

Interactive comment on “Contributions to uncertainty related to hydrostratigraphic modeling using Multiple-Point Statistics” by Adrian A. S. Barfod et al.

Anonymous Referee #3

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This paper is the product of a nice piece of work and is very interesting. My main concerns are related to the introduction, where some transitions and justifications are missing and to the methodological section, that goes too fast into details. I therefore suggest the following minor revisions.

In the introduction, transitions are often missing between paragraphs, for instance, page 2, between lines 14 and 15. It is a bit jumps from one topic to another.

Related to the paragraph comprised between lines 3 and 14, you might cite the following paper that discuss uncertainty and bias in training images : Ferré, Ty. "Revisiting the Relationship Between Data, Models, and Decision-Making." Groundwater 55, no.

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5 (2017): 604-614. Pirot, Guillaume. "Using training images to build model ensembles with structural variability." Groundwater 55, no. 5 (2017): 656-659.

General justifications are given in the first paragraph of the introduction, but the authors should also justify why they chose this specific sites, and what they bring or want to improve, with regards to previous studies conducted at the Kasted site.

You should also define your notions of hard and soft conditioning clearly in the introduction

Then, in section 2, when presenting the study area, the historic of previous research could be explained/clarified. Page 6, line 5: one 'complex' too much? Page 6, line 14: how is defined the 'selected quality threshold?'

The main aspect, regarding the method subsection is that the reader is lost in details from the beginning. A big picture of the approach is missing. In the way of presenting, I would recommend to give first an overview of the method, and progressively go into details.

Page 7, lines 7 to 15 are not very clear. Can you reformulate? Page 8, line 26, figure 5 is called, while figure 4 has not been called.

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., https://doi.org/10.5194/hess-2017-734, 2018.

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