APPENDIX 1
Public and Peer Review Panel Comments

Appendix 1-2
Comments from the Public and Consultants

Appendix 1-2e
Comments on Behalf of the Counsel for Sugar Cane Growers Cooperative of Florida

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Topic: Chapter 3 Comments by Bill Green (1 of 1), Read 41 times

Conf: Everglades Report - Peer Review

From: Bill Green billg@hgss.com

Date: Friday, October 13, 2000 01:53 PM

Garth W. Redfield, Ph.D.
Lead Environmental Scientist
Water Resources Evaluation Department
South Florida Water Management District
3301 Gun Club Road
West Palm Beach, FL 33416

Re: Draft 2001 Everglades Consolidated Report/Comments on Behalf of Sugar Cane Growers Cooperative of Florida

Dear Dr. Redfield:

This letter follows up verbal and written comments by Tetra Tech, Exponent and myself presented on behalf of Sugar Cane Growers Cooperative of Florida at the Peer Review Panel Workshop held in West Palm Beach last week, regarding the above referenced report. I believe that our position can be summarized as follows:

1) Everglades water quality restoration goals should be adjusted to include the establishment of a nutrient gradient and associated ecology in areas downstream of the Stormwater Treatment Areas (STAs) now under construction. For this to happen, Florida's narrative nutrient rule needs to be interpreted in such a way that (a) remaining natural areas are protected from phosphorus induced imbalances of flora & fauna, and (b) "already impacted areas"
can be utilized for gradient ecology purposes. If the numerical criterion set for natural areas is roughly in the 10ppb to 20ppb range, a higher range of values will need to be set for "gradient ecology areas."

2) An independent advantage of allowing for gradient ecology is that such areas currently have the lowest methyl mercury contamination levels, attributed in part to higher phosphorus levels seen in those areas.

3) The Everglades Forever Act directs the South Florida Water Management District to evaluate the costs and benefits of further phosphorus reductions. However, no such analysis appears in the report. We urge the Peer Review Panel to recognize this oversight and to recommend that both the benefits and potential detriments of

further phosphorus reductions to fish and wildlife be explicitly addressed. We believe this should be focused on whether, in light of the gradient ecology and mercury factors, STA discharges should be permitted to occur at the design phosphorus concentration of 50 ppb, or at some lower level.

4) We also suggest that caution be applied to the research hypothesis that EAA sulfate may enhance mercury methylation at certain concentrations in certain areas of the Everglades. While hypotheses such as that formulated by Dr. Gilmour are a valuable component of scientific research, they should not be assumed true until proven. This is especially the case for the sulfate hypothesis which is both contrary to what has been observed in other wetlands and is based on limited data over a wide geographical region. In contrast, an inverse relationship of phosphorus and mercury in fish is apparent in water bodies throughout the country and other parts of the world, such as Scandinavia.

On behalf of the Cooperative and myself, I wish to thank you and the Panel for the attention you continue to give to these matters, and for the courtesies extended to us last week.

Very Truly yours,

William H. Green
Counsel for Sugar Cane Growers Cooperative of Florida

Post New Topic | Reply to: "Chapter 3 Comments by Bill Green"

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March 31, 2000

Dr. Garth Redfield
Lead Environmental Scientist
South Florida Water Management District
PO Box 24680
West Palm Beach, FL 33416

Subject: Suggested topics for the 2001 Everglades Report

Dear Dr. Redfield:

Thank you for giving us this opportunity to provide suggestions for topics to be addressed in SFWMD's next Consolidated Report. There are four things that should be included:

1) Final Goal of the Ecological Restoration

Because the Consolidated Report, in part, has the objective of providing scientific guidance for ecological restoration, we think it would be a good idea to define explicitly the restoration goals. Do we want to include the rich mosaic and the ecological niches of the historical Everglades, or do we want to make a few percent increase in the slough-sawgrass community? These two options have often been referred to by you as the photo-reduction and the cookie cutter approach respectively. Although these options have been discussed in many meetings that we have attended, neither of the two previous consolidated reports has sought to define explicitly, in layman's terms, the desired endpoint of the restoration. We think there are several data sources from the 19th century and the early 20th century that can be used to establish the areal extents of the different ecological niches that were present in the historical Everglades.

2) Ecological Parameters for Evaluating Improvement or Detriment (Algae vs. Birds and Fishes)

Once the objectives of the restoration (including the size of the different ecological niches to be included) have been established, the Consolidated Report needs to specify the important ecological parameters for the different niches and values for these parameters which ensure success. For example, if the goal of restoration is to create in reduced form, ecological niches that were present in late 19th century, the report must

also specify what components of the restored ecosystem will be used to monitor improvements toward that goal. Will macrophytes, or fish, or birds, or perhaps algae, be used as the indicator of change? The parameters selected for evaluating detriment or improvement of ecosystem health should be independent of whether the restoration is achieved by changing nutrient concentrations, water depth and hydroperiod, or mercury loading. The delineation of objectives and means for quantifying success should form a separate chapter, to be followed by chapters on hydrology, nutrients, and mercury, that address how restoration will affect the selected ecological parameters. In the previous reports, the presentation is often guided by data on monitored parameters that have exhibited change along the nutrient gradient. But not all of the parameters that exhibit change are ecologically meaningful, and there may be other parameters that are significant but do not exhibit change. In particular we would like to see data and discussion on how, if at all, the micro-level changes (such as alakaline phosphatase levels and algae taxonomy) influence higher trophic components of the ecosystem (such as birds, fish, alligators, and mammals).

3) **Impact of Other Ecological Restoration Efforts (Re-Study and Lake Okeechobee Restoration)**

The next Everglades report should address the water quality impacts on the WCAs and ENP of the hydrologic changes that have been proposed in the Re-Study program. Also, will the Re-Study program affect the EFA components that are planned to be implemented or have already been constructed? Will the Lake Okeechobee restoration effort currently in progress have any impacts on the water quality and quantity in the WCAs and the ENP?

4) **Use of Duke University Data**

Although Duke University research on phosphorus criteria for the Everglades represents about one-third of the publicly available data on the Everglades, these data have largely been ignored in previous reports. We believe that these data meet all the quality criteria used by the SFWMD, and should be considered in the overall analysis. Inclusion of Duke data in the SFWMD's analysis can help to make the final conclusions more robust. For example, Duke data show that the use of artificial substrates for periphyton sampling exaggerates periphyton responses to phosphorus. The District used artificial substrates almost exclusively in their periphyton sampling. By comparing both studies, changes in the periphyton taxonomy can be put in perspective.

We hope you will find these general suggestions helpful as you draft the next Consolidated Report. If you have any questions, please contact me or Steve Gherini.

Sincerely,

Sujoy B. Roy, Ph.D.
Tetra Tech, Inc.

Steven A. Gherini, P.E.
Tetra Tech, Inc.