



EVERGLADES WATER QUALITY WILL DEP WATER DOWN A TOUGH STANDARD?

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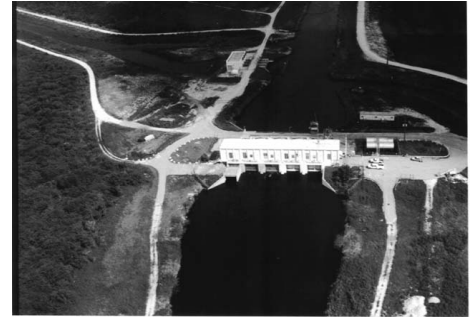
Hour of Decision nears on Everglades Phosphorus Criterion – Are Florida’s public officials willing to make the difficult decisions necessary to really protect Florida’s Everglades from demise by phosphorus pollution?

Parts of the River of Grass are being lost rapidly to the effects of phosphorus. The pollution emerging from sugar cane and other cropland in the Everglades Agricultural Area is causing healthy Everglades sawgrass marshes and sloughs to convert into cattail choked wasteland *at a rate of between 2 and 9 acres per day.*

While the Governor has endorsed and the staff of DEP is proposing a phosphorus criterion of 10 parts per billion, (sufficiently low to protect the Everglades) it is uncertain whether a majority of the 7 member Environmental Regulation Commission (ERC) will support this criterion due to heavy lobbying against it by sugar industry lawyers and consultants.

Even if the ERC adopts the 10 ppb criterion, sugar industry lobbyists are pressing to write a variety of mechanisms into the rule to help them evade its effective enforcement. They want the ability to seek variances, mixing zones and similar relief mechanisms. Recent statements by attorneys working for DEP suggest that the agency is starting to bend under the industry’s lobbying pressure.

Decision time begins in December.



Pump Stations Deliver Dirty Water to the Everglades

The Numeric Phosphorus Criterion — Research by the South Florida Water Management District and the Florida Department of Environmental Regulation strongly validates the original decision of the Legislature to select 10 parts per billion as a “default standard” for the Everglades. Research submitted to DEP by unbiased sources documents that normal background concentrations of phosphorus in healthy Everglades sawgrass marshes and sloughs hover in the range of 6 – 8 parts per billion.

In order to cross-check the proper numeric concentration, DEP and SFWMD researchers established transects which run through both impacted Everglades wetlands (those areas already damaged by phosphorus) and out into pristine areas. By measuring the phosphorus levels, and comparing them to a distance scale, researchers then were able to correlate the level of phosphorus with locations where healthy Everglades marshes switch to impacted areas with unfavorable vegetation changes. Those measurements documented that shifts in vegetation, both in large plants such as sawgrass and in communities of microorganisms, such as periphyton, began to take place as phosphorus levels crossed the 10 part per billion threshold.

Other experiments were conducted by “dosing” otherwise healthy plots of Everglades vegetation

with different levels of phosphorus, and comparing the results with “control” sites at the same location that are not “dosed”. These tests also demonstrated conclusively that once phosphorus levels rise past 10 parts per billion, imbalances in the Everglades vegetation begin to appear.

The Everglades Phosphorus Criterion is required by law to achieve a VERY specific goal -- The Everglades Forever act requires that: “In no case shall such phosphorus criterion allow waters in the Everglades Protection Area to be altered so as to cause an imbalance in the natural populations of aquatic flora or fauna.”

In addition, the phosphorus criterion must also be sufficient to “...assure a net improvement in the areas already impacted.”

Backed by a mountain of data and research greater than ever assembled for any of the state’s 60+ other water quality standards, the DEP recommendation of 10 parts per billion appears eminently defensible.



Sugarcane field discharge – The Source of Pollution Killing the Everglades

Sugar Industry’s Position – The sugar industry, supported in their arguments by hired consultants, has produced its own studies which the industry claims justify a standard in the range of 15.6 to 18 parts per billion. The sugar industry’s consultants used different statistical methods to analyze the state’s data, and decided to retain and use samples which DEP and the South Florida Water Management rejected for reasons of quality control. Sugar industry consultants also present an argument that water with higher levels of phosphorus – supposedly in the 30 part per billion range, once flowed out of Lake Okeechobee into the northern Everglades prior to human settlement and development. They cite the evidence of a band of trees made up of pond apple and other swamp forest vegetation to suggest existence of an area that once tolerated nutrient levels far higher than the 6 – 8 part per billion background levels normally found in undisturbed sawgrass marshes. They either want the criterion for the entire EPA adjusted upward to reflect this postulated higher phosphorus level, or as an alternative, suggest that different (higher phosphorus) criteria be adopted for the parts of the EPA nearest the sugar cane fields.

Clearly, such claims can never be conclusively substantiated. But more significantly, this sugar industry position has an absolutely fatal flaw. Even if speculation about water higher in nutrients than 10 parts per billion leaving Lake Okeechobee in ancient times were shown to be correct, the place such discharges flowed into to was some 25 miles north of the “Everglades Protection Area” where DEP’s proposed 10 ppb water quality criterion is to be applied. Even assuming that a higher phosphorus zone once existed 25 miles north, that presents no evidence at all that such nutrient levels are appropriate in the sawgrass Everglades far to the south, where the criterion is to be applied and enforced.

Finally, the sugar industry’s demand for setting two or more criteria in the EPA is ruled out by the law’s clear language. Use of the term “criterion” in the law means one number, not several. And, the EFA says clearly that compliance must occur in “...all parts of the Everglades Protection Area.”

Dangerous territory – Monitoring, Mixing Zones and Variances – While DEP is making a commendable, science backed recommendation for a 10 part per billion phosphorus criterion, and is opposing the sugar industry efforts to set the criterion at a higher number, DEP staff appear to be straying into dangerous territory when it comes to the agency’s willingness to bend toward the sugar industry’s position on important related issues.

The Everglades Forever Act (EFA) envisioned a rulemaking proceeding to adopt a simple number as a phosphorus criterion, and the Legislature provided such a number as a default standard based on the best research available at the time (1994), which was 10 ppb. The “default standard” will be adopted by operation of law on December 31, 2003 in the event that DEP does nothing, or if the standard is still in dispute.

The EFA directs that DEP enforce the criterion by establishing “... discharge limits in permits for discharges into the EAA canals and the Everglades Protection Area.” In other words, the law says that a monitoring network and decisions on how monitoring is to be conducted should be written into each discharge permit rather than being taken up and decided as a part of a single rule covering the whole Everglades Protection Area. This is only logical, as the discharge area of each permit is obviously going to be different, and decisions on how to measure and monitor each one can’t be dealt with in a “one size fits all” approach in a single rule.

At the urging of the sugar industry, DEP is proceeding to complicate its proposed rule by including a monitoring methodology. While DEP personnel usually claim that

this methodology will only be used to produce a general “report card” on the health of the Everglades, sugar industry advocates believe it will be used to decide whether their discharges comply with the criterion for enforcement purposes. It is at best unclear whether the inclusion of monitoring provisions is even authorized for rulemaking by the EFA. At this writing, DEP staff’s final monitoring proposal to be made to the Environmental Regulation Commission has not been disclosed. The sugar industry is pressing hard for this monitoring language to include the concept of averaging monitoring sites across broad areas of the Everglades Protection Area, and to have monitoring conducted so as to average samples over a lengthy time period. It is possible that such a scheme could allow actual discharges to the Everglades to range upwards to near 100 parts per billion while facilitating a claim of “compliance” based on averaging.

Of even greater concern is DEP Staff’s recently announced intent to include “moderating provisions”, such as variances, mixing zones, or reliance on “net improvement” as a substitute for compliance with the phosphorus criterion as possible features of the rule.

In a recent presentations to the South Florida Water Management District Governing Board, and the Environmental Regulation Commission, an attorney under contract to DEP to help with development of phosphorus criterion rule indicated that the final draft of the rule to be submitted to the Environmental Regulation Commission in December, will include at least some of these moderating provisions. The attorney suggested that:

“A moderating provision may allow for discharges in excess of 10 ppb if:

- Reasonable assurance is provided that net improvement will occur in the impacted areas during the permitting cycle, and
- Reasonable assurance is provided that all reasonable steps will be taken to achieve the 10 ppb phosphorus criterion within the discharge provided that such steps will not cause substantial, widespread economic and social impact.”

In essence, DEP’s consulting attorney has suggested that compliance with the criterion be replaced by a flexible and subjective process that allows non-compliance to be excused in response to the sugar industry’s complaints that compliance costs too much.

Everglades Forever Act Rules Out “Moderating Provisions”—Fortunately for the Everglades, the Legislature took direct steps to rule out most of the “wobble room” lawyers for polluters would normally have to evade enforcement of the phosphorus criterion. DEP lawyers, however, urged on by the sugar industry, want to

read this exclusion in a far more limited manner – having it apply only to “best management practices”. The Everglades Forever Act states that:

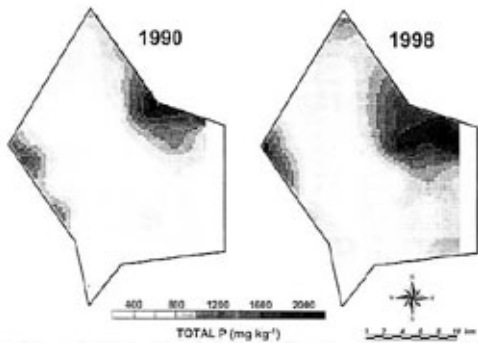
“Mixing zones, variances, and moderating provisions, or relief mechanisms for compliance with water quality standards as provided by department rules, shall not be permitted for discharges which are subject to paragraph (4)(f) and subject to this section, except that site specific alternative criteria may be allowed for nonphosphorus parameters if the applicant shows entitlement under applicable law. After December 31, 2006, all such relief mechanisms may be allowed for nonphosphorus parameters if otherwise provided for by applicable law.”

While paragraph (4) (f) relates to the *geographical area* of the EAA where best management practices are required, the last sentence of the prohibition clearly applies to the discharges which begin to be regulated under the phosphorus criterion on December 31, 2006. That is, in fact, the only purpose in the Everglades Forever Act that this date has. Limiting the application of the prohibition on mixing zones, variances ect. to “best management practices” is also a complete break with logic – variances, mixing zones, and similar moderating provisions have no application to “best management practices” in any event, so there would be no purpose in including this language in the EFA if it were targeted to those programs rather than actual pollution discharges from the agricultural area.

What should be done?—No one disputes that in January, 2007, when the new criterion (hopefully 10ppb) is first enforced, some discharges will be out of compliance at some sites. This is not unusual for a broad range of water quality standards throughout Florida and other states. The technologies that can be *immediately* applied to further reduce STA discharges from their current levels in the 30 ppb range, such as augmentation of the existing STAs with “submerged aquatic vegetation and periphyton based treatment areas promise results that may approach, but not guarantee compliance with 10 ppb. However, adjusting the standard or granting broad variances to simply tolerate this expected performance is *not* what the Everglades Forever Act requires. The EFA contemplates handling “violations” through special conditions in the unique “Long Term Compliance Permits” required under subsection 10 of the act. Those permits obviate the need for “relief mechanisms” by writing a prescription for remedying non-compliance. Under those permits, dischargers that cause violations must immediately start developing plans, schedules and funding mechanisms to do something more to achieve compliance.

“First, do no harm.” This maxim ought to be carefully considered by state officials dealing with the Everglades phosphorus standard. Since the law already provides a “default standard” of 10 ppb, there is no need to accept a bad compromise simply to get the same standard adopted by rule.

We are Losing the Everglades; Day By Day--Federal and state politicians usually herald the \$8 billion Comprehensive Everglades Restoration Plan (CERP) as the hallmark of their commitment to the environment. However, the viability of the entire Everglades restoration will be thwarted if the loss of the central Everglades marshes to phosphorus pollution is not stopped quickly. Studies done for DEP and the South Florida Water Management District document the rapid spread of cattails, loss of beneficial periphyton mat and other species shifts directly related to the effect of water column phosphorus causing elevated phosphorus levels in the soils of the Everglades water conservation areas. Rapid progression of the deterioration of Everglades Conservation Area 2 between 1990 and 1998 underscores the gravity of the situation. *The expansion of phosphorus destruction of the ecosystem is marching forward at a rate between 2 and 9 acres every day.*



Even with the implementation of “best management practices” by the sugar industry, and the initial startup of Stormwater Treatment Area operation, the conversion of healthy Everglades in WCA 2 to areas with enriched soils, cattail thickets, and lost periphyton communities continues unabated.

WHAT YOU CAN DO –

Contact the following public officials. Urge them to:

- Set a 10 ppb Phosphorus Criterion for the Everglades.
- Avoid inclusion of “relief mechanisms” such as variances, or mixing zones of any kind in any rule adopted.
- Handle monitoring provisions and remedial measures in the event of violations through the process established for “Long Term Compliance Permits” under the Everglades Forever Act. Don’t invent new procedures and attempt to adopt them by rule.
- Rely on the default standard rather than accept a bad compromise to get a rule adopted.

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