



Friends of Biscayne Bay  
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**Via email:** [Avril.wood-McGrath@FLORIDADEP.gov](mailto:Avril.wood-McGrath@FLORIDADEP.gov)

**RE: Florida Department of Environmental Protection's (DEP) proposed changes under the Triennial Review of Florida's Water Quality Standards. All surface water quality standards in Chapter 62-302, Chapter 62-303, Chapter 62-304, and Chapter 62-4, Florida Administrative Code (F.A.C.), are open under the current review and may be revised as part of the Triennial Review.**

Avril Wood-McGrath:

Biscayne Bay is the ecological jewel of Miami-Dade County, and serves as a key economic and cultural asset as well as an invaluable element of our ecological heritage that we must strive to protect and preserve as a key priority. For about 20 years the Friends of Biscayne Bay has made it our mission to help preserve the ecological health of this system for future generations. Our mission has never been more important or critical than at the present moment, as our Bay faces both [unprecedented threats](#) and exciting [new opportunities](#) to turn the page on decades of mismanagement. The Biscayne Bay Aquatic Preserve is protected under several state statutes (BBAP) (Chapter 18-18, F.A.C. & Chapter 258.397, F.S.), an Outstanding Florida Water (OFW) (Chapter 62-302.700, F.A.C.), and within Sovereignty Submerged Lands (Chapter 18-21, F.A.C.).

The Friends of Biscayne Bay strongly opposes the reduction of any water quality protections in Biscayne Bay currently afforded under the state assumption of the Clean Water Act Program. At this time the area is the subject of a restoration plan that has just kicked off in 2020 through the Biscayne Bay Southeastern Everglades Ecosystem ("BBSEER"). BBSEER is a new combined restoration project that includes C-111 and Biscayne Bay Coastal Wetlands. In light of our rapidly growing population and increasing development pressure, it is essential that these waters



are afforded the highest level of oversight and protection to ensure that the resources on which we depend are adequately protected. In addition in order to continue to attract federal dollars for this investment we must at minimum meet State water Quality standards so restoration can go above and beyond that min threshold. What's more the ACOE has made it clear it will not cost share to meet those minimum standards.

Florida's waterways are also uniquely interconnected and are critical to our public health, our economy, and our environment. Therefore, for the following reasons, the Friends of Biscayne Bay opposes the Triennial Review changes that reduce protections for Biscayne Bay and the Aquatic Preserve.

The following are some targeted comments and questions to which we would request answers and justification for your proposed changes. After review, and attempting to arrive at a better understanding of the rationale for your proposed changes we may have additional questions. For now, please note:

**1. Revision of Rule 62-4.242, F.A.C., language to address restoration and enhancement projects that occur within or near Outstanding Florida Waters.**

The proposed rule change decreases the level of protection provided to the resource by creating an exemption for restoration and enhancement. Specifically in Biscayne Bay we cannot solely focus on salinity but we also must consider nutrient loading as it is what is killing our seagrass and causing the low DO that caused fish kills this past summer.

*The Florida Legislature has designated Biscayne Bay and Card Sound, including Biscayne National Park, as Outstanding Florida Waters. This affords these waters the highest water quality protections in the state. DEP cannot issue a permit for direct discharges to outstanding Florida waters that would lower ambient water quality and may not issue permits for indirect discharges that would significantly degrade a nearby waterbody designated an outstanding Florida Water Body.*

**2. 62-303.353 Nutrients in Estuaries and Open Coastal Waters.**

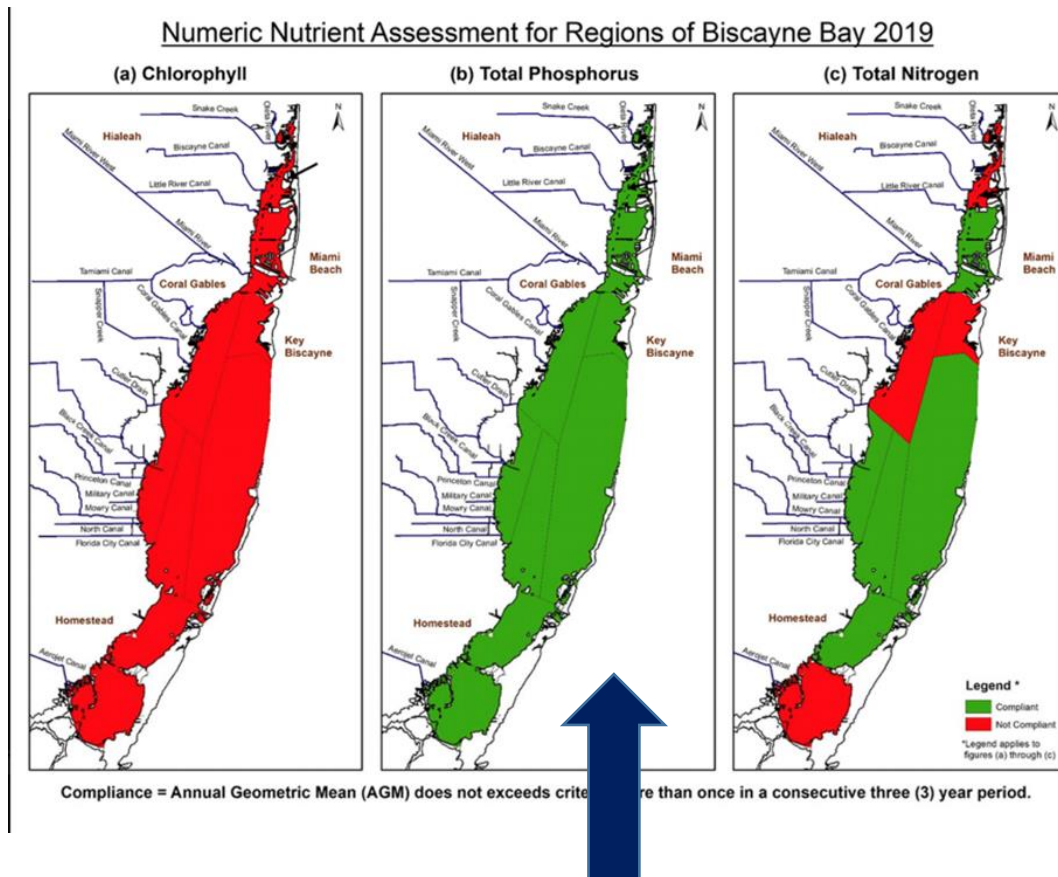
Estuaries, estuary segments, or open coastal waters shall be included on the Planning List for nutrients if:

- (1) The numeric interpretation of the narrative nutrient criterion established in subsection 62-302.532(1)~~62-302.531(2)~~ or 62-302.532(2), F.A.C., is exceeded for any parameter; or
- (2) For estuaries without a numeric interpretation of the narrative nutrient criterion, their annual geometric mean chlorophyll a for any year is greater than 11 ug/l;
- (3) Algal mats or blooms are present in sufficient quantities to pose a nuisance or hinder reproduction of a threatened or endangered species, 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
- 4) There is a statistically significant increasing trend in the annual geometric means at the 95 percent confidence level in TN, TP, or chlorophyll a over the assessment planning period using the Mann-Kendall's one-sided, upper-tail Trend Ttest for trend, as described in Nonparametric Statistical Methods by M. Hollander and D. Wolfe (1999 ed.), pages 376 and 724, which were incorporated by reference in subsection 62-303.351(5), F.A.C.; For the assessment of nutrient trends in estuaries and open coastal waters, there shall be at least one station with a minimum of 10 temporally independent samples; or

(5) For estuaries with nutrient criteria expressed as not to be exceeded in more than 10 percent of the samples, the nutrient data exceed the listing thresholds in subsection 62-303.320(1), F.A.C. Data must meet the requirements of subsections and paragraphs 62-303.320(2), (3), (4)(c)-(4)(e), (8), (9), F.A.C.

Please explain how this change would apply to Biscayne Bay specifically. What is the difference between planning and assessment? Does the narrative standard still apply if a water body is on the planning list? Why is the department removing the statistical reference? Please specifically go over with us your data protocol and give a few examples of what you would not accept as a result of these changes.

Biscayne Bay is exhibiting an imbalance of flora and fauna due to nutrient enrichment. This is clear from the decades of data we have, the department should not be making the bar more difficult to enforce violations. As clearly we have more than a decade of violations of chlorophyll a and nitrogen since the numeric criteria have been adopted yet we have not had a TMDL set for the Bay nor has the bay received any additional attention or resources until recently. See image below:





Much of the nutrient loading into southern Biscayne Bay is in the form of groundwater (Caccia and Boyer 2007, Brynes 1999). In central and northern Biscayne Bay surface water discharge, largely through canals, is the principal pathway for nutrient enrichment. Phosphorous delivered to Biscayne Bay via groundwater are likely to be absorbed by the sediments and the TP-limited benthic ecological community before it can discharge into surface waters (Byrne 1999). Seagrasses respond to higher levels of TP in the sediment by increased uptake, through their roots. This in turn feeds a cascade of change in the composition of the benthic community and in the balance between slow-growing seagrasses and faster-growing algae (Fourqurean et al. 1992).

The Department should be proposing to change the Numeric Nutrient Criteria sampling methodology to actually capture TP by focusing on testing soil and biofilms to capture hotspots for canal point source discharge and groundwater loading into Biscayne Bay and other similar systems that are phosphorus limited. We will not see an exceedance of TP as by the time it reaches the surface waters over a 3-year annual geometric mean far from any nearshore stations the seagrass will all be gone.

We request the Department work with us to set up a new methodology for Phosphorous as it does not travel from on shore point source's very far and it is permanent and cumulative and what is driving the declines of seagrasses that are impacting manatees.

### **3. 62-303.354 Nitrate-nitrite in Freshwater Spring Vents.**

A spring vent in predominantly fresh waters shall be included on the Planning list for nitrate-nitrite if:

- (1) The numeric interpretation of the narrative nutrient criterion established in subsection 62-302.531(2), F.A.C., is exceeded; or
- (2) Algal mats or blooms are present in sufficient quantities to pose a nuisance or hinder reproduction of a threatened or endangered species, 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; or
- (3) There is a statistically significant increasing trend in the annual geometric means at the 95 percent confidence level in nitrate-nitrite over the ~~assessment~~ planning period using the Mann-Kendall's one-sided, upper-tail Trend Ttest for trend, as described in Nonparametric Statistical Methods by M. Hollander and D. Wolfe (1999 ed.), pages 376 and 724, which were incorporated by reference in Rule 62-303.351, F.A.C.
- (4) For a spring with a nitrate-nitrite criterion expressed as a monthly average, there is a sufficient number of samples from the water segment that do not meet the applicable water quality criterion based on the methodology described in subsection 62-303.320(1), F.A.C. Data must meet the requirements of subsections and paragraphs 62-303.320(2), (3), (4)(c)-(4)(e), (8), (9), F.A.C. Rulemaking Authority 403.061, 403.067 FS. Law Implemented 403.062, 403.067 FS. History—New 7-2-12, Amended 2-7-16, - - .

Does this apply to the freshwater springs we have in Biscayne Bay? There are many documented upwelling's and it is a concern the type of water quality they are carrying as a desecrate pathway to Biscayne Bay. Is the Department monitoring these FW springs in Biscayne Bay?

#### **4. Modeling**

The Department appears to lower the bar for a models' reliability in implementation of the nutrient criteria. In the 2013 Implementation Document, modeling set evaluation goals to achieve understandings of nutrient enrichment, nutrient allocations within watersheds, etc. In 2021, qualifiers are proposed that seemingly express a lessened rigor of acceptable models. For example, in 2021 the Department proposes that models must only be "scientifically suitable." See, Section 8.1 of the 2021 Doc. A concern is, among other things, that a "scientifically suitable" model may be less reliable than a "scientifically defensible" model, which would be the standard in any legal action without having to qualify it by explanation in a regulatory document. Furthermore, if a "scientifically suitable" model's conclusions were challenged, it would appear to be an undemanding standard to meet in demonstrating compliance with the 2021 Implementation criteria. This is especially concerning in light of the complexities of setting TMDLS or concentration limits in flowing, sometimes tidally influenced, waterbodies where some pollutants, like phosphorous, are not always easily measurable. The Department should use the most reliable and reproducible science in its effort to protect and restore Florida's most precious natural resources.

Another concern with respect to modeling parameters in the 2021 Document is what appears to be a deletion of "watershed" models in favor of "waterbody" models in Section 8.1. In its most basic sense, a "watershed model" predicts what is occurring on land that results in an export of pollutants to a river, lake, or estuary. A "waterbody" model would not necessarily capture those land based inputs, especially if it is only scientifically suitable. This change in focus from the Protection of Downstream Waters section in the 2013 Document should be explained and justified.

#### **5. Elimination of the Narrative Criteria in favor of TMDLs**

*In no case shall nutrient concentrations of a body of water be altered so as to cause an imbalance in natural populations of aquatic flora and fauna. Rule 62-302.530 47(b), Florida Administrative Code (F.A.C.).*

The narrative criteria can be an effective tool in assessing the health of an aquatic ecosystem where a nutrient pollutant, like phosphorous, which is absorbed by the soil and biofilms before reaching surface water can be assessed and enforced. This is especially significant in a waterbody with a TMDL that has few compliance points or compliance points located far from the nearshore discharge. Because of this dynamic, specifically with phosphorous, the narrative criteria can still play a vital role and provide blanket protection for the designated use of the waterbody.



The 2021 Document appears to ensure that the narrative criteria is limited, going so far as to change the NNC acronym to only refer to numeric nutrient criteria instead of referring to narrative nutrient criteria as was the case in the 2013 Document. This change in focus is subtly apparent throughout the 2021 Document. The proposals appear to change the state's policy on the applicability qualitative criteria by its evaluating flora and fauna in favor of quantitative criteria only within the water column itself.

Please justify this change and provide a rationale.

## **6. Loads Replace Concentrations**

Similar to the elimination of the narrative criteria, another change that is observed throughout the 2021 Document is the replacement of concentrations as the nutrient measurement with loading of nutrients. In Section 7.0, Nutrient Criteria in Estuaries, the 2021 Document specifically states that “[Hierarchy] 1 TMDLs supersede the NNC” which are set as concentrations in current Rule 62-302.532, F.A.C. Again, depending on the frequency and locations of compliance points in proximity to the discharge itself, including runoff, reliance on loading can mask the source that is adding the pollutant. A question arises as to how the superseding of specific concentrations by H1 TMDLs interacts with NPDES permit requirements and Section 401 water quality certifications that are predicated upon meeting state water quality standards that are set currently as concentrations. Along those same lines, the U.S. Supreme Court ruled in the *County of Maui v. Hawaii Wildlife Fund*, 140 S. Ct. 1462 (2020), that discharges to groundwater that reach surface water which are the “functional equivalent of a direct discharge” are subject to NPDES permitting requirements. If water quality standards will now be addressed as loads instead of concentrations, how will the *County of Maui* decision be implemented? Since the 2021 Document does not provide explanation for these issues, future discussions with the Department would be beneficial for the public.

## **7. Reasonable Assurance Plans**

In the 2013 Document, Reasonable Assurance, in near-field, is “demonstrated” when the receiving water body is “shown to attain” a target standard. For protection of downstream waters, in the 2013 Document, dischargers must “provide reasonable assurances that their effluent does not cause or contribute to nutrient impairments” in order to obtain a permit. WQBEL procedures for each tier of the hierarchy provides that a reasonable assurance demonstrations can be numeric interpretations of the narrative criteria along with TMDLs and Site Specific Alternative Criteria (SSAC).

In the 2021 Document, Reasonable Assurance (RA) demonstrations are replaced with Reasonable Assurance Plans. Even the acronym page in 2021 no longer references RA demonstrations and only references RA Plans. The exception to this general replacement is in Section 11.1 in the 2021 Document.



It is unclear from the 2021 document or the referenced rule, 62-303.100, F.A.C., what the impetus was for changing the language or what the result will be. It appears loosening the requirements so that an applicant need only provide an RA Plan as opposed to demonstrating RA will be significantly less protective of an impacted resource.

Was this the Department's intent?

Again, further discussions with the Department would be beneficial for all as we do not see how these changes will improve aquatic preserves like Biscayne Bay across the state but instead will help polluters mask more of their pollution load, while we are left with a greater burden as a state to get to any kind of enforcement that will ultimately clean up and protect the resource.

**Please feel free to contact us with any questions; we can be reached via email:**

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**Sincerely,**

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