

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 #4

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General Comments:

This study analyzed the relative contributions of initial hydrologic conditions and atmospheric forcings to overall monthly forecasting skill in the conterminous US. A land surface model, VIC, was used in this study to conduct ESP and reverse ESP experiments during the reforecast period from 1971-2003. A similar methodology has been adopted by several other investigators but this study provides detailed analysis over different hydrologic sub-regions in the conterminous US at monthly time step. The

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manuscript is relevant for publication in Hydrol. Earth Syst. Sci. Discuss.

Overall, the manuscript is well written and will be of interest to broader audiences. I recommend the manuscript to be accepted for publishing with minor changes.

Specific comments:

1. It is not clear whether the soil moisture is aggregated over all the three layers of the VIC model. Provide a general range of the soil depth that was used to estimate soil moisture.
2. There are too many abbreviations in the manuscript which make it difficult to read. Reduce some of them. In the abbreviation list, full form of USDM is not included.
3. P6572, lines 11-13: “We aggregated hydrologic regions. ” “regions” should be “sub-regions”
4. Please include some of the limitations of this study.

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 8, 6565, 2011.