeed, NACWA mentions that many

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<sup>4</sup> Letter from Ken Kirk, Executive Director, NACWA, to Benjamin Grumbles, Assistant Administrator for Water, U.S. EPA, at 3 (Feb. 29, 2008) (hereinafter “NACWA 2/29/08 Letter”).

<sup>5</sup> Urgent Call at 14.

<sup>6</sup> American Recovery and Reinvestment Act of 2009, Pub. L. 111-5, 111<sup>th</sup> Cong., 1<sup>st</sup> Sess. 123 Stat. 115, 169 (Feb. 17, 2009).

<sup>7</sup> Compare H. R. 2996, 111<sup>th</sup> Cong., 1<sup>st</sup> Sess. (FY 2010 Interior, Environment & Related Agencies Appropriations) with H. R. 1105, 111<sup>th</sup> Cong., 1<sup>st</sup> Sess. (FY 2009 Omnibus Appropriations).

<sup>8</sup> See Budget of the United States Government, Fiscal Year 2011, Appendix, at 1133 (Feb. 1, 2010) (section on Environmental Protection Agency), available at <http://www.whitehouse.gov/omb/budget/fy2011/assets/epa.pdf>.



facilities are currently upgrading their systems as a result of decaying infrastructure or in order to comply with consent decrees. An expansion or upgrade is an ideal time to integrate improved technologies. If a plant is in need of upgrades for conventional treatment, it may be more economical to include nutrient removal along with the expansion or upgrade.<sup>9</sup>

Third, as one study showed, a significant percentage of plants studied could implement effective and inexpensive “temporary modifications” which have a projected life of five to fifteen years. These modifications would solve the nutrient problem until expansion is needed.<sup>10</sup> Our petition provides analysis of several existing technologies that control the nutrient problem. The EPA and facilities can decide how to best employ which technology in a cost effective manner.

- B. The environmental impact of nutrient pollution is of greater concern than the environmental impact of implementing controls.

NACWA also suggests that it is concerned that upgrading POTWs will have adverse environmental impacts, specifically increased energy use, land consumption, and inputs, which NACWA asserts will have unintended environmental consequences, including an increase in the carbon footprint of wastewater treatment plants.<sup>11</sup> Although our organizations obviously believe that any project’s environmental impacts should be carefully considered, NACWA’s complaint is overstated. Nutrient pollution threatens public health, the economy, and the ecological integrity of numerous aquatic systems; the manageable environmental consequences of implementing control technology do not justify allowing the wastewater industry to shirk its obligation to address nutrient pollution.

In many instances, implementing nutrient removal involves only minor retrofits which would have minimal, if any, environmental impact. For larger projects, there are ways to minimize the environmental impact. Upgrading equipment could be made part of an effort to make the POTW more energy efficient.<sup>12</sup> In addition to environmental benefits, energy efficiency can also lead to significant cost savings. For example, the East Bay Municipal Utility District, a San Francisco area POTW serving approximately 600,000 people, instituted a comprehensive energy management program that included, “energy demand reduction, on-site energy generation, and modifications to the way electricity was purchased.”<sup>13</sup> The result was an estimated annual savings of \$2,796,000.<sup>14</sup> In New York state, the Onondaga County Department of Water Environment Protection

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<sup>9</sup> See, Randall et al., Final Report: Evaluation of Wastewater Treatment Plants for BNR Retrofits Using Advances in Technology, available at [http://www.chesapeakebay.net/content/publications/cbp\\_13002.pdf](http://www.chesapeakebay.net/content/publications/cbp_13002.pdf) (May 1999) (last accessed Apr. 15, 2010).

<sup>10</sup> *Id.*

<sup>11</sup> NACWA 2/29/08 Letter at 4.

<sup>12</sup> See U.S. EPA, Wastewater Management Fact Sheet: Energy Conservation available at [http://www.epa.gov/OWM/mtb/energycon\\_fasht\\_final.pdf](http://www.epa.gov/OWM/mtb/energycon_fasht_final.pdf) (Jul. 2006) (last accessed Apr. 15, 2010) (detailing energy and cost saving strategies for POTWs).

<sup>13</sup> *Id.* at 2.

<sup>14</sup> *Id.* at 3 (citing California Energy Commission, EBMUD Case Study, 2003.).



estimated that retrofitting variable frequency drives<sup>15</sup> on the activated sludge pump motors, along with reducing aeration basin blowing and improving the efficiency of pumps saves them over \$200,000 a year.<sup>16</sup>

Additionally, utilities can help implement green infrastructure and water efficiency projects to help reduce flows, improving water quality and reducing the amount of wastewater to be treated (and associated costs and environmental consequences).<sup>17</sup>

Methane capture is another potential way that POTWs can reduce their environmental impact while controlling costs. The wastewater treatment industry is responsible for three percent of the total US consumption of energy every year.<sup>18</sup> For facilities using anaerobic digestion, the methane produced can be converted from pollution into power. There are over a thousand POTWs that utilize anaerobic digestion in treating wastewater. This process produces a biogas that is approximately 60% methane and 40% carbon dioxide.<sup>19</sup> The methane created by these facilities can be captured and used for heat and power at the facility or even sold as natural gas to a third party.<sup>20</sup> According to EPA, a POTW could produce electricity for as little as \$0.038 per kilowatt hour, less than the average national electricity rate.<sup>21</sup> In 2000, Point Loma Wastewater Treatment Plant in California saved \$3 million in energy costs by converting biogas to energy. They even sold an additional \$1.4 million of power to the electrical grid.<sup>22</sup> Unfortunately, of the POTWs that use anaerobic digestion and are large enough to make biogas capture economically feasible, only 106, or 19 percent, actually do so.<sup>23</sup>

Finally, one cannot overstate the importance of addressing nutrient pollution. As EPA observed, “[n]utrient pollution, especially from nitrogen and phosphorus, has consistently ranked as one of the top causes of degradation in some U.S. waters for more than a decade. Excess nitrogen and phosphorus lead to significant water quality problems

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<sup>15</sup> A variable frequency drive is “an electronic controller that adjusts the speed of an electric motor by modulating the power being delivered.” *Id.*

<sup>16</sup> *Id.*

<sup>17</sup> U.S. EPA, Managing Wet Weather with Green Infrastructure, at [http://cfpub.epa.gov/npdes/home.cfm?program\\_id=298](http://cfpub.epa.gov/npdes/home.cfm?program_id=298) (last accessed Apr. 15, 2010) (stating “Green infrastructure is an approach to wet weather management that is cost-effective, sustainable, and environmentally friendly.”).

<sup>18</sup> EIA, Energy Information Administration, Emissions of Greenhouse Gases Report at <http://www.eia.doe.gov/oiaf/1605/ggrpt/> (last accessed Apr. 15, 2010).

<sup>19</sup> U.S. EPA, Final Report, King County Fuel Cell Demonstration Project (Apr. 2009) at 1-1 available at <http://your.kingcounty.gov/dnrp/library/wastewater/energy/FuelCell/0904FuelCellReport.pdf> (last accessed Apr. 15, 2010).

<sup>20</sup> *Id.*

<sup>21</sup> U.S. EPA, Opportunities for and Benefits of Combined Heat and Power at Wastewater Treatment Facilities (2007) at 11 available at [www.epa.gov/chp/documents/wwtf\\_opportunities.pdf](http://www.epa.gov/chp/documents/wwtf_opportunities.pdf) (last accessed Apr. 15, 2010).

<sup>22</sup> Federal Energy Management Program, Wastewater Treatment Gas to Energy for Federal Facilities available at [http://www1.eere.energy.gov/femp/pdfs/bamf\\_wastewater.pdf](http://www1.eere.energy.gov/femp/pdfs/bamf_wastewater.pdf) at 2-3 (last accessed Apr. 15, 2010).

<sup>23</sup> U.S. EPA, Opportunities for and Benefits of Combined Heat and Power at Wastewater Treatment Facilities (2007) at 3.



including harmful algal blooms, hypoxia and declines in wildlife and wildlife habitat. Excesses have also been linked to higher amounts of chemicals that make people sick.”<sup>24</sup>

The multiple problems caused by nutrient pollution have real economic impacts as well. Bottled water purchases during “taste and odor episodes” associated with algal blooms amount to an estimated \$942 million per year.<sup>25</sup> Algal blooms cause commercial fishery losses of approximately \$31.3 million.<sup>26</sup> Lake closures due to eutrophication cause an annual loss of \$1.4 billion in fishing and boating trip-related revenue.<sup>27</sup> Property values are affected as well. As reported in the State-EPA Task Group Report, “Estimated lake property value loss can be as much as \$2.8 billion annually because of nutrient enrichment.”<sup>28</sup> Lastly, the cost to clean nutrient-polluted waters is astounding. Approximately \$10 billion has been spent on the restoration of the Chesapeake Bay, and an estimated \$28 billion is still needed to complete the work.<sup>29</sup> Admittedly, nutrients are not the only source of pollution to Chesapeake Bay, but they are a major contributor. Forty percent of the Bay’s area, approximately 1,792 square miles, is hypoxic.

II. POTWs are a significant source of nutrient pollution and relying exclusively on water quality-based controls is neither effective nor appropriate.

NACWA downplays the impact of reducing nutrient pollution from POTWs, because of their relative contribution of nutrient pollution in many water bodies. NACWA cites to an EPA Region 4 document to argue that POTW regulation will not control the problem of nutrient pollution because nonpoint sources contribute to the problem as well.<sup>30</sup> NACWA does not suggest any way that it or EPA will be able to do more to control nonpoint pollution in the immediate future.

In any case, although Petitioners wholeheartedly agree that much more needs to be done to control nonpoint sources, the fact that nutrient pollution comes from several sources is no reason not to address the substantial nutrient pollution contributed by POTWs.

NACWA’s suggestion that just because many water bodies are impaired primarily or exclusively by non-point pollution justifies ignoring POTW pollution is incorrect. Indeed, the same document NACWA cites to support this argument indicates that point sources, in whole or in part, account for 57 percent of all sources of impairment, suggesting that failing to control such sources would be wholly irresponsible.<sup>31</sup> Looking more closely at nutrient pollution, NACWA does not – and could not – claim that

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<sup>24</sup> U.S. EPA, Water Quality Criteria for Nitrogen and Phosphorus Pollution at <http://www.epa.gov/waterscience/criteria/nutrient/> (last accessed Apr. 15, 2010).

<sup>25</sup> Urgent Call at 5 (Figures in 2008 dollars).

<sup>26</sup> *Id.* at 11.

<sup>27</sup> *Id.* at 9 (citing, Dodds, W.K., et al, Eutrophication of U.S. freshwaters: analysis of potential economic damages, *Environmental Science and Technology* 43(1):12–19 (2009) at 15).

<sup>28</sup> *Id.*

<sup>29</sup> *Id.* at 32.

<sup>30</sup> EPA-Region 4, Total Maximum Daily Load Program (2001) *available at* [http://p2ad.org/files\\_pdf/EPA\\_TMDL\\_Presentation.pdf](http://p2ad.org/files_pdf/EPA_TMDL_Presentation.pdf) (last accessed Apr. 15, 2010).

<sup>31</sup> *Id.*



POTWs are not contributing to nutrient loading. Nutrient pollution from POTWs is a very real and substantial portion of the problem and, in certain watersheds, addressing their contribution can make a marked difference in pollution. For instance, the State-EPA Task Group Report highlights research indicating that improvements to wastewater treatment plants reversed the trend of increasing nitrogen pollution and decreasing submerged aquatic vegetation in Tampa Bay and Sarasota Bay.<sup>32</sup>

NACWA's response to these facts appears to be that one of its members should only need to adopt nutrient controls when there is no other choice, and a POTW's discharge is creating problems for a water body after considering "the waterbody's hydrodynamics, assimilative capacity, and intended uses. In turn, assimilative capacity depends on the time of year, the depth of the water column, the flushing rate of the water body, the sedimentation rate, and the form and type of nutrients," as well as possibly "[t]he location of the POTW's discharge point. . . ."<sup>33</sup>

In other words, NACWA argues that EPA should ignore the technology-based controls that have been responsible for much of the Clean Water Act's success and instead rely entirely on water quality standards to address nutrient pollution. As discussed in our petition and in further detail below, however, this response is flawed; for one, addressing nutrient pollution from POTWs on a case-by-case basis has failed -- and likely will continue to fail -- to achieve improvements in water quality, and furthermore the Act's technology-based approach is appropriate in order to prevent unnecessary pollution and to ensure a level playing field for dischargers, regardless of the particular location of their pollution.

Our petition described the failure of states to adopt and implement numeric nutrient standards and to establish discharge limits in permits based on applicable narrative standards.<sup>34</sup> Similarly, in petitioning EPA to establish numeric standards and total maximum daily loads for nutrient pollution where states had failed to do so, several Mississippi River basin organizations and national groups demonstrated that, because of the absence of numeric standards, states commonly did not list certain kinds of water bodies as impaired for nutrients and rarely imposed nutrient limits in NPDES permits.<sup>35</sup>

EPA's own internal watchdog, the Office of Inspector General (OIG), similarly found that states and EPA had failed to make needed progress in establishing numeric nutrient standards:

In 1998, EPA stated that a critical need existed for improved water quality standards, given the number of waters that were impaired from nutrients. In the

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<sup>32</sup> Urgent Call at 11.

<sup>33</sup> Letter from Ken Kirk, Executive Director, NACWA, to Peter Silva, Assistant Administrator for Water, U.S. EPA, at 8-9 (Sept. 24, 2009) (hereinafter "NACWA 9/24/09 Letter").

<sup>34</sup> Secondary Treatment Nutrient Petition at 5-7.

<sup>35</sup> Minnesota Center for Environmental Advocacy et al., Petition for Rulemaking Under the Clean Water Act: Numeric Water Quality Standards for Nitrogen and Phosphorus and TMDLs for the Mississippi River and the Gulf of Mexico at 55-69 (July 30, 2008), available at <http://www.elpc.org/documents/NutrientPetitionFINAL.pdf> (last accessed Apr. 15, 2010).



11 years since EPA issued its strategy, half the States still had no numeric nutrient standards. States have not been motivated to create these standards because implementing them is costly and often unpopular with various constituencies. EPA has not held the States accountable to committed milestones. The current approach does not assure that States will develop standards that provide adequate protection for downstream waters.<sup>36</sup>

In the Mississippi basin, the news is worse. Of the ten states that contributed the most nitrogen to the Gulf of Mexico, only one -- Tennessee -- had any kind of numeric standard, and seven of the ten states responsible for the most phosphorus delivery to the Gulf had no numeric standards.<sup>37</sup> Because numeric water quality standards for nutrients are largely absent, NACWA's suggestion that nutrient pollution from POTWs be based on water quality standards is essentially a dodge.

In contrast to an exclusively water quality-based approach, the Act's traditional use of both water quality standards and technology standards makes sense for POTWs as well. The State-EPA Task Group Report identified five tools having "the most promise to reduce nutrient loadings and therefore judged to have the highest overall effectiveness."<sup>38</sup> The list included establishing "technology treatment requirements for nutrients and thereby establish[ing] technology based limits for NPDES point sources that discharge nutrients to water-**update secondary treatment requirements.**"<sup>39</sup> Contrary to NACWA's assertions, regulating point sources, and more particularly, updating secondary treatment standards, will have a great effect on nutrient reduction and water quality.

The case by case analysis suggested by NACWA is not effective in addressing the problem of nutrient pollution. National discharge standards are needed so that a state can demand rigorous environmental protection without jeopardizing economic activity which might shift to a state with less rigorous standards.<sup>40</sup> Though some jurisdictions have achieved better nutrient protection through consent decrees and litigation, this approach is too piecemeal to be sufficiently effective. Generally-applicable nitrogen and phosphorus removal requirements are needed to appropriately address the problem.

Finally, NACWA's slogan that EPA should not adopt a "one size fits all" approach bears no relevance to our petition. Petitioners have merely requested that the minimum technological standards adopted by Congress be updated as Congress itself anticipated they would be. Unfortunately, as the recently proposed nitrogen and phosphorus water quality standards for Florida make still more clear, steps to control nutrient pollution

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<sup>36</sup> U.S. EPA, Office of Inspector General, EPA Needs to Accelerate Adoption of Numeric Nutrient Water Quality Standards, Report No. 09-P-0223 (Aug. 26, 2009) (introductory section titled "At A Glance") available at <http://www.epa.gov/oig/reports/2009/20090826-09-P-0223.pdf> (last accessed Apr. 15, 2010).

<sup>37</sup> *Id.* at 15.

<sup>38</sup> Urgent Call at C-6.

<sup>39</sup> *Id.* (emphasis added). The list also included federally promulgating numeric nutrient water quality criteria, green labeling, banning detergent phosphate, and federal legislation requiring nonpoint source regulation. *Id.*

<sup>40</sup> *Id.* at 33.



going well beyond the secondary treatment limits Petitioners have proposed will also be necessary in many cases.

- III. The Clean Water Act gives the EPA the authority to define secondary treatment and mandates that EPA publish information on the degree of effluent reduction attainable through the application of secondary treatment.

In its February 29, 2008 letter, NACWA conceded that EPA has discretion to include nutrient removal in its definition of secondary treatment.<sup>41</sup> However, NACWA's second letter argues that CWA and EPA precedent preclude the inclusion of nutrient removal in the definition of secondary treatment.<sup>42</sup> The EPA and the courts have never construed EPA's authority to be so narrow, and in fact, confirm EPA's discretion to define secondary treatment.

A. The Clean Water Act

The CWA regulates POTWs separately from other point sources, but the statutory language does not constrain EPA from requiring POTWs to address significant constituents in their discharge, even if such pollutants had not historically been limited. The statutory term "secondary treatment" is never defined. Instead, the CWA leaves to the Administrator of the EPA the task of deciding what constitutes secondary treatment. The exact provision of the CWA reads as follows: "In order to carry out the objective of this chapter there shall be achieved-- for publicly owned treatment works...effluent limitations based upon secondary treatment as defined by the Administrator pursuant to section 1314 (d)(1) of this title."<sup>43</sup> Section 1314 (d)(1) then directs the Administrator to consult with stakeholders and publish her determination of what pollutants can be treated through secondary treatment.<sup>44</sup>

NACWA's argument that Congress intended that the technological requirements applicable to POTWs (which are now more than a quarter-century old) be frozen forever as the status quo<sup>45</sup> ignores the plain language of the law. The CWA - as enacted in 1972 and as it stands today - states that, after establishing its original definition of "secondary treatment," EPA is "from time to time" thereafter to reconsider its definition. Moreover, NACWA's tortured reading of the legislative history of the 1972 CWA and the 1981 amendments to the Act does not begin to show that Congress intended that the definition

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<sup>41</sup> NACWA 2/29/08 Letter at 2 (stating, "Furthermore, NACWA does not believe the petition sets forth sufficient legal basis or technological facts to justify EPA using it (*sic*) discretion under the CWA to redefine secondary treatment to include national nutrient removal.").

<sup>42</sup> NACWA 9/24/09 Letter at 6 (stating in part, "[T]he CWA provides no authority for EPA to consider nutrient removal[.]").

<sup>43</sup> 33 U.S.C. § 1311(b)(1)(B).

<sup>44</sup> 33 U.S.C. § 1314(d)(1) ("The Administrator, after consultation with appropriate Federal and State agencies and other interested persons, shall 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.").

<sup>45</sup> NACWA 9/24/09 Letter at 4.



of secondary treatment should not be extended by EPA to include economically practicable nutrient removal if technological improvements made that reasonable.

NACWA acknowledges “that Congress indicated that the pollutants that EPA could consider for effluent limitations as part of secondary treatment were not necessarily limited to BOD and TSS.”<sup>46</sup> NACWA then argues, using a number of quotes from legislative history regarding “best practicable waste treatment technology” (BPWTT) and EPA regulations, that “secondary treatment” does not include nutrient removal. But none of these quotes actually says that “secondary treatment” does not include some level of nutrient removal and the legislative history cannot reasonably be read in that manner given the undeniable fact that even the filtering, settling, activated sludge and trickling filter processes that NACWA agrees were part of “secondary treatment” as practiced in 1972 actually did and do remove a considerable amount of nutrient pollution. The real question then is whether improvements to technology designed to enhance nutrient removal above that typically achieved in 1972 may be required. The answer to that question is clearly “yes.” The language of the Act makes clear that improvements to the definition of “secondary treatment” were explicitly contemplated.

It bears emphasis that Petitioners are not asking EPA to establish discharge limits for nutrients under the “best practicable” standard, but rather that the agency update its “secondary treatment” definition to reflect the capacity of POTWs to remove nutrients. As EPA is well aware, nutrient removal to levels far below those levels suggested in the Petition are practicable. Further, NACWA’s complaint that the improvements to secondary treatment that Petitioners request will cost significant amounts of money for some dischargers,<sup>47</sup> is not a valid objection to improving the minimum technological standards for POTWs. Congress knew full well in 1972 and 1981 that reaching “secondary treatment” had and would cost a lot of money for some dischargers, yet it enacted and left in place the language requiring EPA to update the minimum performance required by “secondary treatment” and did not limit EPA’s analysis to specified pollutants.

#### B. *Maier v. EPA* and EPA’s Chesapeake Bay Decision

NACWA relies heavily on the Tenth Circuit’s decision in *Maier v. EPA*, 114 F.3d 1032 (10th Cir. 1997) as well as the EPA’s rejection of the Chesapeake Bay Foundation’s (CBF) petition asking EPA to address nutrient pollution in the Chesapeake Bay Watershed.<sup>48</sup> Even presuming these decisions were correct (a proposition Petitioners do not accept), neither the Tenth Circuit nor EPA stated that EPA lacks the discretion to define “secondary treatment” in a way that includes nutrient control.<sup>49</sup>

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<sup>46</sup> *Id.*

<sup>47</sup> *Id.* at 7.

<sup>48</sup> U.S. EPA, Decision on Petition for Rulemaking To Address Nutrient Pollution From Significant Point Sources in the Chesapeake Bay Watershed, (June 13, 2005), *available at* <http://www.epa.gov/ow/cbfpetition/petition.pdf> (last accessed Apr. 15, 2010).

<sup>49</sup> Ultimately, NACWA, as it must, acknowledges that *Maier* and EPA’s action on the CBF petition both allow the inclusion of nutrients in the secondary treatment requirements. *See* NACWA 9/24/09 Letter at 10-11 (summarizing *Maier* as holding “[e]ven if a pollutant can be reduced by the application of secondary



The *Maier* court explains that “[a]side from sections 1311 and 1314, the CWA does not further delimit ‘secondary treatment,’ or specifically constrain the Administrator in promulgating generally-applicable effluent limitations for POTWs.”<sup>50</sup> The court then concludes: “The statute plainly delegates to the EPA authority to define secondary treatment, and to promulgate generally-applicable regulations based on its definition.”<sup>51</sup>

The *Maier* court even went so far as to say that nutrients *could* be encompassed within “secondary treatment,” though the court found that EPA did not overstep its authority in finding that nutrients were not required to be limited by the secondary treatment regulation.<sup>52</sup> Instead, the court ruled that the “secondary treatment” provisions permit EPA some discretion to regulate particular pollutants: “As a matter of statutory delegation and practical necessity, the EPA exercises its expertise to determine if technology ought to form the basis of the ‘secondary treatment’ defined under section 1314(d)(1).”<sup>53</sup> No matter what one thinks of this ruling (again, Petitioners disagree with the holding), it does not preclude EPA from addressing nutrients.

Similarly, EPA’s action in denying the CBF petition seeking improved controls for nutrients from POTWs in the Chesapeake watershed does not amount to a disclaimer of the agency’s authority to address nutrient pollution. Rather, the agency gave a number of reasons – some specific to the Chesapeake watershed – it was not choosing to do so at that time.<sup>54</sup>

Not only do these prior decisions permit EPA to control nutrients from POTWs, but the reasons EPA put forward *not* to do so have weakened over time. The regulatory landscape of 1997 when the *Maier* decision was handed down, and even more recently when EPA denied CBF’s petition, has changed. For one, as Petitioners previously showed, and as this letter further reinforces, exclusively relying on water quality-based regulation of POTWs’ nutrient pollution is irrational in light of the failure of states and EPA to put in place a robust set of numeric nutrient water quality standards. In addition, key pollution control officials (including a number from EPA) are now seriously considering addressing nutrient pollution through the “secondary treatment” regulation. In the State-EPA Task Group Report, under “Examples of Innovative Tools Applied to

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treatment technology, *EPA is not required to establish new effluent limitations for it*” (emphasis added) and noting that EPA’s response to CBF conducted some analysis of the effect of including nutrients in the secondary treatment requirements). However, NACWA then attempts to extend beyond *Maier* and the agency’s prior action based on its own selective reading of the law and its history, claiming that “neither *Maier* nor EPA’s response to the CBF petition clearly account for the statutory framework and legislative history. . . . *Id.* at 11; *see also id.* (“EPA must take into account the statutory limits of the secondary treatment program”).

<sup>50</sup> *Maier v. U.S. EPA*, 114 F.3d 1032, 1041 (10th Cir. 1997) *cert. denied*, 118 S. Ct. 599.

<sup>51</sup> *Id.*

<sup>52</sup> *Id.* at 1042 (“Although these descriptions suggest that NOD and nutrients fall within a general understanding of secondary treatment, they also demonstrate ‘secondary treatment’ has a broad connotation.”).

<sup>53</sup> *Id.*

<sup>54</sup> *See generally* U.S. EPA, Decision on Petition for Rulemaking to Address Nutrient Pollution from Significant Point Sources in the Chesapeake Bay Watershed at 26-30 (June 13, 2005).



Sources of Nutrients: Municipal Wastewater Treatment,” the Report suggests that EPA “consider redefining secondary treatment requirement for wastewater treatment plants to include nitrogen and phosphorus by adding them to the list of pollutants that require technology-based effluent limits.”<sup>55</sup> As noted above, the report also identifies changing EPA’s secondary treatment requirements as one of the five most promising tools for reducing nutrient pollution.

The factual predicates upon which the EPA based its prior decisions to refuse to address nutrient pollution from POTWs are no longer valid. Where “a significant factual predicate of a prior decision on the subject ... has been removed,” an agency may be forced to institute rulemaking procedures.<sup>56</sup> EPA’s reasoning was predicated on the premise that nutrients could be controlled on a case by case basis through permitting. EPA and the states have recognized that this is not the case. Nutrient pollution continues to cause severe damage to waterways and EPA’s current method of regulation fails to adequately address the problem:

Nationally, nutrient pollution is one of the top causes of water quality impairment; for those waters assessed, it is directly linked to 20% of impaired river and stream miles, 22% of impaired lake acres and 8% of impaired bay and estuarine square miles. Nutrients are also indirectly linked to additional listed impairments related to low dissolved oxygen, impaired habitat, algal growth and noxious aquatic plants. These indirect links to impairments result in an additional 31% of impaired river and stream miles, 30% of impaired lake acres, and 50% of impaired bay and estuarine square miles.<sup>57</sup>

In light of the State-EPA Task Group Report’s findings, EPA must update its standards to address nutrient pollution from POTWs.

#### IV. Conclusion

Nutrient pollution leads to serious and far-reaching problems that threaten both wildlife and human health. NACWA’s arguments in opposition to the petition for rulemaking are specious. The facts outlined in our petition and in this letter demonstrate the unreasonableness of excluding nitrogen and phosphorus limits from generally-applicable removal requirements for wastewater treatment plants. Economically and technically feasible technologies to remove nutrients are now widely available. EPA has both the authority and the duty to update its secondary treatment standards and should do so before further delay intensifies nutrient impairments to the nation’s waters.

We would welcome the opportunity to discuss our petition with you and your staff.

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<sup>55</sup> Urgent Call at 26.

<sup>56</sup> *Maier*, 114 F.3d at 1044 (citing *WWHT, Inc. v. FCC*, 656 F.2d 807, 817 (D.C.Cir.1981)).

<sup>57</sup> Urgent Call at 5-6 (citation omitted).



Please feel free to contact Jon Devine at the Natural Resources Defense Council about this matter. He can be reached by telephone at (202) 289-2361 or by email at [jdevine@nrdc.org](mailto:jdevine@nrdc.org). Thank you for your time and attention.

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