Hydrol. Earth Syst. Sci. Discuss., doi:10.5194/hess-2016-496-AC4, 2016 © Author(s) 2016. CC-BY 3.0 License.



## **HESSD**

Interactive comment

## Interactive comment on "Reproducing an extreme flood with uncertain post-event information" by Diana Fuentes-Andino et al.

Diana Fuentes-Andino et al.

diana.fuentes@geo.uu.se

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We are thankful to all referees and others for their valuable comments to our work. All the comments and suggestions done will greatly help us improve our manuscript. After going through all of them, the major improvements in this work will be:

- 1. The uncertainties in the data, their limitation and implication in the results will be further discussed in the revised version. For example, we bring up the sources of uncertainties introduced by the roughness coefficient and its interaction with discharge.
- 2. We will developed more in the discussion sections on the implication of the results from the data, hydrological and hydraulic perspectives. Also we will develop more on the possible reasons of disagreement for some of the maximum water level observations.

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- 3. A literature review about other available methods for uncertainty analysis and more details on the choice of the Generalized Likelihood Uncertainty Estimation (GLUE) method in our work will be included in a revised version.
- 4. We will make the manuscript more self-contained by adding more description and incorporating appendices of the models and tools used, we will also further explain reasons for the assumptions and decisions done throughout the work.
- 5. The value of this work will be increased after adding suggested literature related with the impact of the hurricane Mitch and of the quality of the data in the region.
- 6. We will discuss and suggest strategies for improvements on the post-event data collection campaigns.
- 7. For clarity, the presentation of some figures, especially Figures 10 and 11, will be improved.
- 8. The references will be updated including a link to the work from JICA (2002): http://libopac.jica.go.jp/search/detail.do?rowIndex=7&method=detail&bibId=0000054206
- 9. The clarity and structure in the manuscript will be improved, we will also highlighting the novelty of this approach.

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