

Nat. Hazards Earth Syst. Sci. Discuss., author comment AC4  
<https://doi.org/10.5194/nhess-2021-129-AC4>, 2021  
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## Reply on RC2

Doris E. Wendt et al.

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Author comment on "Evaluating integrated water management strategies to inform hydrological drought mitigation" by Doris E. Wendt et al., Nat. Hazards Earth Syst. Sci. Discuss., <https://doi.org/10.5194/nhess-2021-129-AC4>, 2021

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We thank Reviewer 1 for these additional suggestions.

We have changed the groundwater module box as suggested in the revised figure 1 and completed the names of the three groundwater storage systems for consistency. In the caption, we linked the names of the groundwater systems to the power law, by-pass, and parallel storage-outflow equations and referred to a detailed description of the hydrogeological representations in the manuscript.

In response to the last question, the by-pass storage-outflow equation results in a small proportion of recharge (10% in L155-156 in submitted manuscript) that bypasses the groundwater storage and is discharged immediately, as indicated by the different shade of arrow in revised Figure 1. The two parallel storages in the small groundwater storage system are modelled in parallel, for which groundwater recharge and water demand is equally divided (L159-160 in submitted manuscript).

Attached is the last version of revised Figure 1.

Please also note the supplement to this comment:

<https://nhess.copernicus.org/preprints/nhess-2021-129/nhess-2021-129-AC4-supplement.pdf>