

Interactive comment on “Analysis of parameter uncertainty in hydrological modeling using GLUE method: a case study of SWAT model applied to Three Gorges Reservoir Region, China” by Z. Y. Shen et al.

Anonymous Referee #3

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This study employs the GLUE method to examine parameter uncertainty of SWAT model in a meso-scale watershed in China. The paper is well organized and written. The methodology used appears to be carefully developed and soundly applied. The results are sufficiently presented and discussed. The paper would provide valuable information to researchers and end users of SWAT model. Considering the overall quality and originality of this paper, I would like to suggest consideration for publication in HESS after minor revisions to address the following concerns:

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Page, 8205, line 15-16. The statement “one way to deal with this issue is to use random variables as the input data, rather than the conventional form of fixed values” should be supported by appropriate references.

Page 8209, line 22-23. The Morris Qualitative Screening Method should be mentioned with appropriate references.

Page 8212, line 22-23. The “high precipitation condition” is not clearly defined.

Page 8213, line 1-10. Suggest rewriting these sentences. In particular, why daily precipitation data might be invalid in TGRA? It is also not clear how many rain gauges are involved in this study.

Page 8215, line 18-19. This finding would contradict the assumption about distributions of parameters (page 8211, line 7-9). Should the sampling strategy be updated accordingly?

Page 8215, line 24-25. Temperature in TGRA may feature a large variability. The so-called “high temperature” should be associated with a specific time period.

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