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Hydrology and Earth System Sciences Discussions

Interactive comment on "Model-based analysis of nutrient retention and management for a lowland river" *by* D. Kneis et al.

Anonymous Referee #4

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This manuscript describes a model used to predict water quality in a lowland river for different scenarios of nutrient management for its major tributaries/point sources. Overall, the model appears sound and does a good job of predicting nutrient concentrations in a relatively complex system. I only have three major comments to make:

1) The manuscript has pooled Results and Discussion sections. These should be separated to clearly differentiate what are the predictions from the model as opposed to what are the inferrences made from them.

2) p. 5. Internal P generation is an important component of the model and is likely to delay the recovery of the system once P loads are reduced. The authors mentioned that cores were taken to evaluate P regeneration. However, methods were not explained and no data presented. Thus, it is not possible to evaluate the conclusions

drawn from this part of the study. The coring method and data must be presented or this section of the manuscript should be taken out altogether.

3) The manuscript requires minor editing to improve the english.

I am also forwarding a hardcopy of the manuscript with several minor comments.

Interactive comment on Hydrology and Earth System Sciences Discussions, 2, 2549, 2005.