

Summary of the South Florida Water Management District's Technical Comments to the
United States Environmental Protection Agency's Proposed Numeric Nutrient Criteria
06/04/2010

The South Florida Water Management District (the District) supports numeric nutrient criteria development in Florida as long it is science based and enough time is allowed to address the state's ecological diversity. However, the District does not support the current proposed rule as written. Major reconstruction of the rule is needed with more time than allotted in the Consent Decree. The following is a brief summary:

1) Lakes

- In general, the use of chlorophyll *a* as the indicator for protecting designated use and the 20 microgram per liter (ug/L) criterion is supported.
- Major concerns with total nitrogen as a criterion for all lakes if it is not a limiting nutrient.
- More work needed in understanding possible regional differences across the state within the color and clear lake classifications.
- Highly colored lakes (140 platinum cobalt units) have been handled incorrectly by having extrapolated data used in the criteria development.
- Proposed possible alternative that considers each individual point (chlorophyll *a*, TN, TP) in the data set and classifies them as either meeting the chlorophyll *a* criterion or not.

2) Streams and Rivers

- Many concerns with the use of the reference approach:
 - No relationships found between nutrients and biological response.
 - Many other factors in environment influence biological communities.
- If a reference approach is used, we support the Florida Department of Environmental Protection's benchmark approach:
 - 14 years and millions of dollars of investment have resulted in method with scientific rigor; groundtruthing by FDEP provided even more rigor.
 - This methodology employs the 90th percentile approach as compared to USEPA's 75th percentile.
 - Provides a biological verification with the implementation of the rule.
- Do not support canals being lumped with streams north of Lake Okeechobee.

3) South Florida Canals

- Scientific studies (especially in ecology) of canals are a tiny fraction of those found for other South Florida ecosystems. We believe a valid question needs to

be answered first: What defines the canal ecology we are attempting to protect with this rule?

- The methodology, an inference reference approach, is not suitable for the South Florida Canals. What is a reference, artificial and highly managed canal?
- Sub-regionalization of the South Florida region needs to be considered in rule development (e.g., Biscayne aquifer sub-region).
- No canal specific information linking chlorophyll *a* as a protective criterion and/or a strong relationship is not seen with nutrient concentrations.
- To our knowledge, external scientific peer review was not performed for this section of the rule.
- The use of the Everglades Protection Area TP rule criterion of 10 ppb as an instream criterion for canals is unsound.

4) Statistics

- Many statistical assumptions not tested or not shown in rule (e.g., residuals having constant variance). This is a global comment across all parts of rule.

5) Implementation

- CERP, Kissimmee, Northern Everglades Restoration Initiatives:
 - Water quality cost sharing with United States Army Corps of Engineers.
 - Downstream discharges from lakes into streams.
 - TN/Chlorophyll *a* could be an issue where previously focused on TP.
 - Retrofits, permits, and delays for current and future project design and construction.
- Florida's current Total Maximum Daily Loads (TMDLs) and Basin Management Action Plans (BMAPs) process:
 - Current TMDLS may have to undergo more administrative review even though have been already approved by USEPA.
 - Current BMAPs, the state's roadmap for implementing TMDLs, may be delayed as stakeholders wait to see what their end targets will be.
- Water Supply Reuse:
 - May impact the ability of local wastewater utilities to provide reclaimed water – and it may have a ripple effect throughout the water management activities in the District
- Environmental Resource Permitting (ERP)
 - Potential loss of state water quality certification - The proposed rule would require a change towards more robust water quality analysis methodology and compliance requirements, similar to National Pollutant Discharge Elimination System permits.