

Manuscript: St. Marys River Evaluation and Restoration Project Report for Peer Review

Author(s): _Not clear who wrote pp. 1-18; Appendix A was written by Bain, Arend, Steinhart, Moerke, and Varnakovida; Appendix B has a variety of authors (primarily Bain) but LimnoTech appears to have assembled it; Appendix C appears to have been written by Siefke and others. _____

Name of Reviewer: _Barbara L. Bedford_____

1. Are the objectives of the work clearly stated? 1(2)3 4 5
Objectives are indirectly stated in the last sentence of the second paragraph on p. 1. Objectives are clearly stated on p. 5, and clearly stated upfront for Appendices A and B but not for Appendix C.
2. Are the methods employed valid, appropriate and sufficient to address the questions, hypotheses or the problem? (1)2 3 4 5
I noted some variability among PIs but these PIs are based on much more extensive research and data than some of the PIs for the lakes themselves.
3. Are the observations, conclusions and recommendations supported by the material presented in the manuscript (e.g., data, model and analyses)? (1)2 3 4 5
They are supported by extensive data and very strong analyses; models seem sound.
4. Are the assumptions used valid and are the mathematics presented correct? (1)2 3 4 5
Cannot comment on mathematics as I am no expert here.
5. Is the manuscript well organized, material precise and to the point, and clearly written using correct grammar and syntax? 1(2)3 4 5
Appendices A and B are well written, more so than pp. 1-18 and Appendix C.
6. Are all of the figures and tables useful, clear, and necessary? 1(2)3 4 5
The lettering on Fig. 2 is blurry and the figure needs a key to the colors. The word occurrences is misspelled in Fig. 3. Table 1 legend is incomplete; it should read "description of biological conditions associated with gradients of ecosystem degradation." Figure 4 is very blurry, requires a color key, and its legend should indicate what study these site are for. Table 3 legend should read "Methods and Timeline for GLFC Study of Enhanced Sea Lamprey Control for St. Marys River. Table 4 should have "fish" inserted before "species" in the legend.
7. What is the quality of the overall work? 1(2)3 4 5

Recommendation (please circle your response)

(A) - acceptable

B - acceptable with suggestions for revision

C - acceptable if adequately revised
D - unacceptable

If you have selected **C**, do you wish to receive the revised manuscript for further review? yes no

Rating (Circle the rating you would like to give this manuscript. Unacceptable work should be given a score of 40 or less.)

100 **95** 90 80 70 60 50 40 30 20 10 0

Comments (limit responses to one paragraph for each question; reference pages, charts, and data. Please distinguish if responses are of major or minor concerns.)

A. What is the best/most unique part of the analysis?

The extensive peer-reviewed literature and research that supports the analysis lends strength and credibility to the recommendations and conclusions.

B. What is the most critical aspect of the study/analysis? Why?

The recommendations that appear primarily in Appendix B should be prominent in pp. 1-18, especially those related to adaptive management. The unique biological productivity and diversity of the St. Mary's River ecosystem should be stated more strongly in pp. 1-18; it is quite clearly stated in Appendix A but the appearance of pp. 1-18 before could cause the stronger and better-written Appendix A to be missed.

C. Which aspect of the analysis/modeling is weakest? Why? How can it be improved?

I have no problems with these aspects of the work.

D. Are there any other suggestions that are related to how this analysis may be used more effectively or the results explicated in a more understandable manner?

My primary recommendation is that the recommendations pertaining to adaptive management, the uniqueness of the St. Mary's River, and the very real opportunity to restore some of the ecological characteristics of the system, especially with respect to sea lamprey, be stated more clearly and prominently in pp. 1-18.

Please indicate any confidential comments to the Co-Chair(s) of the Independent Peer Review Group in the space below. Comments for transmission to the author(s) should be on a separate sheet attached.

On the whole, this document is far better written than the other document I reviewed. Appendices A and B are especially well-written.

Signature: Barbara L. Bedford Date: April 23, 2011

Comments for Transmission to Authors

It would be useful to have both general comments and specific comments for major and minor revision. Please use additional sheets should they be required.

Other than my comments and suggestions above, most of my points are relatively minor.

- Use scientific names the first time they are used in pp. 1-18.
- Change the table of contents so that it includes the titles of the appendices and the number of pages. Appendices could be paginated as A1, A2,, B1, B2, etc. The meat of the report is in Appendix A.
- Check for typos here and there. I found many.

- I fail to understand, given the wealth of up-to-date sources and data in Appendices A and B, why Fig. 3 is referred to in the text on p. 3, last paragraph, with a 1982 citation.
- I also am struck by referring to the interests of ecosystems as “newly emergent uses and users;” the ecosystem was always there, at least since the last glaciations. See bottom of p. 4 and #2 on p. 5.
- Why wait to p. 6 to state the objectives?
- On p. 7, reference is made to using the approach to test hypotheses. I would have liked to see explicit statements of some hypotheses.
- I noted four typos on p. 11.
- Why is the word biologists capitalized at the top of p. 16, also on bottom of p. 9.
- Should the recommendations and findings that appear in bold on pp. 16-17 appear in a section entitled “Findings and Recommendations” rather than under St. Marys Rapids Wetted Surface Area?”
- The legend for Fig. 7 uses “cms” whereas the figure itself uses cfs.
- Should the wording at the top of p. 18 also be a recommendation?
- Under references, spell out TNC.
- The last two references seem incomplete; I can't tell from them how I would go about finding these documents.
- I found the section entitled “Biological Condition Assessment” highly information and very well-written. More of this material would seem to belong below in pp. 1-18, i.e., more prominent. The last paragraph especially should be highlighted.
- The section on sensitive species on pp. 7-8 also should be more prominent, i.e., in pp. 1-18 which are presented as the main document.
- Perhaps the main points and highlights of Appendix A should be included in a section at the end entitled “conclusions” or “recommendations” or such.
- The references for Appendix A use italics for the names of journals, which makes them easier to see, but the references for pp. 1-18 does not do this.