Interactive comment on "Multi-level qualification of Parafluvial Exchange within the Hyporheic Zone Affected by River Sinuosity and Seasonal Change using Multi-tracer Methods" *by* Amin reza Meghdadi and Morteza Eyvazi

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Dear Prof. Brian Berkowitz

we received some comments deal with our manuscript. In the article, we tried to qualify the river-aquifer connectivity mainly by integrating δ18O and EC which was performed during the wet and dry season. Also, we cover one type of hyporheic exchange which is affected by river sinuosity (parafluvial exchange). our findings were verified by established methods (radon and temperature) which yield satisfactory results.

The outcome of this study will yield an innovative alternative monitoring framework which can be qualitatively applied for more accurate and spatiotemporal evaluations of stream-Aquifer connectivity. Also, The outcome of this study could be applied by others around the world in order to monitor hydrological issues like spatiotemporal variations in groundwater-surface water connectivity or to solve the environmental problem such as anthropogenic contaminant transport.

The referees commented to quantify the groundwater-surface water interaction which is subject of another ongoing study by authors. By the way, in the revised version with added a section to quantify the Vertical Groundwater Flux (VGF) in the representative points (the attached figure).

Since applying further changes is out of the scope of this study and is not applicable for us because of financial issues, we would be grateful if you could accept our manuscript to be published in the HESS with the current status.

Yours sincerely

Aminreza Meghdadi
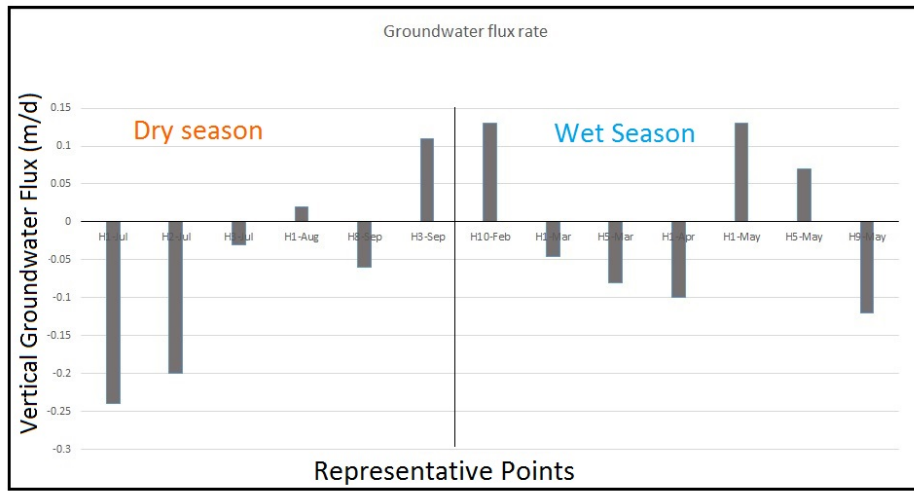
Fig. 1. Quantifying the vertical groundwater flux in the representative points