Recharge exhibit significant spatial and temporal variability. Averaged spatially and temporally, 77.8 ± 50.8 mm/yr.

Previous studies [e.g., Towes and Allen, 2009; Jyrkama and Sykes, 2007] used HELP without any attempt of model performance evaluation, notwithstanding its inherent limitations. Thus, their results need to be interpreted with caution.

Model results from the two versions of HYDRUS-1D were statistically compared with observed soil moisture and soil temperature. Analysis of the results show:

- Promising performances of HYDRUS-1D & ROSETTA
- Rigorously accounting for freezing and thawing will not change subsurface water and heat movement in our semi-arid study area. As a matter of fact, no freezing of soil profile can be expected when all the soil temperature records are above zero.

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Conclusions

- Model results from the two versions of HYDRUS-1D were statistically compared with observed soil moisture and soil temperature.
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References