

Interactive comment on “Seasonal hydrologic prediction in the United States: understanding the role of initial hydrologic conditions and seasonal climate forecast skill” by S. Shukla and D. P. Lettenmaier

Anonymous Referee #1

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General comments: This paper attempts to enhance seasonal hydrologic forecast skill by reducing uncertainties in the initial hydrologic conditions and improving climate forecast skill. The authors synthesized and utilized some state-of-the-art prediction models/methods. The findings could be important for the improvement of seasonal hydrologic and drought prediction in the Conterminous United States and for other countries as well. Therefore the paper is qualified for publication in this journal. However the draft could be improved by addressing the following comments.

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Specific comments: It's not very clear that why the authors adopted the methods by Wood and Lettenmaier (2008). Some summarizing comparisons of different methods reviewed should be provided to the last paragraph of Section 1.

Variable Infiltration Capacity (VIC) with more background info. and its applications have not been reviewed in the Introduction.

There are no discussions or comparisons of results with other researchers'. I couldn't locate a direct reference in the Results section.

The Conclusion part could be improved by providing more details or discussions about the weakness/limitation of the methods adopted in the research.

P6567 line 1, and many other similar places: the order should be switched. The earliest published article should be put at the very beginning.

P6568 line 24, JJA is not referenced.

P6568 line 26, PCA only appeared here once. So better to just use Principal Component Analysis. Too many acronyms were used throughout the paper. Try to reduce some. It's better to list the full names for some important texts in the conclusion part.

P6578, The key findings should be numbered differently from the major sections, like (1), (2), etc.

Section 3.3, should some texts (i.e. those for Eq. 4) be put in the Method part?

I don't think it's necessary to list Table 1, since it's publically available at USGS. A reference should be sufficient.

Table A1, usually MI is short for Michigan (unless USGS designated it differently).

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