Appendix 1A-2: Peer-Review Panel Comments on the Final *2007 South Florida Environmental Report – Volume I*

In July 2007, these comments were provided to the public on the District's WebBoard (http://www.sfwmd.gov/sfer). With the exception of reformatting some information for better readability, this appendix was not edited or spellchecked by the SFER production staff and appears as posted on the WebBoard.

Subject: Chapter 2 Evaluation – Otto Stein

Posted: 10 Jul 2007 07:39 PM
Originally Posted: 10 Jul 2007 07:33 PM

Review of Author's Responses to Panel Comments on 2007 SFER Chapter 2 (and appendices)

Reviewer Note: As a new reviewer I made none of the original comments on the 2007 report, therefore I must interpret not only the authors' responses, but also the comments of the previous reviewer.

Overall, the authors have addressed the reviewer comments, incorporating suggestions, or at least taking then under advisement. For completeness, I address each specific comment individually below and identify them numerically in the order in which they appear and by page number.

Review of Specific Comments and Author Responses:

Comment 1 (pg App. 1A-4-11,12): The authors have clearly changed the presentation format for the main Chapter 2 as suggested by the reviewer.

Comment 2 (pg App. 1A-4-13): It appears that the authors have created the necessary tags in the database for some of the suggested changes (upgrade of a sensor at a specific sample station) but not others (a discontinuation or relocation of a station) due to the difficulty in database management, therefore those changes are still recorded elsewhere. Unfortunately, changes in location are more like to cause a change in measurement without a change in actual condition. This may or may not be an issue, but easy access to a change in location would allow the reader to look for any potential bias due to the location change.

Appendix 2-4

Comment 3 (pg App. 1A-4-13): Directly related to comment 2 above. It may be worthwhile to make the information readily available in one place.

Comment 4 (pg App. 1A-4-14): Same response as comments 2 and 3.

Comment 5 (pg App. 1A-4-14): My understanding of the comment is that the reviewer would like documentation, or at least the data, to determine *if* there is a bias in long term records due to equipment changes and is not necessarily related to a reduction in random error per se. Is the response implying that the long term records have been checked for bias and none was found?

Comment 6 (pg App. 1A-4-14): Are the documents containing the "further details" of the sampling locations readily available to the reviewers should they choose to explore this further?

Comment 7 (pg App. 1A-4-14): The response seems quite reasonable, but relates to most of the comments above, Have long term records been checked or has there simply been a recording of appropriate data to at some time do this checking?

Comment 8 (pg App. 1A-4-15): The authors have supplied the requested data in the enclosed table.

Subject:Chapter 3B Evaluation – Otto Stein

Posted: 10 Jul 2007 07:39 PM
Originally Posted: 10 Jul 2007 07:34 PM

Review of Author's Responses to Panel Comments on 2007 SFER Chapter 3B

Reviewer Note: As a new reviewer I made none of the original comments on the 2007 report, therefore I must interpret not only the authors' responses, but also the comments of the previous reviewer.

Overall, the authors have addressed the reviewer comments, incorporating suggestions, or at least taking then under advisement. For completeness, I address each specific comment individually below and identify them numerically in the order in which they appear and by page number.

Review of Specific Comments and Author Responses:

Comment 1 (pg App. 1A-4-21,22): I believe the reviewer was merely suggesting that the overall structure of Chapter 3A, 3B, and 3C should be similar whenever possible. As pointed out by the authors, the knowledge base for different parameters in different so it might not be possible to have exactly the same structure. Agreed, but when practical, the overall structure should be similar for readability if nothing else.

Comment 2 (pg App. 1A-4-22): Similar to comment 1 above, not issue here.

Comment 3 (pg App. 1A-4-22): If not USGS then someone entity should explore the temporary and spatial heterogeneity of mercury and sulfur. (See my comments to Appendix 3B-3).

Comment 4 (pg App. 1A-4-23): It would appear that sulfur's influence on many parameters is a focus area of the 2008 report. This should shed more light on this comment and many others.

Comment 5 (pg App. 1A-4-23): Done.

Comment 6 (pg App. 1A-4-23): See comments 3 and 4 above.

Comment 7 (pg App. 1A-4-23): Was this funding secured?

Peer Review Panel Report Summary Comments

Most of these comments and responses are summaries of the comments above and there is little controversy as the authors agree with virtually all of the comments made by the reviewer.

Subject: Appendix 3B-3 Evaluation – Otto Stein

Posted: 10 Jul 2007 07:38 PM
Originally Posted: 10 Jul 2007 07:30 PM

Reviewer Note: As a new reviewer I made none of the original comments on the 2007 report, therefore I must interpret not only the authors' responses, but also the comments of the previous reviewer.

In general, the authors have made a good-faith effort to address the reviewer comments, incorporating most suggestions, or at least taking them under advisement, answering specific questions and/or adequately rebutting issues they disagree with. For completeness, I address each specific comment individually below and identify them numerically in the order in which they appear and by page number.

Review of Specific Comments and Author Responses:

Comment 1 (pg App. 1A-4-75): One could argue that the authors did not adequately address the comment in isolation, but it is clear that the rest of the comments could be considered subsets of this generic comment and thus it is addressed in total.

Comment 2 (pg App. 1A-4-75): To summarize sulfate is the primary source of sulfur, but the bio-geochemical transformation of the sulfate is the "problem". The comment and response are just two sides of the same coin.

Comment 3 (pg App. 1A-4-75,76): I am glad to see that the authors are performing mesocosm studies of the link between surface-water sulfate concentrations and MeHg production. This should lead to a better understanding of the phenomenon. However, the reviewers comment taken in larger context is valid, sulfur cycling in wetlands is quite complex and not well quantified, therefore it is likely that a one-parameter cause-and-effect model will only offer a partial answer to this complex question. The authors should push to have more sulfur data collected and made available to better assess other transformations and sinks of sulfur in the EPA system. In addition to sediment sulfur data, the influence of divalent metals especially iron, on sulfide precipitation and sequestration, and sulfur oxidizing bacteria in these open water systems might also be important.

Comment 4 (pg App. 1A-4-76): The comment and response is directly related to the above Comment 3. These data will be critical for a better determination of the sulfur cycle in the EPA.

Comment 5 (pg App. 1A-4-76,77): This is a very open-ended comment and the authors indicate that they are raising important questions that need to be answered before a direct link can be established. I would suggest that the temporal issues are probably more important than the spatial ones. Has there been any attempt to determine the time required for a influent sulfate molecule to influence mercury methylation and then move up the food chain to the fish species of importance? A direct link between current sulfate concentrations and fish tissue mercury concentrations may be impossible if these time scales are large and could explain the large spatial diversity.

Comment 5 (pg App. 1A-4-77): The authors have done an excellent job of addressing this comment and demonstrate that the authors are taking several parallel approaches to determining the sources of sulfate in the influent.

Comment 6 (pg App. 1A-4-77,78,79): Again the authors indicate they are quite knowledgeable about the link between sulfate, sulfide and mercury methylation. I agree that sulfate reduction is the obvious first process to focus on however, to re-iterate on comment 3 above, the sulfur cycle will probably need much better characterization before a direct link between sulfate and MeHg production can be fully established in the EPA.

Comment 7 (pg App. 1A-4-79): Responses to previous comments, especially the response to comment 6, make convincing arguments as to the link between sulfate concentration and MeHg production. However, I look forward to more study on the entire sulfur cycle in the EPA as an important bridge between sulfur and mercury cycles.

Subject: Chapter 5 Evaluation – Otto Stein

Posted: 10 Jul 2007 07:39 PM
Originally Posted: 10 Jul 2007 07:32 PM

Review of Author's Responses to Panel Comments on 2007 SFER Chapter 5

Reviewer Note: As a new reviewer I made none of the original comments on the 2007 report, therefore I must interpret not only the authors' responses, but also the comments of the previous reviewer.

In general, the authors have made a good-faith effort to address the reviewer comments, incorporating most suggestions, or at least taking then under advisement, answering specific questions and/or adequately rebutting issues they disagree with. For completeness, I address each specific comment individually below and identify them numerically in the order in which they appear and by page number.

Review of Specific Comments and Author Responses:

Comment 1 (pg App. 1A-4-32):

I believe the reviewer is referring to Table 5-39 and the associated summary plots (Figs. 5-57 to 5-65) as there is no Table 5-59. No one can dispute that the best way to calibrate mathematical models and hence better manage the STAs, is to look at the previous performance data for future guidance, as suggested by the reviewer. The authors' response clearly demonstrates that the District is taking this approach, but implies that unavoidable untreated diversions due to floods are a source of the relationship between increased TP loading and increased TP effluent concentration. If this is true, managing the STAs to deal with periodic untreated diversions to minimize their impact on the overall performance will be necessary.

The text added to the executive summary and chapter helps to demonstrate that the District is indeed using the collected data in management decisions, but I note that the stated text revision was modified before being added to the Executive Summary and the very important second paragraph was omitted, at least from the summary and I could not find it in the chapter. In the future when clear revisions like this are made, it would be helpful to state where the revision is located within the chapter.

Comment 2 (pg App. 1A-4-33): I agree that this chapter should focus on performance issues and more mundane issues such as the permit status could be in an appendix. I assume this comment relates to the new tri-level of review previously suggested by the review panel and initiated this year. Will the 2008 chapter been reformatted as suggested?

Comments 3 (pg App. 1A-4-33,34): What progress has been made in research to analyze the 2006 (and other) data to develop a cause and effect relationships between various types of plant stress (turbidity, dry-out, loading rate) and performance? These weather-related problems are not one-time events over the design life of the system, hurricanes and drought will continue in the future. Operational objectives will have to consider them and it is good to see the district is focused on them.

Comment 4 (pg App. 1A-4-34): Done.

Comment 5 (pg App. 1A-4-34): At what frequency is newly collected and analyzed data incorporated into the DMSTA2 model?

Comment 6 (pg App. 1A-4-34): This comment is related to comment 3 above. The reviewer's questions are valid and the authors' response quite appropriate. However vegetation management will have to consider the influence of drought, floods etc. Assuredly periphyton plants, and presumably SAV, will be more sensitive than emergent vegetation to drought and, based on the 2005 and 2006 data, hurricane damage. A concern will be the long term viability and maintenance issues in trying to keep all vegetation types established and performing optimally in the STAs.

Comment 7 (pg App. 1A-4-35): The comment is quite general and the author's response is appropriate.

Comment 8 (pg App. 1A-4-35): The positive comment relates to a re-organization of the Chapter in 2007 and suggestions to continue a similar re-organization in the future. Authors state they will take the suggestions under advisement.

Comment 9 (pg App. 1A-4-35): These questions were adequately addressed.

Comment 10 (pg App. 1A-4-35): The comment regards inclusion of public education in future activities. Authors' response indicates some positive developments such informational kiosks and posting of information on the website. While education per se might not be a primary function of

the district, I wonder how many local people are aware of the incredible activities for environmental stewardship and pollution control are going in their vicinity. I suggest the district be more proactive in addressing educational activities especially with the K-12 age level that would likely be very impressed with the work and wildlife viewing opportunities.

Comment 11 (pg App. 1A-4-35,36): The comment regards turbidity. I am somewhat surprised that increased turbidity was not "directly linked" to increased TP concentrations. I assume TP included particulate forms and I would suspect that the colloidal material encompassing turbidity would have relatively high concentrations of sorbed P. In fact, it seems P (and metals), that readily sorb to colloidal material, would be most affected by turbidity. A potential link between turbidity and effluent TP should be further explored.

Comment 12 (pg App. 1A-4-36): The authors incorporated this editorial comment in the final draft.

Comment 13 (pg App. 1A-4-36): This comment (regarding depth of water in the SAV) appears to be one of the questions currently being answered by experiment. This should be continued.

Comment 14 (pg App. 1A-4-36): I am not quite sure what the reviewer intended with this comment and perhaps the authors did not either. Whether ammonia is ionized or not depends primarily on the pH of the water. It is standard practice to include the sum of both as "ammonia N" realizing that unionized ammonia is significant in alkaline water and NH_4^+ is significant in acid water and the form is free to move back and forth as conditions change. To clarify, are the reported data for the sum of both NH_3 (aq) and NH^{4+} species?

Comment 15 (pg App. 1A-4-36): Done.

Subject: Chapter 2 Evaluation – Neal Armstrong

Posted: 10 Jul 2007 02:00 PM
Originally Posted: 10 Jul 2007 01:59 PM

SFER 2007 Chapter 2 and Appendices 2-2 and 2-4

Chapter 2 – Hydrology (and associated appendices) was to be reviewed by the SFER Panel at the Accountability Review level, and Dr. Ward and others providing comments to this topic provided an excellent review with a focus on chapter organization so that hydrology material was provided to the reader in an orderly and informative fashion and a focus on environmental monitoring over space and time with special attention to the data record as affected by equipment and station location changes. The Panel's comments were directed appropriately toward improving the hydrologic data record so that long-term hydrology trends and spatial changes can be detected with confidence.

The authors of the chapter and the two appendices (Appendices 2-3 and 2-4) responded in very positive and helpful ways to the two recommendations and seven comments, and they are to be commended for incorporating the responses to most of the recommendations and comments in the final version of this chapter and appendices. There are several areas where more information could be incorporated into Chapter 2 and Appendix 2-4, and these are noted in the detailed account of responses to recommendations and comments below. Specifically: (a) Chapter 2 in SFER 2008 could reference the information on DBKEY that was incorporated into Appendix 2-4; (b) the current monitoring design studies could incorporate sites in which long-term data consistency is explicitly studied and could examine water quality as well as rainfall, flow, and stage; and (c) the information on missing data due to equipment malfunction could be incorporated into Chapter 2 and Appendix 2-4 for flow, rainfall, and for water quality.

Specific itemization for recommendations and comments follow:

SFER 2007 Chapter 2

Panel Recommendation	Author Response
1. Chapter 2 reorganization recommended.	Chapter 2 was reorganized in recommended order in final version of SFER 2007 with plans to organize this chapter in SFER 2008 in the same way.
2. Document hydrometeorologic measurement network changes in Chapter 2 and Appendix 2-4 to assure that hydrology changes are actual rather than due to changes in network or measurement equipment.	A Microsoft Access-based database is currently used to store this documentation, but a new DBKEY has been created in DBHYDRO when upgraded equipment (sensor and/or communication system) is installed at the sampling station. This addition to DBHYDRO is noted in Appendix 2-4 but not in Chapter 2.

SFER 2007 Appendix 2-2

Panel Comment	Author Response
In Appendix 2-2, change misspelled (and offending) word in the recommendations section.	Misspelled word was corrected in Appendix 2-3 (changed from 2-2).

SFER 2007 Appendix 2-4

Panel Comment	Author Response
1. How does the District record the equipment used for past and present water quality measurements.	Author reported that such information is recorded in various separate databases including DBHYDRO. For flow measurements, for example, such information is recorded in the QMEAS database, as subset of DBHYDRO.
2. Can changes in equipment be noted?	See response #2 for Chapter 2 above.
3. How does equipment change affect data consistence and quality over time?	Because technology has improved over time, data quality has as well. While the error band of the data has been reduced, there is not necessarily a need to adjust the data.
4. How will future sampling locations be “optimized”? What criteria will be used to determine sampling locations?	The authors noted that such optimization depends on the parameter and that further details are available in the District’s optimization studies on rain gauge location and flow and stage networks. This Appendix has sections on these optimization studies and references for them in the Reference list.
5. In current monitoring design studies, will a subset of sampling sites [be] denoted long-	The author assumed a definition of consistency in the absence of one by the Panel

SFER 2007 Appendix 2-4

Panel Comment	Author Response
term sampling sites where the emphasis is on consistency over long periods of time?\	and answered "yes". Examples of flow and stage data were given. However, in Appendix 2-4 "consistency" seemed to be applied only to the rain gauge data. If flow and stage are used as examples, then it would be helpful if the authors would extend such discussion not only to flow and stage but to water quality as well.
6. Is it possible to estimate the percentage of data lost to equipment malfunction?	The authors note that it is possible to estimate missing data due to equipment malfunction, and estimates of missing data for mean daily flow and daily rainfall are given for 2001 through 2005. Such data were not added to Appendix 2-4 in SFER 2007, and the authors are encouraged to do so in SFER 2008 and to add water quality missing data if possible.

Subject: Chapter 4 Evaluation – Neal Armstrong

Posted: 10 Jul 2007 01:57 PM
Originally Posted: 10 Jul 2007 01:56 PM

SFER 2007 Chapter 4

Chapter 4 in SFER 2007 was to be reviewed by the Panel at the Accountability Level primarily and at the Integrative Level secondarily.

The authors of this chapter did an excellent job in SFER 2007 and have provided detailed responses to the Panel's three general recommendations. The Panel appreciates the thoroughness of the responses and the time taken to prepare such in depth responses. It also wants to emphasize the positive view it has of the work done and that it wanted to add support to several areas the District found views as important.

The Panel review of this chapter pointed out the successes that the regulatory program has had in reducing total phosphorus loading and applauded the excellent record of compliance achieved by the program in the EAA. It also noted the challenge remaining in C-139. The Panel recognizes that the phosphorus reduction efforts in the EAA and C-139 are part of a regulatory program, not a research program, but because of the role that BMPs play in total phosphorus reduction and because the District has underlined the importance of continued research on the total phosphorus reduction capabilities of various BMPs and how to make them even more effective (e.g., the authors' response points out the "maintaining and improving BMP effectiveness is at the core of the long-term success of the source control program"), the Panel made recommendations for continued research in this area to underscore the importance of research as well.

Likewise, the Panel has praised the innovation of the BMP equivalents approach. Because the equivalents were originally based on the effectiveness of BMPs in removing constituents of concern, the Panel understands there is some relationship between equivalents and effectiveness for each BMP, but it also understands that the terms are not synonymous. Nevertheless, the Panel noted in SFER 2006, Chapter 3, p. 3-13, that "The equivalents system was created to provide for a balanced compliance strategy in light of the many uncertainties surrounding BMP effectiveness

at the time of program inception", and it appeared to the Panel that reducing uncertainty about BMP effectiveness in view of the equivalents program might be a goal.

Specific recommendations and comments are listed below with the author's responses. The text in italics represents an assessment of what follow-up is needed by the authors and/or the Panel in SFER 2008.

SFER Chapter 4

Panel Recommendations	Author Response
1. Continued research, innovative management of the drainage canals, and the equivalents program.	The authors provide a very detailed response to the issues raised in the Panel's recommendation. There were many specific comments made prior to the September hearing that were addressed by the authors' presentation there but not included here. *The Panel looks forward to seeing those responses in the SFER 2008 report.*
2. Monitoring consistency	The authors point to continuous efforts to improve in this area, to information provided in SFER 2006 and in the draft version of SFER 2007. *The Panel continues to believe this is an area needing attention and looks forward to further information in the SFER 2008 report.*
3. Chapter "tightening"	The authors note several steps being taken to "tighten" the chapter and request a report outline similar to that done for the hydrology chapter last year. *The Panel appreciates efforts that have been taken and are planned and will discuss the preparation of a suggested outline.*

Subject: Chapter 8 Evaluation – Neal Armstrong

Posted: 10 Jul 2007 03:06 PM
Originally Posted: 10 Jul 2007 03:05 PM

SFER 2007 Chapter 8

While the author of Chapter 8 was responsive to the Panel's recommendations and comments and quite informative in her responses, it was not clear which if any of the responses were going to be or needed to be included in SFER 2007.

Subject: Chapter 10 Evaluation – Neal Armstrong

Posted: 10 Jul 2007 03:08 PM
Originally Posted: 10 Jul 2007 03:06 PM

SFER 2007 Chapter 10

The authors of Chapter 10 were very responsive to the Panel's recommendations and comments, and noted in several instances that additional material was going to be added to SFER 2007 or SFER 2008. Where such material was to be added to the SFER 2007 report, Chapter 10 has been enhanced from the draft by additional material which addresses the points raised by the Panel. The Panel looks forward to additional information in the SFER 2008 report.

Subject: Chapter 12 Evaluation – Neal Armstrong

Posted: 10 Jul 2007 02:02 PM
Originally Posted: 10 Jul 2007 02:01 PM

SFER 2007 Chapter 12 and Appendix 12-2

Chapter 12 in SFER 2007 was to be reviewed by the Panel at the Accountability Level primarily and at the Integrative Level secondarily.

Overall, the authors were very responsive to the recommendations and comments offered by the Panel, and the positive nature of those responses was appreciated. In many cases, the authors will be incorporating changes into the SFER 2008 document or considering whether to do so. In other cases, the authors effectively responded to comments, and it will be left to the Panel to see whether a response is found in SFER 2008.

Specific recommendations and comments are listed below with the author's responses. The text in italics represents an assessment of what follow-up is needed by the authors and/or the Panel in SFER 2008.

SFER Chapter 12

Panel Comments	Author Response
General: Chapter be restructured for in-depth focus on one coastal system each year and consistent presentation template.	Agree and will incorporate in SFER 2008. *Panel will need to check SFER 2008.*
1. Add overview, clarify management strategies and quantifiable targets, and consideration of work done elsewhere on Atlantic and Gulf Coasts.	Agree, but literature cited in Chapter 12 is not representative of those in District's technical reports. District staff is familiar with work done elsewhere. *Authors are encouraged to cite literature in Chapter 12 that demonstrates familiarity with and use of estuarine research done elsewhere.* *Panel needs to check SFER 2008.*
2. Coordinate work in South Florida estuaries.	Staff is involved in coordination with others and will continue to seek opportunities for collaboration. *Apparently will incorporate into future reports.*
3. Develop common presentation template for each coastal ecosystem and other changes.	Template will be developed for next year's report (SFER 2008). *Panel needs to check SFER 2008.*
4. Incorporate separate section on EACs and VECs and related material.	Recommendation will be considered for SFER 2008. *Panel needs to check SFER 2008.*
5. Incorporate summaries of main programs, entities, and integrative efforts.	Agree and will incorporate in SFER 2008. *Panel will need to check SFER 2008.*
6. Strengthened water quality data collection at key or core stations.	Authors will consider implementation as part of SFER 2008. *Panel will need to check SFER 2008.*
7. Examine urbanized areas for history of eutrophication and toxic substance	District not lead agency on such studies and studies involve many agencies.

SFER Chapter 12

Panel Comments	Author Response
accumulations.	*Not clear what District plans to do.*
8. Role of phosphorus in supporting cyanobacteria bloom in Biscayne/Florida Bays.	Some phosphorus sources being quantified, but not sure how to do others. *Not clear how this will ultimately be pursued.*
9. Describe exotic invasive species in coastal systems.	Authors agree and will discuss with Chapter 9 authors how best to approach this topic for future reports. *Panel will need to check SFER 2008 and subsequent reports.*

Loxahatchee Section – Additional Comments

Panel Comments	Author Response
1. How will District address "next steps"?	Authors state that "next steps" were partially addressed in previous years but will add language in the chapter ("next steps" found in Appendix 12-2). *Panel will need to check SFER 2008*
2. Oyster monitoring sites.	Authors plan to include information in SFER 2007 and more information to be available in SFER 2008. *Panel unable to readily locate information in SFER 2007 and will need to examine SFER 2008.*
3. Flow gauge coverage.	Gauges in non-tidal areas cover ~70% of the watershed. *Authors were responsive to query. Not clear if incorporated into SFER 2007.*
4. Water quality monitoring seemed inadequate.	District evaluating existing water monitoring system and considering sampling monthly instead of bimonthly. *Panel will check SFER 2008 for information on changes made.*
5. Freshwater effects on mangroves.	Stress not freshwater but other freshwater species that would invade and impact mangrove distribution. *Authors were responsive to query. Not clear if incorporated into SFER 2007.*
6. Larval fish density and species composition.\	Authors cite historical data as basis for parameters selected. *Authors were responsive to query. Not clear if incorporated into SFER 2007.*
7. Nutrients to be included in water quality sampling?	Authors note that nutrients sampled currently, and current program being examined for

Loxahatchee Section – Additional Comments

Panel Comments	Author Response
	improvements. *Authors were responsive to query. Not clear if incorporated into SFER 2007.*
8. What are expectations for Digital Elevation Model to improve inundation estimates and alter conclusions about optimal flows?	Authors do not expect conclusions about optimal flows to be altered, but better understanding about inundation and water storage expected. *Authors were responsive to query. Not clear if incorporated into SFER 2007.*
9. How well will selected flow regime approach critical flow needed for oysters?	Authors respond about changes in oyster populations longitudinally in the estuary. *Authors were responsive to query. Not clear if incorporated into SFER 2007.*
10. Green mussel invasion and impacts on oysters not discussed in chapter or appendix.	Authors note that spread of exotics in South Florida estuaries is a legitimate concern and will have to be addressed in future restoration plans. *Authors were responsive to query. Panel will need to check SFER 2008 for progress.*

Other Coastal Estuaries – Additional Comments

Panel Comments	Author Response
1. Role of phosphorus in supporting cyanobacteria bloom in Biscayne/Florida Bays.	Authors refer reader to response summarized above. *Not clear how this will ultimately be pursued.*
2. Salinity recorder near seagrasses near mouth of estuary?	While District is considering installing salinity recorders at seagrass sites near St. Lucie Inlet, other monitoring provides understanding of salinities there. *Authors were responsive to query. Panel will need to check SFER 2008 for progress.*
3. How does modeling of salinity, nutrients, and other variables show interaction with seagrasses? Also, will Florida Keys be added to coastal ecosystems?	Seagrasses are not really modeled with water column model; they are modeled separately with sediment as the nutrient source. Reader is referred to a report for more information. *Authors were responsive to query.*
4. Various questions about monitoring in the Caloosahatchee Estuary.	*Authors were responsive to query.*

Subject: Comments on the Executive Summary – JoAnn Burkholder

Posted: 10 Jul 2007 11:36 AM
Originally Posted: 10 Jul 2007 11:35 AM

Executive Summary

Panel Recommendations listed below were not addressed.

1. Formatting - Definitions of scientific terms/units should be added to the Glossary. In some cases, brief explanatory legends should be added for figures.

2. A section should be added identifying the most important challenges facing the District for the next water year including, as appropriate, what citizens of Florida can do to assist. Such a section could be very useful to the District, for example, on the exotic species issue.

3. A section should be added about major education outreach activities that the District accomplished during the water year including, importantly, tangible positive outcomes with broad effects beyond completion of the specific activities.

Subject: Comments on Chapters 1A, Appendices 3B and 3C-1 – JoAnn Burkholder

Posted: 10 Jul 2007 12:32 PM
Originally Posted: 10 Jul 2007 12:05 PM

Chapter 1A

Panel recommendations below were not addressed (1st, 3rd) or not further addressed (2nd). In general, this was an excellent chapter, and consideration of the recommendations below may make the 2008 SFER's Chapter 1a even stronger.

Mention should be made of the potential impact on the S. FL environment of increasing urbanization onto EAA lands…

A one- or two-page general description of the South Florida environment should be added, to orient the reader to the various parts of the system that are being discussed as well as describe their interconnectedness.

A section should be included in Chapter 1a, or perhaps more appropriately, a new chapter, that provides information about the District's many outreach education activities.

Chapter 1B

Four of seven panel recommendations were addressed; those that were not addressed are:

The C-139 basin and data (inputs, outputs) should be added to Figure 4.

The District should take the necessary steps to obtain reliable estimates of atmospheric deposition (p.3). It would greatly benefit the District to have a baseline, especially confronting what Chapter 1b describes as dramatic increases in adjacent urbanization.

The District should redouble its efforts to control TP loads entering Lake Okeechobee by working with appropriate agencies on development policies that will contribute to reduced TP loads.

Appendix 3B: - Sulfur in the Everglades

Overall evaluation - The final version of this appendix was considerably altered, in places, from the draft SFER. The authors considered the panel's concerns, and tempered their stated findings so as to not extend beyond the data. The chapter addresses the sulfide issue (p.3B-3-12), and the fact that sulfate concentration alone is not a good indictor for the mercury methylation problem (although I did not see mention of acid-volatile and chromium-reducible sulfides). It also

mentions (p.3B-3-26) that sulfide accumulation data and solid-phase reduced sulfur species are being compiled for consideration in the next project phase (unfortunately, some sites have only 2 data points). It does not, however, address the fact that the sulfur isotopic ratio is not a good tracer for sulfur source in South Florida because of the large fractionation involved during sulfate reduction, and limitations in interpretations about more >2 sources with distance. But the authors did mention that "in addition to concentration data, sulfur and oxygen stable isotopes, and major ions [chloride?]" should be examined as tracers of sulfur contamination; and that "an improved understanding of reduced sulfur storage and retention in soils is also needed" (p.3B-3-64).

Appendix 3C: - 1 Overall Evaluation

The final version appears identical to the draft. The panel recommendations were not addressed.

Subject: Chapter 6 Evaluation – JoAnn Burkholder

Posted: 10 Jul 2007 12:30 PM
Originally Posted: 10 Jul 2007 12:09 PM

Chapter 6 – Ecology of the EPA

Numerous modifications of the final chapter version from the draft, including addition of several figures and a table that were very helpful, show that the authors of this chapter seriously considered the panel's recommendations - those that were not addressed hopefully can be considered for the 2008 SFER. The panel recommendations were specifically considered as follows:

1. A short statement should be included in the summary of how the four research areas are inter-related – how they relate and inform one another. –

Not done in the summary, but addressed somewhat in the 2nd paragraph of the Introduction (p.6-6).

2. A clear statement should be provided of the agencies involved in all research areas, both in the summary and in each research section. –

Addressed in the Introduction: Interacting entities were listed in the Introduction (p.6-6).

3. The introduction should include a clear explanation as to why each research area was chosen (this could be easily accomplished with a table that lists the research project, the biological justification, and management goals or uses). –

Addressed: A nice table was added to address this recommendation. In the Wading Bird Monitoring section, a clear description was added of the major parameters considered (p.6-12); and Figure 6-5 is a very helpful addition.

4. The supplemental feeding study with white ibis should include analysis of contaminants, particularly mercury. –

Not addressed (p.6-17).

5. The same overall format should be used for reporting the research (introduction, scientific details, results and discussion) studies throughout the report. –

Not addressed.

6. 6/9: Future food web studies should be considered that involve larger mesocosms with more complex food webs. 9. Additional information should be included on the stable isotope techniques to examine trophic level inter-relationships. –

The panel's comments regarding these two recommendations are not reflected in the final writing, including comments to more fully explain the Methods, or to justify the experimental design.

7. All studies presented in this chapter should have clear hypotheses stated in their respective introductory sections.

Not addressed (except as before, in the Plant Ecology and Cattail Habitat Improvement Project sections), although objectives generally were clearly presented. The Fire Project section presented two main questions, rather than hypotheses, that were considered.

8. The effects of fire, particularly with respect to temporal and spatial patterns, should be explored and described more fully.

Not addressed.

Subject: Chapter 9 Evaluation – JoAnn Burkholder

Posted: 10 Jul 2007 12:14 PM
Originally Posted: 10 Jul 2007 12:12 PM

Chapter 9 – Nonindigenous Species

The chapter contains a clear synopsis (Summary section) of key activities that occurred during FY2006. The authors responded to the panel's recommendations throughout the text (e.g. helpful information added, including a table, on p.9-1; small but helpful touches such as the breakout of provinces on p.9-12, the organizational map – Figure 5, the helpful footnote added to Table 2, the nice use of a "natural setting" photo for the Gambian rat, careful attention to editorial suggestions - many other examples). While the draft chapter was excellent, the final version was even more so. The authors should be commended for an elegant, excellent contribution to the 2007 SFER.

Panel Recommendations

1. The involvement of the general public in the effort of nonindigenous species control is essential to the success of this task. Efforts should be made to educate the public in the problem and significance of exotic invasive species control in South Florida…. -

Addressed (p.9-6), along with mention of future efforts needed.

2. Pictorial description of the priority nonindigenous species should be included, especially plants (or refer to website). -

Addressed - very helpful addition of Figures 1-4 (pp.9-9 through 9-12). Also some nice photo additions (e.g. Ficus microcarpa, Schefflera actinophylla, and Scaevola taccada on pp.9-24 and 9-25).

3. Concluding remarks should include comments on the gap of current efforts, special notes of problems, and future needs in management, planning, research and funding. - Not further addressed, but this chapter overall was an excellent effort as stated above.

Subject: Chapter 10 Evaluation – JoAnn Burkholder

Posted: 10 Jul 2007 12:22 PM
Originally Posted: 10 Jul 2007 12:21 PM

Chapter 10 – Lake Okeechobbee and its Watershed

Overall, the panel's major recommendations generally were not reflected in the final chapter, either for content or editorial corrections. The final chapter did include some improvements (e.g. p.10-24, further information about other regional projects and regulatory considerations). Explanation was also added (p.10-36) about calcium in the Lake, including mention of District

plans to examine calcium and various other chemicals as management strategies for sequestering phosphorus. In the section Algal Biomass and Toxins, nutrient ratio information was not referenced or developed (p.10-35).

Comments on the Specific Panel Recommendations

1. This chapter should include additional data from the monitoring program for inputs of suspended solids, nitrogen (inorganic and organic forms), sulfate, and herbicides/ pesticides to Lake Okeechobee. –

Minimally addressed: Additional data were included in the final chapter only for pesticides and sulfate (p.10-40), and confusing statements about the use of herbicides was not clarified.

2. The models being used to forecast eutrophication and recovery of Lake Okeechobee from hurricanes should be briefly described, including information about incorporation of changing sedimentation coefficients and internal phosphorus loading.

Not addressed: The requested short description of the model was not provided; readers were referred (pp.10-31, 10-60) to the revised LOCEM and the 2006 SFER for further details. The chapter additionally mentions that future development of the LOEM might consider interactions among settling rates, sediment resuspension rates, and fluxes of dissolved inorganic nutrients.

3. Research is needed on sulfate reduction in the Lake and its role in mobilizing phosphate, as a potentially important biogeochemical process influencing phosphorus availability and eutrophication. –

Brief mention was added (p.10-40) that sulfate can affect eutrophication (and mercury) and clarified that no sulfate research has been conducted in the Lake to date, but the chapter does not mention whether such research is planned. [Interestingly, the authors also added that limits for mercury set for the Lake are among the least restrictive among mercury advisories in the state (referred readers to a website).]

4. A description should be added about the extent of residual soil phosphorus accumulation in the watershed, the projected influence of this problem on the Lake's water quality, and the model(s) used to make this projection. –

Not addressed: Only brief general information was added (p.10-31) to the effect that long-term P loading in the watershed has reduced P assimilative capacity in soils and wetlands, causing more P discharge to the Lake.

5. Information should be added about the severe suspended sediment problem in the Lake, the model(s) used to make this projection, and the analysis of feasibility for sediment management to accelerate improvements in water quality.

Partly addressed: Information was added (pp.10-60, 10-62, 10-63) describing an update of the SWAN model to simulate wind waves in the Lake in 2004-2005, and to more accurately predict large wind waves during hurricanes. Results apparently have provided supporting information that the hurricanes have had long-term impacts on sediment transport/re-suspension and nutrient exchange between the water and sediments. Requested information about the model itself was not provided. The authors did add (pp. 10-62, 10-63) a helpful, brief description of sediment management (which, they mentioned, had been described in "previous consolidated reports"). The selected "no action" alternative for feasibility of sediment management (as compared to chemical treatment and dredging scenarios) was previously evaluated using two separate water quality models (ILPM, LOWQM). Although the sediment management report was published in 2003 (Blasland, Bouck and Lee, Inc.), the final report of the management evaluations using these two models is still in preparation. The authors pointed out that the analyses underestimated available sediment phosphorus (given much more mixing from the recent hurricanes than had

been considered in the models), and that the "no action" alternative will therefore take longer than the predicted 30 years to achieve the targeted management goal of 40 µg P/L in the Lake water column.

6. Influences of fish on the lake food web should be examined. –

Aside from a recommendation for future work, information was not added to address the influences of fish on the Lake food web.

7. Additional information should be included about exotic species in the Lake (for example, maps of major exotic species distributions, and descriptions of potential impacts on beneficial native species). –

Minimally addressed: The chapter contains very brief information on exotic species. It clarifies (p.10-57) that exotic animals in the Lake are not tracked by the District; that the District monitors only two exotic plant species, torpedograss (~16,000 acres) and melaleuca (described as entirely controlled); and that recent hurricanes appear to have minimally affected these two species. It also mentions (p.10-62) that ~2,023 hectares (5,000 acres) of torpedograss were treated in the Moore Haven and Indian Prairie regions of the marsh in WY2006, and that since 2000, 10,117 hectares of torpedograss have been treated overall.

8. The panel recommends, as in its review of the 2006 SFER, that this chapter provide more integration with other chapters. The Kissimmee River is a major source of water and chemical constituents to the Lake, which in turn supplies water and materials to the EPA, the St. Lucie Estuary, and the Caloosahatchee Estuary. The impacts of the upper watershed on the Lake, and of the Lake on the St. Lucie and Caloosahatchee Estuaries and the EPA, should be described. The chapter should also include a description of plans to account for potential impacts on the Lake from urban/suburban development affecting the upper watershed. –

Not addressed, except for brief integration with Chapter 11.

Subject: Chapter 11 Evaluation – JoAnn Burkholder

Posted: 10 Jul 2007 12:29 PM
Originally Posted: 10 Jul 2007 12:27 PM

Chapter 11 – Kissimmee River Restoration and Upper Basin Initiatives

Specific comments on the panel recommendations (numbered below) are as follows:

1. Chapter 11 of the 2007 SFER should be restructured to add an initial outline of the chapter's contents. –

Not addressed, but the chapter would have been difficult to restructure at that point; perhaps this suggestion can be incorporated for the 2008 SFER.

2. The description of hurricane effects should include information about how such impacts can be mitigated.

Addressed: The chapter contains an additional paragraph (p.11-12) including a brief synopsis of hurricane history in the Kissimmee watershed over the past ~130 years, and brief information about how related impacts can be mitigated (mainly by increasing water storage capacity via a three-pronged approach).

3. Explanation should be added about considerations to ensure that restoration provides sufficient nesting sites for colony occupation by wading birds.

Not addressed, but the chapter does clarify (p.10-33) that appropriate reference data do not exist for numbers, locations, and species composition of wading bird nesting colonies pre-

channelization of the Kissimmee River. Thus, a restoration expectation was not developed for nesting sites, but the District plans to monitor them as a key feature of ecological integrity in the restored ecosystem. It would be helpful, in the 2008 SFER, to have explanation about considerations that will be taken to ensure that restoration provides sufficient nesting sites for wading birds.

4. The use of data on dissolved oxygen sags in the PM for that parameter should be clarified, and the extent to which dissolved oxygen sags promote higher phosphorus release from sediments should be examined.

The chapter states (p.11-27) that in the authors' view, despite some periods of low DO levels, DO has substantially improved following restoration. The basis for this statement, however, is mean DO levels. The chapter did not address the panel's concern that mean DO levels cannot be used to adequately evaluate conditions for DO stress; rather, oxygen "sags" pre-dawn need to be assessed. The chapter also clarifies (p.11-27) that the potential for low DO to enhance phosphorus release from river channel sediments has not been examined, but is suspected to be small in comparison to the quantity of phosphorus transferred downstream from the watershed. It mentions that the District planning for the next KRREP phase will consider proposals to evaluate phosphorus assimilation/release in the river channel and in the restored wetlands of the Pool D floodplain.

5. Increased phosphorus levels at the southern end of Lake Kissimmee are, as yet, unexplained and could confound management goals. The steps being taken to identify the sources of this elevated phosphorus should be clarified, and progress assessed in the 2008 SFER.

The authors deferred explanation of the sources for the increased phosphorus levels, as well as progress, to the 2008 SFER, and the panel looks forward to seeing the information there.

6. The Kissimmee and its watershed are the headwater region for the Everglades and, as such, are of vital importance to Everglades system functioning. This chapter requires clarification of how adaptive management is applied to the Kissimmee River and upper watershed, and the extent to which management activities in the Kissimmee are integrated with management for the rest of the Everglades system. Clarification should include explanation of how the phosphorus and mercury information will be included as part of the overall Everglades evaluation of mercury contamination.

The application of adaptive management in the Kissimmee system, steps whereby the general citizenry can judge management progress toward goals, evaluation of accountability of the KRRP, and the extent to which management of the Kissimmee are coordinated and integrated with management of the rest of the Everglades system remain unclear. Explanation was not included as to how phosphorus and mercury data will be included as part of the overall Everglades evaluation of mercury contamination. The panel hopes to see more explanation of these points in the 2008 SFER.

Subject: Evaluation of Chapter 12 and Appendix 12-2 – JoAnn Burkholder

Posted: 10 Jul 2007 12:50 PM
Originally Posted: 10 Jul 2007 12:35 PM

Chapter 12 – Management and Restoration of Coastal Ecosystems

The panel recommended major revisions on this chapter, mostly, however, for designing Chapter 12 of the 2008 SFER. Thus, the panel's major recommendations for further restructuring mostly were not incorporated into the 2007 SFER. The panel hopes to see them in the 2008 SFER.

Chapter 12 – Appendix 12-2 – Restoration Plan for the Northwest Fork of the Loxahatchee River

The panel was requested to evaluate this lengthy Appendix, although it was already in final published form. The quality of this Appendix (science, organization, writing) was excellent – it was a pleasure to read. The panel made six recommendations for future consideration, and hopes that they will be addressed in future updates of progress in restoring the Northwest Fork.

Subject: General Comments – Robert Ward

Posted: 06 Jul 2007 05:21 PM
Originally Posted: 06 Jul 2007 05:20 PM

The author responses reflect an ongoing struggle to report, in a scientifically sound and integrated manner, the status of the environment of a large water district that encompasses a unique and valuable ecosystem. The fact that such reporting is not well developed, professionally, compounds the problems facing the authors. It is refreshing to see the authors accepting the challenge and developing new presentation/content formats.

With respect to water quality and the SFER, this panelist also wants to acknowledge the difficulty in preparing an integrated report of environmental conditions when legal requirements, created by many separate state and federal laws, have specific reporting requirements that do not acknowledge the fact that one agency is attempting to implement the many laws in an integrated and sound science manner. (The laws are applied to an entire state/nation for a specific legal purpose which can be counter to the desire of a local management agency to integrate both management and reporting in a streamlined and publicly-oriented manner.) There are a number of countries rewriting environmental/water quality management laws to reflect the integrated nature of ecosystem management and reporting (e.g. the European Union, New Zealand, Brazil and South Africa), but the U.S. has not updated its major environmental legislation since the 1970s. On the other hand, for example, the U.S. Environmental Protection Agency, which administers the Clean Water Act, is working toward a more integrative monitoring and reporting approach, but there is still a long way to go. Linenfelser and Griffith (2007), a WERF report, describe the need to better integrate monitoring and evaluative techniques in performing water quality standard violation assessments. In many ways, the District and the Florida DEP, in preparing the water quality portions of the annual SFER and developing a new monitoring strategy, are ahead of the national requirements and on the cutting edge of environmental monitoring and reporting. Working at the 'edge' is not always comfortable, but it is obvious from the author comments that they are fully aware of the issues and pitfalls and this panelist wants to acknowledge the leadership shown by the staff in moving the entire 'science' of monitoring and reporting forward.

Literature Cited: Linenfelser, B. and L Griffith. 2007. Evaluating Waterbody Assessment and Listing Processes: Integration of Monitoring and Evaluative Techniques. WERF Stock No. 04WEM4, Water Environment Research Foundation, Alexandria, VA (www.werf.org).

Subject: Chapter 1B Evaluation – Robert Ward

Chapter 1B – Ward

Posted: 06 Jul 2007 05:24 PM
Originally Posted: 06 Jul 2007 05:23 PM

An Integrative Perspective on Water Quality and Phosphorous

Author responses to the Review Panel's comments, in general, further elaborate on issues raised during the review. The detail provided is responsive and helpful in understanding precisely the chapter's purpose and scope. In several responses note is made that the issues raised by the Panel will be considered for further elaboration in the 2008 report, per the Panel's suggestion in several

cases. One change is made in the final 2007 SFER – color of basin C-139, in Figures 1B-1a and 1b-1b, is changed to match that of the WCAs. This was done to indicate that the outputs from C-139 and the WCAs are rolled into one number in the figures.

Subject: Chapters 3A and 3C Evaluation – Robert Ward

Posted: 06 Jul 2007 05:31 PM
Originally Posted: 06 Jul 2007 05:30 PM

Status of Water Quality in the Everglades Protection Area

The author responses reflect the difficult situation surrounding monitoring water quality within South Florida for purposes of preparing the annual SFER water quality criteria violation assessment:

1. The SFWMD is water supply and flood control agency that organizes and funds water quality monitoring in a project mode;

2. Data from the 93 projects are stored in one database, DBHYDRO, and then scanned to obtain data for the water quality assessment provided in the SFER;

3. South Florida is a unique ecosystem that requires different levels of water quality monitoring – from routine monitoring of well understood water quality variables to highly variable, research-oriented, monitoring/measurement of poorly understood water quality variables.

The authors' responses reflect some frustration with the Panel's concern about the annual scan of DBHYDRO in order to obtain the data for the SFER water quality assessment. The Panel agrees with the authors that their efforts are far ahead of most, if not all, agencies using data for water quality assessments that was not collected specifically for that purpose. The authors are to be commended for this effort and the Panel appreciates the quality of the water quality assessments made in South Florida compared to those conducted elsewhere.

However, even with the documentation of methods, there remains the fact that a scan has to take place. The authors do not appear to have control of the water quality data collected in South Florida and placed into DBHYDRO. Nor do they control of the data available for the annual assessment – they must take and use available DBHYDRO data that meets their criteria. This situation leads to the Panel's concerns.

The Panel welcomes the efforts of the District to identify a network for sites for water quality assessment and attempts to operate them in a manner that supports a stronger scientific foundation for the annual SFER water quality assessment.

On most comments made by the Panel regarding apparent inconsistencies in the SFER results, the authors' responses help clarify the situation. The authors also note that they will seek further streamlining of the water quality presentations to reduce confusion in year-to-year results.

More specifically, the authors response to Panel comments on Chapters 3A and 3C highlights the efforts that have been made to introduce consistency in how water quality data are accessed in the District's DBHYDRO database and the efforts currently underway to improve the way water quality data are put into DBHYDRO for purposes of standard violation assessment. The Panel wants to acknowledge this effort and agrees with the authors' observation that the District's current procedures, which are documented and transparent, provide the best science that can be obtained under the current monitoring strategy employed by the SFWMD. In other words, given the District's water supply and drainage missions and its use of projects to organize and fund water quality monitoring, the authors do an excellent job in pulling together the best available data for their annual SFER water quality assessment.

The following comments/questions address more specific authors' responses to the Panel's comments on Chapters 3A and 3C.

1. Regarding streamlining Chapter 3, the Panel notes that other chapters in the SFER are expanding their scope to address all of South Florida, but Chapter 3 remains limited to water quality violations in the EPA. Are there plans to to develop Chapter 3 into a truly South Florida assessment of water quality or leave its purpose as: "the primary purpose of this chapter is to provide an overview of the status of water quality, relative to Class III criteria, in the EPA during WY2006"?

2. The author response to how data are queried each year from DBHYDRO, mentioned on page 1A-4-17, notes that the stations used for all periods in the 2007 report were updated to the 'standard network' to assure consistency between periods. Is this the new network that will consistently be used to evaluate standard violations in the future?

3. Also on page 1A-4-17, in reference to added stations in the Arthur R. Marshall Loxahatchee National Wildlife Refuge, it is noted that a revised network, with the added stations, provides a more accurate representation of water quality conditions. How are terms such as 'more accurate' and 'improved spatial coverage' used as criteria to bring new sampling site into the network? Hopefully there will be more elaboration on this point in the 2008 SFER? Or will the need to annually update the monitoring network be greatly reduced once there is a standard network for long-term water quality criteria violation assessment? It is recognized that there will always be shorter-term water-quality assessments related to emerging concerns and responses.

4. The Panel's comment on Table 3A-3 regarding the disparity between sample sizes, is acknowledged in the authors' response, but there is no change in the substance of the table. An asterisk is used to indicate insufficient sample size to confidently characterize the excursion frequency in both the draft and final 2007 SFER reports.

5. The errors (incorrect order of columns) in Table 3A-4 are corrected in the final 2007 SFER report.

6. The time period for pesticide detection and exceedance categories, in Table 3A-5, was changed in the final 2007 SFER to reflect an annual assessment (February 2005 through February 2006) rather than the December 2004 through February 2006 stated in the draft 2007 SFER.

7. On page 1A-4-19, it is noted that the annual queries of DBHYDRO do not result in different records from year to year and that if there are differences, it is due to refinements in the monitoring network. Regardless of how differences are created, is there not a potential for inconsistencies in the findings/conclusions from year to year due to changes in the monitoring network? The Panel notes that once a consistent network of sampling stations, with consistent sampling frequencies, is devoted to standard violation detection, such issues should be greatly diminished, or even eliminated.

8. On page 1A-4-27, the Panel asked if it was possible to place a confidence interval around the estimate of atmospheric deposition of TP. The authors' response to this question is not clear. If a number is reported and there are 'many data issues', would it not be more scientifically sound to report the estimate's uncertainty than just a firm number? It seems it should be possible to place a confidence interval around an estimate from weekly sampling at five stations.

Subject: General Comments on Author Responses – Jeff Jordan

Posted: 03 Jul 2007 03:06 PM
Originally posted: 03 Jul 03:06 PM

Whenever new tasks are added to an already huge job, it can seem overwhelming. However, after looking at the responses by authors to the comments from the panel, it is clear to me that extraordinary effort was put into this tasks. Since panelist rarely looked at the SFER that was produced each Spring it was hard to tell if our recommendations were having any impact on the process. The new approach this year allowed us, and authors, to account for the issues that were raised during the Fall review.

Subject: General Comments Evaluation – Jeff Jordan

Posted: 05 Jul 2007 10:38 AM
Originally Posted: 03 Jul 2007 01:54 PM

Response to General Comments:

Integrating Water Quality

I know this is a big task, as well as a collaborative one involving both FDEP and SFWMD. I understand the challenges and believe the effort is a sufficient response to the Panel. As is acknowledged, more interaction between the agencies is progress. The formation of the inter-agency working group on water quality is an important step.

SF Water Monitoring Strategy

The use of the working group should help--sufficient response.

Documenting Report Authorship

I still believe there is an important difference between authorship and merely contributors of data or some minor function. The issue is whether readers should believe that all of the people listed are in full agreement with all of the work and conclusions or if their contribution did not include fully reading and approving the material. This issue should still be addressed beyond just leaving it to chapter authors.

Reporting on Sulfur

Adding a chapter on sulfur and its role in causing or contributing to adverse impact in the EPA is a sufficient response.

The rest of the responses to the general comments are sufficient. I understand the trade-offs in terms of the executive summary but encourage continued refinements.

Subject: Chapter 1 Evaluation – Jeff Jordan

Posted: 03 Jul 2007 02:42 PM

Originally posted: 03 Jul 2007 02:42 PM

All responses to comments in 1A and 1B are sufficient. For comment 2 in 1A, I will look at the 2008 report for the change. For comment 4 in 1B, this information is helpful- -I hope it will be included in the 2008 report as suggested.

Subject: Chapter 2 Evaluation – Jeff Jordan

Posted: 03 Jul 2007 02:53 PM

Originally posted: 03 Jul 2007 02:53 PM

The reorganization of Chapter 2 should produce a much better product. We appreciate the author's willingness to make these changes.

Subject: Chapter 4 Evaluation – Jeff Jordan

Posted: 03 Jul 2007 02:43 PM

Originally posted: 03 Jul 02:43 PM

Responses to the three comments are sufficient.

Subject: Chapter 7 Evaluation – Jeff Jordan

Posted: 03 Jul 2007 02:45 PM
Originally Posted: 03 Jul 2007 02:44 PM

The authors responded to all comments in 7A and 7B and we look forward to the changes in the 2008 report. I support all of the comments by Meganck.

Subject: Chapter 8 Evaluation – Jeff Jordan

Posted: 03 Jul 2007 02:50 PM

Originally posted: 03 Jul 02:50 PM

Most of the responses from the author refer to other chapters. It is clear that cross-referencing between Chapter 8 and the other chapters mentioned is necessary. Since so much of what is being done in Chapter 8 affects other chapters (and the reverse) this would be a good place to do a through job of cross-referencing.

Subject: Chapter 12 Evaluation - Jordan

Posted: 03 Jul 2007 02:57 PM

Originally posted: 03 Jul 02:57 PM

As this is a "work in progress" I appreciate the author's willingness to take our suggestions seriously. This is a hard and complex chapter and more work is needed. However, it is clear that the authors are making an effort to follow panel suggestions. I look forward to seeing the 2008 report.

Chapters 1A, 1B, 7A, 7B, 8 Eval - Richard Meganck

Posted: 03 Jul 2007 02:57 PM

Originally posted: 03 Jul 02:57 PM

Posted 7-3-07 for Richard Meganck by WebBoard Administrator.

Comments on the Response to Questions Raised or Recommendations Made in Relation to Chapters 1A, 1B, 7A, 7B, 8 of the 2007 SFER

Task 1A: Review of the Authors' Responses to Comments of the 2007 SFER (After Reviewing the Applicable Chapters and Appendices of the SFER and the Relevant Portions of the Panel's 2007 Report)

General Comment: I believe this exercise of reviewing and verifying the comments from the authors to the questions posed by the Review Panel is a very effective one. This process will assist the public workshop process as it will be relatively straightforward for Panel members (and the general public who follow this exchange on the website) to focus on questions and responses in the subsequent SFER. Overall, it will make the entire process between the Panel and the authors much more efficient and, over time, effective.

Chapter 1A: Introduction to the 2007 SFER – Volume I

Comment 1: Author's comment noted; will verify during the review period for the 2008 SFER.

Comment 2: The explanation provided is logical. The section on major features of the South Florida environment provides sufficient information for the general reader. The reduced size of the chapter is desirable and anyone wishing additional information can access the web as is noted.

Comment 3: The response provided is fine. With the additional information that will be provided at the 2008 SFER workshop and its final report, the casual or detailed reader should find the information required. The scientist will also have the opportunity to consult references noted and direct contact with the authors. We should review this issue during the October 2007 panel meeting of the 2008 SFER.

Chapter 1B: An Integrative Perspective on Regional Water Quality and Phosphorus

Comment 1: Agree that an overall impression from the figure in question is better than trying to force too much hard data onto a map. Perhaps a footnote to the effect that more detailed data on the C-139 basin is found in Chapter 4 would be sufficient to deal with this response.

Comment 2: The District can only be expected to employ data collection and monitoring methods that are readily available and generally accepted. It won't do much good to collect data that will be questioned in terms of either accuracy or completeness. Therefore, the Panel can only expect the District to use new methodologies and equipment as they become available. The explanation provided seems logical. This issue can be reviewed during the October 2007 panel session.

Comment 3: Nothing further to add.

Comment 4: A logical plan and timetable is in place to increase the density and effectiveness of BMPs based on the experience to date. The response to the question raised provides a clear strategy that the public can grasp and towards which farmers can plan.

Comment 5: No specific comment. Rather than present partial data, the Panel agrees with the authors that only if it is discussed and agreed should Chapter 1B address Sulfur and mercury. Otherwise there are sufficient topics to address in this chapter.

Comment 6: The explanation provided is logical and the District should not necessarily alter its implementation plans particularly given that the expected reductions in P loads resulting from installation of BMPs in the Upper Kissimmee Basin are minimal.

Comment 7: This comment refers to the Panel's Final Report from the 2007 SFER workshop on the relationship between the need to co-manage P and N on a watershed basis. There are undoubtedly an infinite number of new research tracks that can be pursued, although investigating the impact of N on primary production is a fairly obvious one given the surrounding agricultural land use practices. The panelist raising this issue correctly points to the possibility nutrients other than P being a limiting factor to phytoplankton growth and apparently the District is responding to this possibility by conducting a study in the Caloosahatchee estuary. I hope the results of this study, plus the one being undertaken this year in the St. Lucie estuary, will allow the District to draw some conclusions as to the limiting factors for primary production in estuarine environments. It will be interesting to compare the data produced in these two studies with those from the Loxahatchee River and Estuary and subsequently with the P data to determine if consistent relationships or trends can be detected. I feel the District is correct to continue to use P as a primary indicator of water quality as well as the principle limiting factor for phytoplankton growth and as possible begin to examine other nutrients which either separately or in combination with P are acting to impact primary production. There is little else that the District can do except to incrementally gain new information on this issue, particularly given budgetary and time constraints overlaying the entire restoration effort, as well as the legal requirements imposed for installing new infrastructure.

Chapter 7A: Comprehensive Everglades Restoration Plan (CERP)

General Comment: This chapter has continued to gain in both the quality of the material present, as well as recognition of the obvious integrative nature of the CERP to nearly all other research and management activities being undertaken in managing the broader water regime. Therefore this chapter has become increasingly important to overall understanding of the CERP and it numerous components. Clearly this chapter will become even more important in the future as progress with implementation proceeds. This strong belief should not however preclude the District taking new research tracks when legitimate questions surface. However, with any complex and dynamic "natural" system, achieving a precise and broadly stated goal will only be possible within a range of acceptable targets and will continue to vary in the future.

Comment 1: The panel acknowledges the increased effort that is being placed on keeping the public informed on progress being made in achieving CERP goals through the Acceler8 program. The added emphasis noted will be verified in the 2008 SFER.

One additional comment that should not be taken as negative but rather in support of this overall effort is that the international community should somehow be made more aware of the CERP and it progress. Many nations are facing similar situations in managing coastal lowlands in very complex socio-economic contexts and although District scientists are publishing in peer-reviewed outlets, a greater effort to get general summary information into publications widely read in the developing world is logical. For example the UNEP publication *Our Planet* is read by thousands of students, scientists and managers worldwide. It would not be too costly an effort to ensure that important milestone information reaches those types of outlets.

Comment 2: No further comment as the authors have responded logically.

Comment 3: Agree with authors' comment.

Comment 4: The proposed response is fine and can be reviewed during the 2008 SFER workshop in October 2007.

Chapter 7B: Update on RECOVER and Implementation and Monitoring for the CERP

Comment 1: The proposed response will be reviewed in the 2008 SFER.

Comment 2: The panel appreciates the authors' proposal to include more social data in this part of the SFER. We would appreciate it if the in the 2008 SFER presentation, the authors would note the specific additions in this regard.

Chapter 8: Implementation of the Long-Term Plan for Achieving Water Quality Goals in the Everglades Protection Area

Comment 1: Clarified and now clear.

Comment 2: Clarifying that the treatment cells in the referred-to basin may be functioning quite well is important information, however, from the authors' comment that cannot yet be verified. The clarification that it is not possible to detect any significant difference in water quality with the installation of the levees in specific cells would seem to indicate the need for further investigation as noted.

Comment 3: Agree with and understand the authors' comment.

Comment 4: Clarifying that the monitoring programs in effect at the STAs does not include monitoring in the Everglades or the downstream receiving areas helps reader understanding, but perhaps a specific reference to the portion of the SFER where such data or text is provided (footnote?) would be desirable.

Comment 5: The response provided is understandable and acceptable. Perhaps a reference to or web link to the referred-to sections of the SFER would help in reader understanding. Nobody is questioning whether the District is complying with the law, but rather whether a review process is in place to avoid such comment from the public that will result in delays to implementing specific water-quality related structures or actions. The panel fully supports the adaptive management program as a legitimate way in which to integrate new data and other information into management work plans.

Comment 6: Agree with authors' comment.

Comment 7: The panel is sympathetic with the attempt to keep the overall volume of the SFER in check, but as many individuals will read only those parts of the report that interest them or in which they are more versed, the cross referencing still seems like an acceptable way in which to bridge potential questions that may arise.

Comment 8: Agree with the comment.

Subject: Comments on Responsiveness of Authors of 2007 SFER – Joanna Burger

Posted: 02 Jul 2007 03:58 PM
Originally Posted: 02 Jul 2007 03:54 PM

Posted by WebBoard Administrator, 7-02-07.

Providing the Peer Reviewers the opportunity to see and respond to the responses of the chapter authors is an excellent idea. However, the comments of the Peer Review Panel fall into several categories: a review of the chapter, specific details that can be fixed and amended, and overview comments that require reorganization of the entire effort (or significant parts thereof), re-thinking of issues, and new directions. It is the latter category that were less well addressed in the comments I read. Many of these issues may well require a more in-depth discussion with the Panel.

Additionally, in the future we need to organize both the Panel Reviewers comments, and the Authors responses so there is consistency across chapters. This will require a discussion among the Panelists.

In the future, it would help the chapter authors, the Peer-review Panel in their response, and the public, if all the comments were labeled. That is, in responding to the authors, the Peer-review Panel needs a way to refer to each comment.

Chapters for JB to Review: 3b, 9, and secondarily 6, 11, 6X

Subject: Chapter 3B Evaluation – Joanna Burger

Posted: 02 Jul 2007 04:02 PM
Originally Posted: 02 Jul 2007 03:56 PM

Posted 7-2-07 for Joanna Burger by WebBoard Administrator.

Responses to the General Peer Review Comments

The responses are exceedingly useful in understanding the rationale for the current organization of Chapter 3, including the individual sections (i.e. 3b). One way to deal with the complexity, and the different levels of information and formal criteria, is to include the rationale information given in this response in each section, particularly at the beginning of Chapter 3. This would alert the reader to not only the organization, but the current reasons for this organization.

The revision of the report reflects the general peer review comments where possible, such as the inclusion of authors, and connecting research and management goals. Both the reporting on sulfur

comments, and cross-cutting themes will be better addressed in the 2008 report, but are not included in the current revision. It would have been helpful to know how the meeting in the spring of 2007 addressed the cross-cutting themes mentioned.

Over the last two years, the Peer Review Panel has made several suggestions about organization of the report, many of which have been implemented. Perhaps a useful approach would be to not only discuss these with the overall Editor of the report, but to have a workshop with the lead authors of each chapter at which we discuss these questions.

Responses to Comments on Chapter 3B – Joanna Burger

The initial comments all deal with overall organization of Chapter 3, and again, it seems that the overall rationale for the chapter should be explicitly stated at the beginning of Chapter 3, and again in Chapter 3B. Two-three sentences about why mercury should be examined in biota rather than as water quality criteria would go a long ways to explaining the different treatment of sulfur and mercury. The lack of criteria for mercury makes it difficult to have the same format, but not to have some of the same tables and data presentation.

Information on the relationship between sulfate and mercury requested by the comments has now been integrated. The other comments of the Peer Review Panel were more in line with data needs for investigators, and could not result in modification of the chapter itself. Funding is an issue, and not all problems or issues can be addressed currently.

Responses to Peer Review Panel Recommendations on Chapter 3B

The following comments were adequately addressed by the authors: 1, 2, 7.

Comment 3, relating to understanding why mercury levels are high in the ENP, was not adequately addressed with specifics of how (and when) further investigations will specifically address the issue. Similarly, Comment 4 and 5 requires additional funding before it can be addressed.

Comment 6, relating to SAMS, is still an extremely important issue, and the Panel would like an update on the outcome of the discussions.

Comment 8, merely refers to continued studies, which are going to continue.

Subject: Chapter 6 Evaluation – Joanna Burger

Posted: 02 Jul 2007 04:04 PM
Originally Posted: 02 Jul 2007 03:59 PM

Posted 7-2-07 for Joanna Burger by WebBoard Administrator.

Responses to the Peer Review Panel Comments

The inclusion of an appendix to Chapter 6 (in the 2008 report) that will summarize past research, and the relationship among the four main areas of research is an excellent idea, and is responsive to the Panel's comments. Similarly, a summary table that relates how each research project (anticipated for the 2008 report) relates to the goals of CERP, will be extremely useful (partly this could have been done in the 2007 report).

Several comments were addressed in the revision to the 2007 report, and these include: (1) a statement of how the research areas are related, (2) authors and agencies involved, (3) rationale for the DNA study of cattails, (4) a statement of the overall rationale for the research, (5) adding specific figures on numbers, (6) the supplemental feeding study, (7) definition of floc, (8) details of the Invasive Species Summit, (9) tree island objectives, (10) the FIRE experiment, (11) a figure on the tree islands, and (12) the summary table on hypotheses.

The Everglades wading bird population modeling is expected soon, and was not available at this time. Thus the chapter could not include it. Similarly, the chapter section on wading birds has been revised to include the issues mentioned. The explanation for low wading birds in the ENP was much appreciated, and makes this section clearer, although we still don't understand why.

Many of the other issues were discussed, but not necessarily revised in the current document. The Panel appreciates answers to some of these questions, including when specific results will be available (some of this should be added to the 2008 report).

Subject: Chapter 9 Evaluation – Joanna Burger

Posted: 02 Jul 2007 04:02 PM
Originally Posted: 02 Jul 2007 03:59 PM

Posted 7-2-07 for Joanna Burger by WebBoard Administrator.

The major comment of the Peer Review Panel was to include educational efforts in the chapter. The authors of this chapter were responsive to this request, and have added considerable information about educational efforts. While the authors specifically address Florida, it is clear that more effort is needed in Florida, particularly given the problem of this sub-tropical region.

It is not clear from the response of the authors that the specific comments were addressed, although many appear to have been.

Subject: Chapter 11 Evaluation – Joanna Burger

Posted: 02 Jul 2007 04:03 PM
Originally Posted: 02 Jul 2007 04:00 PM

Posted 7-2-07 for Joanna Burger by WebBoard Administrator.

Responses to Peer Review Panel

The authors of this chapter and of others as well, should specifically state how they addressed the comments in the chapter (not just answer the question). Then the reviewers could more easily cross-check this.

The authors answered adequately most of the comments, including (1) inclusion of an outline, and (2) sufficient habitat for nesting birds.

Some issues will be included in the 2008 report, which is appropriate for more difficult issues, including explanation for increased phosphorus levels in Lake Kissimmee.

The issue of mercury in the Kissimmee might better included in the mercury chapter. Further, the definition of adaptive management, so important to this chapter, should be included as a footnote. Not all of the public will go back to all previous reports to look for such detail. Their addition was helpful.

Responses to Additional Comments

Most of these comments were adequately addressed in the revision of this chapter. The authors adequately addressed the issue of management of the Kissimmee in respect to the rest of the Everglades system. Other outlying issues mainly deal with mercury in this system, which suggests that it would be ideal for the authors of this chapter and those of the mercury chapter (including the researchers) to meet to discuss critical issues with mercury in this system.

Responses to Peer Review Panel Recommendations

The authors were responsive and added information where requested. This improved the chapter overall.

Subject: Chapter 10 Evaluation – van Donk

Posted: 28 Jun 2007 02:08 PM
Originally Posted: 28 Jun 2007 02:00 PM

The attached evaluation is for Chapter 10 from Prof. dr. Ellen van Donk.

Posted 6-28-07 by Trudy Morris Stein WebBoard Administrator.

Recommendations

1. This chapter should include additional data from the monitoring program for inputs of suspended solids, nitrogen (inorganic and organic forms), sulfate, and herbicides/pesticides to Lake Okeechobee.

Responses: Some more data are now included in the report on page 10-40 concerning the pesticide and sulphate monitoring program. More information is needed about nitrogen. Also is stated that pesticides are not used on the lake as part of any control program by the SFWMD and that herbicides are used to control exotic and invasive species. The District has not studied direct effects of herbicides on lake fauna.

2. The models being used to forecast eutrophication and recovery of Lake Okeechobee from the hurricanes should be briefly described, including information about incorporation of changing sedimentation coefficients and internal phosphorus loading.

Reponse: On page 10-60 is stated that further details on the revised LOCEM can be found on the District's web site at www.sfwmd.gov under the What We Do, Watershed Management, South Florida Watersheds, Okeechobee section and the Documents tab. We, however, asked for a short description of the model and not a reference to a website.

In the text on page 10-60 the authors write that " the sediment water interactions are influenced by constant settling rates, sediment resuspension rate determined through calibration of suspended solids, and flux of dissolved inorganic nutrients. While the sedimentation coefficient can be adjusted to account for possible interactions with declining calcium and increasing sulfate, currently there is no direct mechanism that dynamically changes this coefficient over time. Future development of the Lake Okeechobee Environment Model (LOEM) may consider these interactions". We hope it will be included in the report of next year.

3. Research is needed on sulfate reduction in the Lake and its role in mobilizing phosphate, as a potentially important biogeochemical process influencing phosphorus availability and eutrophication.

Response: On page 10-40 a new paragraph has been included which gives more information about the role of sulphate: "Sulfate is known to impact eutrophication (Lamers et al., 2002) and is recognized to impact mercury cycling in the Everglades (Marvin-Dipasquale and Oremland, 1998). However, as with other ions in the lake, sulfate has declined from over 60 parts per million (ppm) in the early 1970s to under 30 ppm in the 2000s. No sulfate research has been conducted on Lake Okeechobee to date. Although mercury is a concern in Florida waters, especially for fish consumption, Lake Okeechobee limits are among the least restrictive of all advisories in the state (for information on individual lakes and water bodies see

http://www.doh.state.fl.us/environment/community/fishconsumptionadvisories/FreshfishSearch.html

4. Description should be added about the extent of residual soil phosphorus accumulation in the watershed, the projected influence of this problem on the Lake's water quality, and the model(s) used to make this projection.

Response: On page 10-31 a paragraph is added stating, "Long-term phosphorus loading in the watershed has created residual phosphorus in the soils. The increase in residual phosphorus has

reduced the phosphorus assimilative capacity of soils and wetlands in the watershed, resulting in more phosphorus discharge to the lake. Methods are needed to manage and capture phosphorus stored in the watershed before it gets to the lake. The District is soliciting landowners to develop opportunities to store water on their farms and is developing ongoing water storage projects within the watershed."

However, no information on the extent of residual soil phosphorus accumulation in the watershed, the projected influence of this problem on the Lake's water quality, and the model(s) used to make this projection, is yet included.

5. Information should be added about the severe suspended sediment problem in the Lake, the model(s) used to make this projection, and the analysis of feasibility for sediment management to accelerate improvements in water quality.

Response: On page 10-60 the paragraph is added: "The wind-wave model Simulating Waves Nearshore (SWAN) for the Lake Okeechobee Environment Model (LOEM) has been updated. The model has been used to simulate wind waves in the lake from 2004 to 2005. The model more accurately predicts the large wind waves during the hurricanes. Using these wave predictions, the LOEM simulated the hydrodynamic, sediment processes, and water quality during and after hurricanes from 2004 through 2005, including Charley, Frances, and Jeanne in 2004, and Wilma in 2005. The modeling results indicated that the hurricanes have had lasting impacts on the sediment transport, sediment resuspension, and nutrient exchange between the lake bed and the water column. For instance, Hurricane Frances led to huge bottom shear stress on the lake bottom, which caused large resuspension of sediment and nutrients to the lake water column."

More information should be added about the model(s) used to make this projection, and the analysis of feasibility for sediment management to accelerate improvements in water quality.

6. Influences of fish on the lake food web should be examined.

Response: This is still a recommendation for further studies, there is nothing about this included in the text.

7. Additional information should be included about exotic species in the Lake (for example, maps of major exotic species distributions, and descriptions of potential impacts on beneficial native species).

Response: The only information given on exotic species is written on page 10-57. "The District has not tracked exotic animals on the lake, and exotic plant tracking is limited to torpedograss and melalueca." We hope more information will be added in the report of 2008.

8. The Panel recommends, as in its review of the 2006 SFER, that this chapter should provide more integration with other chapters. The Kissimmee River is a major source of water and chemical constituents to the Lake, which in turn supplies water and materials to the EPA, the St. Lucie Estuary, and the Caloosahatchee Estuary. The impacts of the upper watershed on the lake, and of the lake on the St. Lucie and Caloosahatchee Estuaries and the EPA, should be described. The chapter should also include a description of plans to account for potential impacts on the lake from urban/suburban development affecting the upper watershed.

Response: The Panel still recommends that this chapter should provide more integration with other chapters. Only some integration has been established with Chapter 11. Much more integration is needed.

Subject: Chapter 11 Evaluation – van Donk

Posted: 28 Jun 2007 02:07 PM
Originally Posted: 28 Jun 2007 02:02 PM

Posted 6-28-07 by Trudy Morris Stein WebBoard Administrator.

The attached evaluation is for Chapter 11 from Prof. dr. Ellen van Donk

Recommendations

1. Chapter 11 of the 2007 SFER should be restructured to add an initial outline of the chapter's contents.

Response: An initial outline of the chapter's contents has not been added.

2. The description of hurricane effects should include information about how such impacts can be mitigated.

Response: A paragraph has been added on page 11-12 with some information about how impacts can be mitigated.

"Hurricanes, a recurring event in South Florida, have passed over the Kissimmee Basin about once every seven years for the last 129 years. Increasing water storage capacity is the chief means of mitigating impacts of the intense rainfall that can accompany hurricanes and other tropical systems. In the Kissimmee Basin, storage is increased in several ways. First, regulation schedules for lakes are designed to lower water levels and increase water storage capacity for the wet/hurricane season. Second, the Headwaters Revitalization Project, when complete, will provide an additional 100,000 ac-ft of storage in lakes Kissimmee, Cypress, and Hatchineha. Third, future Comprehensive Everglades Restoration Plan (CERP) projects will provide additional storage of Kissimmee Basin water before it enters Lake Okeechobee."

3. Explanation should be added about considerations to ensure that restoration provides sufficient nesting sites for colony occupation by wading birds.

Response: On page 11-33 is written: "No quantitative data are available for the numbers, locations, and species composition of wading bird nesting colonies within the pre-channelized Kissimmee River/floodplain system and no appropriate reference data were identified. Therefore, a restoration expectation was not developed for reproductive effort by colonially nesting wading birds. However, this key aspect of ecological integrity of the restored Kissimmee system will be monitored throughout the restoration evaluation program." We still expect that an explanation will be added about considerations to ensure that restoration provides sufficient nesting sites for colony occupation by wading birds.

4. The use of data on dissolved oxygen sags in the PM for that parameter should be clarified, and the extent to which dissolved oxygen sags promote higher phosphorus release from sediments should be examined.

Response: On page 11-27 the authors write: "It is important to note that post-construction DO concentrations of <1 mg/L have been recorded in the river channel during the wet season and, in some cases, low DO concentrations have persisted for as long as several months. As noted previously, low DO concentrations can affect the availability of nutrients, including phosphorus. The possibility that low DO leads to release of phosphorus from river channel sediments has not been examined. The amount of phosphorus released from sediment in the restored river channel is believed to be relatively small compared to the amount of phosphorus transported downstream from sources throughout the basin. Nevertheless, planning for the next KRREP phase will consider proposals to study phosphorus assimilation and release in the river channel as well as the restored wetlands in the Pool D floodplain.

Despite some periods of low oxygen levels, DO has improved substantially following restoration. Although the restoration expectation for DO concentrations in the restored river channel is intended to be evaluated after implementation of the Kissimmee River Headwaters Revitalization Project regulation schedule, two of the four metrics used to evaluate DO response are already being met under the interim regulation schedule.

We stimulate the idea that in the planning for the next KRREP phase proposals will be considered that study phosphorus assimilation and release in the river channel as well as the restored wetlands in the Pool D floodplain.

5. Increased phosphorus levels at the southern end of Lake Kissimmee are, as yet, unexplained and could confound management goals. The steps being taken to identify the sources of this elevated phosphorus should be clarified, and progress assessed in the 2008 SFER.

Response: This is still a recommendation for next year.

The Kissimmee and its watershed are the headwater region for the Everglades and, as such, are of vital importance to Everglades system functioning. This chapter requires clarification of how adaptive management is applied to the Kissimmee River and upper watershed, and the extent to which management activities in the Kissimmee are integrated with management for the rest of the Everglades system. Clarification should include explanation of how the phosphorus and mercury information will be included as part of the overall Everglades evaluation of mercury contamination.

Response: Explanation of how the phosphorus and mercury information will be included as part of the overall Everglades evaluation of mercury contamination is still lacking.