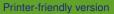# *Interactive comment on* "Comparative analyses of hydrological responses of two adjacent watersheds to climate variability and change scenarios using SWAT model" *by* Sangchul Lee et al.

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In this manuscript, the SWAT model was implemented to one of the hot research regions in the United States. In general, the manuscript is well-written and the associated work was reasonably conducted. However, I have several major concerns before recommend for publication: 1. It looks like that the given work is the follow-up of Sharifi et al. (2016) and Lee et al. (2016) published on Catena and PLOS ONE. However, authors did not really mention much about it which I think they should. The general readers will be a lot more interested in a series of research efforts instead of a single

piece. 2. Based on the knowledge of 1., the given work was conducted by adding (changing) climate data with the use of the SWAT model. In the Introduction (Ln. 104), it was mentioned that other work did not demonstrate climate change impacts on hydrology and nutrient cycles. However, I actually can find some work online by using the keywords of: Climate Change, Chesapeake Bay, SWAT. I understand there may be some differences between your work and others, but I think authors should better explain/justify the uniqueness of the propose research. 3. I agree with Reviewer#1 that the given work was using CMIP3 data instead of the latest climate projections of CMIP5 may be a very big issue. I suggest authors should run the scenarios accordingly (by CMIP5). I know it may sound frustrating but it's difficult to justify your work by not using the latest data.

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., https://doi.org/10.5194/hess-2017-178, 2017.