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November 21, 2019

Ken Weaver, Environmental Administrator
Standards Development Section
Florida Department of Environmental Protection
2600 Blair Stone Road, MS 6511
Tallahassee, Florida 32399-2400

Re: Comments Submitted by Florida Electric Power Coordinating Group
Environmental Committee, Water Subcommittee
Triennial Review—Proposed Revisions

Dear Administrator Weaver,

The following correspondence is provided by the Water Subcommittee of the Florida Electric Power Coordinating Group (FCG) Environmental Committee (EC) in response to the Department's request for public comments following the second set of rule development workshops held November 4th through the 7th, 2019. As requested, these comments have been submitted on or before November 22, 2019.

Narrative Turbidity Criterion

The FCG-EC objects to the proposed narrative criterion for turbidity. The criterion as proposed reads:

[N]or shall turbidity levels be increased to levels that negatively affect designated uses or result in increased sedimentation or reduced light transmission to the point that the normal growth, function, reproduction, or recruitment of aquatic life is impaired.

The proposed language for the statewide narrative is very broad and contains many variables that may be affected by any number of environmental stressors, natural or anthropogenic, not necessarily related to turbidity.

Although EPA regulations do allow the states to develop narrative criteria to supplement numeric criteria, EPA's clear preference is for the states to develop numeric criteria. *See* 40 CFR 131.11(b). The current criterion of 29 NTU above natural background is a numeric criterion that DEP presented to EPA as protective of applicable designated uses and EPA approved as consistent with Section 303 of the federal Clean Water Act. If indeed the current criterion is protective of designated uses, there is no logical basis for imposing a less precise narrative criterion as a regulatory overlay to the existing numeric criterion.

The Department's existing criterion has been a standalone criterion for many years and is based on the scattering of light expressed in nephelometric turbidity units (NTU). To allow a DEP staff

member to override the narrative criterion by some *perceived* impairment of growth, function, recruitment and reproduction of “aquatic life” guts the existing numeric criterion of any semblance of objectivity or consistency in application.

Surface water quality criteria must be protective of designated uses. By proposing a broad, subjective narrative criterion, the Department is conceding that its numeric criterion, 29 NTU over background, is not—and potentially has never been—protective of designated uses although it has been imposed upon the regulated community for many years.

Similarly, the proposed narrative cannot be shown to be protective of designated uses because most of the operative terms within the proposed criterion are not defined and there are no objective means of measuring them.

The introductory clause states: “[N]or shall turbidity levels be increased to levels that negatively affect designated uses.” A criterion *is the measure* to determine if a designated use is negatively affected. Exceeding 29 NTU above background, thereby exceeding the applicable criterion, is how the Department determines that a designated use is negatively affected. “Negatively affected” cannot be the measure for determining “negatively affected.”

Similarly, the phrase “or result in increased sedimentation or reduced light transmission” is equally circular. The Department has not adopted criteria or thresholds establishing a baseline measure of sedimentation or minimally required light penetration. Since there is no baseline, there is no means of determining an increase in sedimentation or decrease in light transmission and, therefore, no measure of sedimentation or light penetration that allows the Department to determine “the point that the normal growth, function, reproduction, or recruitment of aquatic life is impaired.”

Additionally, none of the operative terms in the last phrase are defined nor subject to measurement in a manner that would allow the Department to determine that the designated use of a water body has been “negatively affected.” The term “aquatic life” is broad to the point of meaningless. Hydrilla is aquatic life and an invasive species. Cyanobacteria are aquatic life. Invasive lionfish are aquatic life.

DEP has no vast database allowing the Department to determine when the normal growth of “aquatic life” has been negatively affected. Nor is there a compendium of information defining the “function” of whatever organisms fall within the category of “aquatic life” and informing DEP when that function has been negatively affected.

While studies may exist that identify specific environmental stressors that affect growth, reproduction and recruitment of individual plants and animals, DEP cannot credibly assert that it has the authority to abandon the long-standing numeric turbidity criterion and take regulatory action where the agency determines some negative affect on some plant or animal falling within the far reach of the term “aquatic life.”

If indeed the Department has reason to believe that the existing numeric criterion for turbidity is not protective of some designated uses, DEP should document any such deficiencies by performing the necessary studies and analyses and promulgate an objective criterion or criteria protective of those designated uses.

Site Specific Alternative Criteria (SSAC)—Protected Species

The FCG-EC objects to the proposed amendment to the Type I SSAC provisions that would mandate an affirmative demonstration that protected species and habitat will not be negatively affected by the alternative criterion. As proposed, a party requesting a SSAC would have to provide:

A description of the occurrence of any Federally listed threatened or endangered plant or animal species and critical habitats within the water or downstream waters. An affirmative demonstration that the alternative criteria will not negatively affect threatened or endangered species or critical habitats must be included if any are present in the water or downstream waters.

To obtain a SSAC, the applicant must demonstrate that a proposed alternative criterion will be protective of designated uses—*not* threatened and endangered species or their critical habitat. Like the proposed narrative turbidity criterion, “negatively affect” is open to interpretation and without some form of objective measure, would force applicants to prove a negative.

More fundamentally, the Clean Water Act does not address, nor mandate consideration of, threatened or endangered species or their habitat in establishing water quality standards and criteria. The FCG-EC requests that DEP withdraw the provision from its proposed rule amendments.

Adoption of EPA’s Recommended Cyanotoxin Criteria

The FCG-EC does not support the adoption of EPA’s recommended criteria for cyanotoxins as ambient water quality criteria but could support a rule that references the concentrations proposed by EPA as the basis of public health advisories.

While the relationship between nutrients and algal biomass as measured by chlorophyll-a is well established, there are more steps, and yet to be defined steps, in the physiochemical processes by which a nutrient entering surface waters may ultimately affect the growth of a specific algal species to the point at which cyanotoxins are produced.

If adopted as ambient criteria, documented exceedances of cyanotoxin criteria would result in the listing of water bodies as impaired for, presumably, nutrients although the relationship between an individual point source discharge of TN or TP and the ambient concentration of an organic cyanotoxin would be impossible to establish. A permitted point source may be given a wasteload allocation to implement a TMDL where the total elimination of the discharge would have no effect on what are certain to be transient concentrations of cyanotoxins.

Additionally, by the time ambient concentration of cyanotoxins are measured and found to be in violation of a numeric criterion, algal biomass and other conditions are likely to have triggered regulatory action through the implementation of the Department’s existing narrative and numeric nutrient standards.

The Florida Blue-Green Algae Task Force recommended that:

Defensible health advisories should be established by the Florida Department of Health and defensible water quality criteria should be established by the Florida Department of Environmental Protection. These actions should be supported by the best available science and monitoring and updated as new information becomes available.

(Emphasis added). As DEP experienced with the development of its existing numeric nutrient criteria and thresholds, establishing a sufficient dose-response relationship between nutrients and a biological metric is no easy task and likely to be far more challenging where the goal is to identify a dose-response relationship between nutrients and the concentration of an organic byproduct of undeterminable algal population dynamics.

The Department ultimately relied heavily on a reference water approach in promulgating its existing numeric nutrient standards rule—where, unlike cyanotoxins, there are acceptable and beneficial concentrations of nitrogen and phosphorus which are essential nutrients for biological processes. In sum, cyanotoxins are not pollutants in the traditional sense nor appropriate for integration into Clean Water Act programs implemented by the Department.

However, to the extent it may be possible to use the EPA recommended cyanotoxin criteria to supplement existing programs to establish more protective public health advisories, more rapidly and effectively protecting the public from exposure to cyanotoxins, the FCG-EC would support such an effort.

Striking Confounding Factors Language from Dissolved Oxygen Assessment

The Department is also proposing to strike language at 62-302.533(5) as follows:

Ambient DO levels will be considered to have declined, for purposes of this subsection if, ~~after controlling for or removing the effects of confounding variables, such as climatic and hydrologic cycles, quality assurance issues, and changes in analytical methods,~~ a waterbody segment is shown to have a statistically significant decreasing trend in DO percent saturation or an increasing trend in the range of daily DO fluctuations at the 95 percent confidence level using the one-sided Seasonal Kendall test for trend....

This proposed amendment would allow the Department to conclude that there was a declining trend in dissolved oxygen concentrations notwithstanding a hurricane, drought, bad data or a change in methodology making previously collected data not comparable to other data used in the trend analysis.

The Department thought the qualifying language to be sufficiently important to include it in the rule as previously adopted and there does not appear to be any rationale basis for deleting the language and allowing ambient DO levels to be assessed for regulatory purposes regardless of interference from these previously addressed confounding variables. Consequently, the FCG-EC opposes this proposed rule amendment.

Assessment of Numeric Interpretations of Narrative Nutrient Criterion—Expanded Scope

DEP has proposed to add language to 62-303.350(1), F.A.C., that would significantly broaden its discretion to place waters on the planning list for suspected nutrient impairment. The proposed amendment reads:

Other information indicating an imbalance in flora or fauna due to nutrient enrichment, such as algal blooms or mats, excessive nuisance macrophyte growth, decrease in the distribution (either in density or areal coverage) of seagrasses or other native submerged aquatic vegetation, adverse changes in algal species composition, and excessive diel oxygen swings, and other scientifically credible and compelling information meeting the requirements of Chapter 62-160, F.A.C., indicating a waterbody is imbalanced shall also be considered for placing waters on the Planning List.

The FCG-EC objects to this language for the same reasons expressed in opposition to the proposed narrative turbidity criterion.

The added language creates open ended discretion in the Department to declare a waterbody imbalanced thereby amending the impaired waters rule which was designed to provide an objective process for identifying impaired water bodies. The proposed provision is an exception that swallows the rule. What is “scientifically credible” or “compelling” information is not subject to objective measure.

The FCG-EC objects to the addition of this language throughout Chapter 62-303 and opposes the addition of the phrase “or other information is available pursuant to rule 62-303.350, F.A.C., indicating an imbalance in flora or fauna due to nutrient enrichment,” as it is proposed in sections 62-303.351, *Nutrients in Freshwater Streams*; 62-303.352, *Nutrients in Freshwater Lakes*; 62-303.353 *Nutrients in Estuaries and Open Coastal Waters*; and, 62-303.354, *Nitrate-Nitrite in Freshwater Spring Vents*.

Relocation of Trends Analysis from Study List to Planning List and Verified List

The FCG-EC cannot support the elimination of the trends analysis concept from the Part III of the impaired water rule, *Study List*, and the addition of a trends analysis to Part IV of the rule addressing the *Verified List*.

DEP created the concept of the study list to obtain EPA approval of its numeric nutrient standards rule. EPA and third parties asserted that in applying Florida’s narrative nutrient criteria, and in interpreting the narrative criterion with numeric endpoints, DEP had to wait until the waterbody was impaired to take any action. EPA insisted on some mechanism for DEP to identify waters where data suggested a trend toward nutrient impairment.

DEP created the study list primarily for this purpose and included rule provisions allowing placement of a waterbody on the study list if a trend toward nutrient impairment was detected. The study list is submitted to EPA with the Department’s verified list of impaired waters and EPA considers waters on the study list to be waters of Florida’s 303(d) list. Although EPA considered the study list waters impaired for 303(d) purposes, EPA is no longer mandated to establish TMDLs for Florida waters as it was previously under the now expired federal consent decree.

As its name suggests, the waters on the study list were subject to further scrutiny before placed on the planning list or placed directly on the verified list of impaired waters. The Department is now proposing to shift the trends analysis provisions of the rule from Part III, *Study List*, to various provisions embedded in Part II, *Planning List*, and Part IV, *Verified List*.

The provisions included in Part IV, *Verified List*, allow listing for nutrients where:

- (a) there is statistically significant increasing trend at the 95 percent confidence level for a given nutrient or nutrient response variable over both the period of record (POR) and the most recent 7.5 years using the Mann-Kendall Trend Test, and
- (b) the slope of the POR expressed in units per year is at least 10% of the applicable numeric nutrient criterion for that parameter. For lakes, the applicable TN and TP nutrient criteria shall be the maximum numeric interpretation for the applicable lake color and alkalinity category.

(8) For the POR assessment of trend, there shall be at least 10 years with sufficient data to calculate AGMs. The POR shall start in the most recent year with sufficient data and go as far back in time as possible as long as at least 50% of the years in the POR have sufficient data to calculate AGMs.

(9) For the 7.5-year assessment of trend, there shall be at least 5 years with sufficient data to calculate AGMs.

The regulated community did not object to the trends analysis for placement of waters on the study list since there were no immediate regulatory consequences, but the listed waters would be under heightened scrutiny for potential nutrient impairment providing an added level of protection and addressing EPA's demand for an early warning system for potential nutrient impairment.

The Department sets nutrient criteria and thresholds to be protective of designated uses. If the criteria and thresholds are met, designated uses are supported and the waterbody is not impaired. Nutrient concentrations may show a steady increase over time, or fluctuate over time, and so long as those concentrations do not trip a nutrient criterion or threshold, or result in an imbalance applying the narrative nutrient criterion, the affected waterbody should not be considered impaired.

The provisions as proposed, allow a waterbody to be verified as impaired prior to its exceeding nutrient criteria or thresholds so long as, statistically, it appears to be heading the direction of impairment. In sum, the proposed amendments create a new class of water quality criteria allowing a waterbody to be listed an impaired when it does not actually exceed applicable nutrient criteria or response variables.

If a statistical test is going to be applied to allow the listing of a waterbody based on a number other than the threshold or criterion adopted by rule, that number effects a change to water quality standards and should be adopted as a water quality standard. It is certainly a laudable goal to prevent impairment rather than be forced later to implement costly restoration programs. However, the proposed language appears to send a waterbody straight to the impaired list when ambient concentrations of the parameter of concern may be well below the criterion or threshold

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determined to be protective of designated uses by the Department. The FCG-EC does not support the proposed amendments integrating the trends analysis into provisions of the impaired waters rule addressing the verified list of impaired waters but could support the trends analyses if maintained under the Study List,

FCG-EC Submission of Comments

The FCG has a long history of working proactively with DEP to address unforeseen or unintended consequences resulting from Department initiatives and maintaining an open dialogue with Department staff to address FCG member utility concerns. The FCG-EC appreciates the opportunity to provide these comments and looks forward to working with DEP throughout the triennial review process. Please consider these comments supplemental to the FCG-EC comments submitted on May 30, 2019, following the initial set of rule development workshops.

Respectfully Submitted,



Winston K. Borkowski

Hopping Green & Sams

On behalf of:

Florida Electric Power Coordinating Group
Environmental Committee

Copy to:

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