FWEA Utility Council
Protecting Florida's Clean Water Environment
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American Water Works Association
AWWA FLORIDA
Utility Council

December 3, 2010

Ms. Stephanie Sanzone
Designated Federal Officer (DFO)
EPA Science Advisory Board Staff Office (1400R)
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20460

Re: Nutrient Criteria for Florida's Estuarine and Coastal Waters, and Southern Canals - Methods and Approaches for Deriving Numeric Approaches

Dear Science Advisory Board,

The Florida Water Environment Association Utility Council, Florida Section of the American Water Works Association Utility Council, and Florida Rural Water Association appreciate the opportunity to provide the following comments regarding the Science Advisory Board's (SAB's) review of the U.S. Environmental Protection Agency's (EPA's) draft technical support document (TSD) for deriving numeric nutrient water quality criteria for Florida's estuaries, coastal waters, and South Florida canals. As the state umbrella organizations for municipal wastewater treatment utilities, public water supply utilities, and rural wastewater and water utilities, these comments represent the collective voice of a broad spectrum of Florida utilities. Our members collect and treat the sewage waste produced by millions of Floridians and then either safely discharge the treated reclaimed water or beneficially reuse it for irrigation or in industrial processes. Because the raw sewage we intake into our treatment systems is often rich in nutrients, we have significant experience implementing and managing nutrient-related water quality control programs.[1] It is with this experience that we offer these comments regarding EPA's draft TSD and the importance of scientifically valid nutrient water quality standards to Florida utility community.

As you know, nutrients are different than other regulated constituents. Nutrients naturally occur in aquatic systems and are necessary to sustain biological communities. A number of natural and anthropogenic factors impact the way nutrients express themselves, and the level of nutrients that

[1] We are proud of our members' progressive track record in controlling and abating nutrient loading to Florida waters. All Florida utilities must show that their discharges do not create violations of Florida's existing narrative nutrient criterion. See Fla. Admin. Code r. 62-650.500. Florida utilities are subject to additional strict nitrogen and phosphorus discharge requirements in southwest and south Florida. See §§ 403.086(4)(a), .086(9), Florida Statutes. Florida is also the national leader in the beneficial reuse of reclaimed water. See Florida Department of Environmental Protection, *Reuse Inventory Database and Annual Report*, at http://www.dep.state.fl.us/water/reuse/inventory.htm.

water bodies need for biological health -- as well as the level of nutrient loads that create problems -- will vary based on these confounding factors.

This site-specific variability creates significant challenges when attempting to promulgate biologically relevant numeric nutrient water quality criteria under section 303(c) of the Clean Water Act. Water quality criteria are a critical component of two major Clean Water Act programs: the National Pollutant Discharge Elimination System (NPDES) and the Total Maximum Daily Load (TMDL) program. Under the NPDES permitting program, water quality criteria are translated into water quality based effluent limitations (WQBELs) for utilities and other regulated entities that discharge to surface waters.[2] NPDES permitted discharges cannot cause or contribute to violations of any ambient water quality criteria. Under the TMDL program, a water body that fails to achieve an applicable water quality criterion is considered "impaired;" will receive a TMDL (i.e. a nutrient load reduction target); and be subject to restoration projects and/or pollutant load reductions to recover the water body so that it is no longer considered impaired for that pollutant parameter.[3] Even entities that indirectly influence surface water quality are subject to potential load reduction requirements through the TMDL program, so utilities that beneficially reuse treated effluent for irrigation or other beneficial purposes may be subject to increased treatment requirements.[4]

Given the unique attributes of nutrients and the Clean Water Act's regulatory framework, it is important to ensure that numeric nutrient water quality criteria are established at biologically relevant levels. If numeric nutrient water quality criteria are set at levels that are too low, then waters that lack nutrient-related water quality problems will nevertheless be considered impaired and will be subject to resource-intensive water quality restoration projects through the TMDL program and needlessly stringent WQBELs. Such overly stringent standards would waste limited public and private resources on "restoring" a healthy water body, and such expenditures have the potential to reduce funds available for truly environmentally beneficial projects. Conversely, numeric criteria that are less stringent than necessary will fail to prevent environmental harm. In order to avoid these negative regulatory consequences, EPA should focus squarely on utilizing nutrient water quality criteria that recognize the unique attributes of nutrients within different aquatic systems, and are based on causal links between nutrients and biological harm in those various systems.

The economic consequences of scientifically flawed nutrient criteria are significant. For example, when EPA promulgated numeric nutrient criteria for Florida's rivers and streams, the agency "was not able to demonstrate a sufficiently strong correlation between the biological response indicators...and TN or TP concentrations."[5] Without a cause and effect basis to establish numeric criteria, EPA relied upon a reference condition approach that set TN and TP criteria for five different regions of the state based on historic water quality data from a handful of waters in each region. The resulting criteria are set at levels below what is achievable

[2] See 40 CFR §§ 122.44(d)(1); 122.44(d)(5); 122.44(d)(1)(vii)(A); 122.45(d).
[3] EPA has noted that Florida is "one of the few states that has in place a comprehensive framework of accountability that applies to both point and nonpoint sources and provides the enforceable authority to address nutrient reductions in impaired waters based upon the establishment of site-specific total maximum daily loads." 75 Fed. Reg. 4174, 4175 (Jan. 26, 2010).
[4] See Fla. Admin. Code r. 62-610.850(1)(a); 610.800(1).
[5] 75 Fed. Reg. 4174, at 4194.

utilizing even the most advanced biological nutrient removal treatment technologies. In addition, those same criteria are lower than the receiving streams' natural conditions for a number of water bodies in the state.

The Florida Department of Environmental Protection and Carollo Engineers performed analysis indicating that compliance with the criteria would require utilities across the state to either utilize deep well injection or reverse osmosis technologies.[6] These reports project that wastewater utilities' capital compliance costs will exceed $4 billion for the recently promulgated freshwater nutrient criteria rule. When considering the magnitude of this cost projection, it is important to keep in mind that a utility's expenditures will primarily be paid by its customers in their monthly utility bills. The cost projection has an impact to the average household utility rate of approximately $700 per year per residence.[7]

As onerous as the freshwater rule is, considering the state's population density patterns, the majority of Florida's wastewater utilities will actually be impacted by the marine, estuary, and canal criteria that will be developed from the methodologies you are about to review. Thus, we commend you for your diligent efforts to review these methodologies. We request that you work with EPA to ensure that Florida's nutrient criteria are based on cause and effect relationships between nutrients and biological responses, so that any needed nutrient reductions are tailored to individual water bodies, as currently happens under Florida's existing narrative standard.

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We appreciate the opportunity to provide comments on the SAB's review of the draft TSD. We cannot overstate the importance of this issue to Florida's utility community. Likewise, this SAB process is critical, as the SAB has the opportunity to promote scientifically sound marine, estuary, and canal criteria for the state.

Kind Regards,

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[6] See Florida Department of Environmental Protection, *FDEP Review of EPA's "Preliminary Estimate of Potential Compliance Costs and Benefits Associated with EPA's Proposed Numeric Nutrient Criteria for Florida"*, available at http://www.dep.state.fl.us/water/wqssp/nutrients/federal.htm; Carollo Engineers, *Costs for Utilities and their Ratepayers to Comply with EPA Numeric Nutrient Criteria for Freshwater Dischargers*, available at http://www.fweauc.org/Positions.asp.

[7] Despite the general agreement between the Florida Department of Environmental Protection and Carollo Engineers on the projected economic impacts of the proposed rule, we are concerned that EPA produced a cost estimate that obfuscates these impacts: their final rule includes a cost estimate that assumes nearly all utilities in the state will receive exemptions to the freshwater numeric nutrient criteria rule, and only need to meet existing best achievable technology nitrogen limits of 3 mg/L in most cases, even though the newly published numeric nutrient rivers and streams criteria for total nitrogen vary from 0.5 to 1.9 mg/L. See EPA, *Pre-publication Federal Register Notice: Final Water Quality Standards for the State of Florida's Lakes and Flowing Waters (PDF)*, available at http://water.epa.gov/lawsregs/rulesregs/florida_index.cfm.

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