

Interactive comment on “Assessment of impacts of climate change on water resources – a case study of the Great Lakes of North America” by E. McBean and H. Motiee

E. McBean and H. Motiee

Received and published: 17 December 2006

Final response:

The authors would like to thank the editor and the referees for their comments and suggestions and the detailed considerations pointed out by them. The authors hope the revised manuscript have responded to the issues raised by the reviewers. As the paper demonstrates, the goal of this research is to characterize the long term statistical trends on hydrologic features of the Great Lakes. As a dimension of this, the comparison of the trend projections is provided to the available results of GCMs models. The Great Lakes are extremely important strategic water resources for both the United States and

Full Screen / Esc

Printer-friendly Version

Interactive Discussion

Discussion Paper

Canada, and any research about the future behavior of these sources is very important for both countries.

The long term series data analyzing methodology is applied by hydrologic researchers throughout the world and there is a strong background concerning this type of research in climate change. The authors believe that this work is relevant to the title of the Issue because it is directly related to the observation and definition of a long term predictions in the regional data (particularly streamflows), and there are relations for the patterns in a natural phenomenon and climate change. The results are relevant to risk management planning relating the rising of the water levels in the Great lakes. Overall, the authors are revising the paper according the following points:

- Editor The authors appreciated the comment of the editor regarding his interpretation about the statistical significance correlation, and 95% confidence limits for slope lines. In response, the 95% confidence limits for slopes were calculated for precipitation and streamflows. Because the impact of climate change is very important on the volumes of streamflows, the figures related to the flows were plotted with 95% confidence lines.
- Referee 1 The authors would like to thank the first referee for the comments and answers. His interpretations about the methodology of the paper are appreciated. The authors respect his points of view in the revised version of the paper.
- Referee 2 The referee's comments are appreciated and the answers to his comments have been provided previously in the interactive discussion. The revised paper incorporates the new descriptions about these comments particularly statistical significance and uncertainty in the climate change predictions.
- Conclusion The authors have accepted to revise the paper with more explanations and calculations about the regression parameters and statistical significance for trend lines.

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 3, 3183, 2006.