Hydrol. Earth Syst. Sci. Discuss., https://doi.org/10.5194/hess-2017-402-RC1, 2017 © Author(s) 2017. This work is distributed under the Creative Commons Attribution 4.0 License.



Interactive comment on "Assessing the resiliency of surface water and groundwater systems under groundwater pumping" by Seung Beom Seo et al.

Anonymous Referee #1

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This paper presents an integrated hydrologic modeling study. Modeling techniques and approaches are standard. The model is used to assess the impact of pumping scenarios on hydrological state variables (groundwater storage, streamflow) under different climate scenarios. Special focus is on the restoration time scale, i.e. the time it takes for the system to restore from a pumping impact.

The paper includes a partial uncertainty analysis, in which model initial conditions are randomly perturbed. However, it is unclear how sources of uncertainty were identified and how it was decided which of those to include into or exclude from the analysis. Can we be sure, for instance, that uncertainty due to subsurface heterogeneity is less important that uncertainty due to unknown initial conditions?

In summary, I cannot recommend publication in HESS. I think the paper may have

value for local groundwater and surface water stakeholders in the model area, but it does not contain new knowledge, methods or insights that are of sufficient interest and importance for an international audience.

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