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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

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OFFICE OF WATER

Herschel T. Vinyard
Secretary
Florida Department of Environmental Protection
3900 Commonwealth Boulevard
Tallahassee, Florida 32399

Dear Secretary Vinyard:

Thank you for the work that your Department is doing and the cooperation between our agencies to achieve our joint goal of reducing nutrient pollution in Florida waters. The U.S. Environmental Protection Agency will be writing to you under separate cover to inform you of the result of our review of Florida's June 13, 2012, submittal of numeric nutrient criteria for certain waters. In recognition of the innovative quantitative approach that your Department is taking with regard to protecting Florida's downstream waters, this letter amends, in part, the EPA's January 14, 2009, determination that new or revised water quality standards for nutrients in the form of numeric nutrient criteria are necessary in the State of Florida to meet the requirements of the Clean Water Act.

Statutory and Regulatory Background

Section 303(c) of the CWA directs states to adopt WQS for their navigable waters. CWA section 303(c)(2)(A) and the EPA's implementing regulations at 40 CFR part 131 require, among other things, that state WQS include the designated use(s) and criteria that protect those uses. The EPA regulations at 40 CFR 131.11(a)(1) provide that states shall "adopt those water quality criteria that protect the designated use" and that such criteria "must be based on sound scientific rationale and must contain sufficient parameters or constituents to protect the designated use." The EPA regulations at 40 CFR 131.10(b) further provide that "[i]n designating uses of a water body and the appropriate criteria for those uses, the state shall take into consideration the water quality standards of downstream waters and ensure that its water quality standards provide for the attainment and maintenance of the water quality standards of downstream waters."

EPA's 2009 Determination and Consent Decree

On January 14, 2009, the EPA determined, pursuant to CWA section 303(c)(4)(B), that new or revised WQS in the form of numeric water quality criteria for nitrogen and phosphorus pollution are necessary to meet the requirements of the CWA in the State of Florida. Subsequently, the EPA entered into a Consent Decree with Florida Wildlife Federation, Sierra Club, Conservancy of Southwest Florida, Environmental Confederation of Southwest Florida, and St. Johns Riverkeeper, effective on December 30, 2009. This Consent Decree established a schedule for the EPA to propose and promulgate numeric nutrient criteria for Florida's lakes, springs, flowing waters, estuaries, and coastal waters. The Consent Decree also provided that if Florida submitted and the EPA approved numeric nutrient criteria for any

relevant waterbodies before the dates set forth in the schedule, the EPA would no longer be obligated to propose or promulgate criteria for those waterbodies.

EPA's Rulemaking in Florida

Since making its January 2009 determination, the EPA has made clear that protection of downstream waters consistent with 40 CFR 131.10(b) is a necessary component of numeric criteria for nitrogen and phosphorus pollution in Florida waters, particularly for protection of downstream lakes and estuaries. The EPA has since promulgated and is proposing numeric nutrient criteria in Florida, including numeric downstream protection values for streams to protect downstream lakes and estuaries. The EPA believes that these numeric DPVs provide Florida the quantitative means to implement assessment and source control programs to protect downstream waters in a timely and effective manner. However, the EPA also believes that other quantitative approaches can similarly achieve this goal of timely and effective protection of Florida's downstream waters.

Florida's New and Revised Water Quality Standards

On June 13, 2012, the Florida Department of Environmental Protection submitted new and revised WQS to EPA for review and approval or disapproval pursuant to CWA section 303(c). These new and revised WQS are set out primarily in Rule 62-302 of the Florida Administrative Code (F.A.C.) [Surface Water Quality Standards]. FDEP also submitted amendments to Rule 62-303, F.A.C. [Identification of Impaired Surface Waters], which sets out Florida's methodology for assessing whether waters are attaining State WQS. Rule 62-302 and Rule 62-303 are hereafter referred to as "Florida's Rules." Florida's Rules include numeric criteria for all freshwater lakes, springs, some inland flowing waters, and certain estuaries and coastal marine waters. In addition, Florida's Rules include statements and procedures, applicable to all waters, that the EPA believes will result in quantitative outcomes that ensure the attainment and maintenance of WQS in downstream waters. Florida's downstream protection approach relies, in part, on a statement providing the authority to take various actions in upstream waters, such as streams, which serve to protect downstream waters, such as lakes and estuaries.[1] This authority is supplemented with specific procedures and regulatory mechanisms that the EPA believes will provide quantitative means to effectively achieve this protection.

First, when any nutrient criterion (total nitrogen, total phosphorus, nitrate-nitrite, or chlorophyll (*a*) is currently met in downstream waters but maintaining that criterion during the next ten years is threatened as documented by measured adverse water quality trends in nutrient concentrations respective to the numeric criteria of those waterbodies, Florida's Rules establish that such threatened waterbodies will be placed on the State's section 303(d) list.[2] If FDEP adopts or already has adopted a site-specific criterion, Florida's Rules provide that FDEP will determine if adjustments to the loading of nutrients from

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[1] Subsection 62-302.531(4), Florida Administrative Code (F.A.C.) provides as follows: "The loading of nutrients from a waterbody shall be limited as necessary to provide for the attainment and maintenance of water quality standards in downstream waters."

[2] Subsection 62-303.390(2)(a), F.A.C. provides as follows:
"(2) A Class I, II, or III water shall be placed on the study list if:
(a) For waters with a statistically-significant increasing trend in TN, TP, nitrate-nitrite, or chlorophyll *a* pursuant to subsections 62-303.351(5), 62-303.352(3), 62-303.353(4), or 62-303.354(3), F.A.C., the Department confirms there is:
1. A statistically-significant (at the 95 percent confidence level) temporal trend in the annual geometric means after controlling for or removing the effects of confounding variables, such as climatic and hydrologic cycles, seasonality, quality assurance issues, and changes in analytical methods or method detection limits; and
2. A reasonable expectation that the water will become impaired within 10 years, taking into consideration the current concentrations of nutrients or nutrient response variables and the slope of the trend."

upstream waters need to be made to ensure attainment and maintenance of the site-specific criterion.[3] As illustrated as an example on p. 32 of Florida's document, *Implementation of Florida's Numeric Nutrient Standards*:

> [I]f an adverse trend in TP were observed in a downstream lake or estuary, a site specific criterion would be developed for the waterbody prior to it becoming impaired, and this action would establish TP expectations for upstream waters at a level that would prevent the lake or estuary from exceeding the applicable nutrient criteria. The adverse trend test, which is linked to the numeric criteria necessary to protect recreation and healthy, well balanced aquatic communities, allows for Hierarchy 1 site-specific and highly accurate downstream protection values to be developed prior to the downstream waters from becoming impaired.

Second, when criteria for nutrient response variables are currently met in downstream waters but maintaining those criteria during the next five years is threatened as documented by measured adverse water quality trends in those nutrient response variable concentrations, Florida's Rules establish that such threatened waterbodies will be placed on the State's section 303(d) list and FDEP will develop Total Maximum Daily Loads.[4] Such TMDLs will establish the maximum loading of nutrients that a downstream waterbody can receive from upstream waters and still attain applicable water quality criteria.

These trend analysis provisions at Subsections 62-303.390(2) (a) and 62-303.450(4), F.A.C., will allow the State to identify downstream waters at risk of impairment years before they might become impaired, study such waters and nutrient pollution trends, expedite development of TMDLs, and thereby establish quantitative downstream protection values for upstream waters that will ensure the attainment and maintenance of downstream nutrient criteria.

Finally, in addition to the above processes established in Florida's Rules, FDEP's supporting documentation[5] describes additional mechanisms that FDEP intends to use to determine the necessary limits on or allocations of nutrient loadings to achieve the protection of downstream waters. In cases where nutrient criteria are currently met in downstream waters, FDEP will cap existing point source loads unless FDEP establishes a Level II Water Quality-Based Effluent Limit that demonstrates that a waterbody will continue to meet nutrient criteria with an increased load. In cases where nutrient criteria are not met in downstream waters, FDEP will use watershed modeling in development of TMDLs and TMDL allocations as the basis for new permits to ensure that downstream standards are attained and

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[3] Subsection 62-303.390(3), F.A.C. provides as follows: "Waters that fall under paragraph 62-303.390(2)(a), F.A.C., and do not have a site specific numeric interpretation of the narrative pursuant to paragraph 62-302.351(2)(a), F.A.C., shall be removed from the Study List upon development of a site-specific interpretation of the narrative nutrient criteria for the waterbody. Those waters subject to a site specific interpretation of the narrative that meet the provisions of subparagraph 62-303.390(2)(a)1., F.A.C., will be reevaluated by the Department to determine whether adjustments are necessary to provide for the attainment and maintenance of water quality standards in downstream waterbodies."

[4] Subsection 62-303.450(4), F.A.C. provides as follows: "If the waterbody was listed on the study list for an adverse trend in nutrient response variables pursuant to paragraph 62-303.390(2) (a), F.A.C., the Department shall analyze the potential risk of nonattainment of the narrative nutrient criteria at paragraph 62-302.530(47) (b), F.A.C. This analysis shall take into consideration the current concentrations of nutrient response variables, the slope of the trend, and the potential sources of nutrients (natural and anthropogenic). If there is a reasonable expectation that the waterbody will become impaired within 5 years, the Department shall place the waterbody on the verified list to develop a TMDL that establishes a numeric interpretation pursuant to paragraph 62-302.531(2) (a), F.A.C."

[5] FDEP. 2012. *Implementation of Florida's Numeric Nutrient Standards.* Document Submitted to EPA in Support of the Department of Environmental Protection's Adopted Nutrient Standards for Streams, Spring Vents, Lakes, and Selected Estuaries. Florida Department of Environmental Protection. p.29.

maintained. Although not critical to understanding Florida's approach to protecting downstream waters, this information in FDEP's supporting documentation provides additional specificity and clarity in how FDEP intends to implement the downstream protection provision at 62-302.531(4), F.A.C.

Determination

The EPA believes that Florida's approach to downstream protection, in combination with protective, scientifically sound numeric nutrient criteria for the upstream and downstream waterbodies, achieves timely and effective protection of downstream waters. That said, Florida's downstream protection provisions, while they are designed to derive numeric values in the future, do not themselves consist of numeric values, which is what the EPA's January 2009 determination and Consent Decree require. For these reasons, the EPA hereby amends its January 14, 2009, CWA section 303(c)(4)(B) determination by determining that quantitative approaches designed to ensure the attainment and maintenance of downstream WQS are sufficient to meet CWA requirements and that numeric DPVs are therefore not necessary in Florida. Note that in all other respects, the EPA's January 14, 2009, determination remains unchanged.

Sincerely,

Nancy K. Stoner
Acting Assistant Administrator