

**Reply to comments of Referee #1**

Page, line	Comment	Reply
1, 26/27	“Almost exclusively from publications” – where is rest of the data from? Consider reformulation.	We added: “with minor supplement by personal communications and own measurements”.
1, 28/29	“reduce uncertainties” – unclear in this context, please reformulate.	We added: “when predicting groundwater properties”.
2, 3	Suggest to rather start like “The physical and chemical properties of groundwater determine its suitability...”	Text modified accordingly
2, 8/9	suggest to write “... we developed the database ... of the federal state of Hesse, Germany.”	Text modified accordingly
2, 21	can you give a reference for the mentioned software?	Done
2, 28	recommend to generally omit “see” from references to figures, tables etc.	Done
3, 1	recommend to use the term “Southern German Scarplands” rather than “Cuesta Landscape”. It is the more widely used term, at least in my experience.	Cuesta Landscape was replaced by Southern German Scarplands in the entire manuscript.
7, 1	you talk about 100 m below ground level, I suppose. Please clarify.	Yes, thanks for the suggestions, we added “below ground level”.
8, 8	not sure if “impoundment” is the right word here. May “sealing” or “packing” be more to the point? Please check.	Impoundment is replaced by „water-catchment system“. If this term is also regarded improper, we would use „sealing“.
9, 5	Eq. 1: recommend to explain equation variables directly below the equation.	Done.
13, 8	P13, L8: “temporally” – do you mean in terms of covered stratigraphy? If so, better use that word.	We mean the historic time span of the data starting from 1810, but mostly from the 20 <sup>th</sup> century till this day. We replaced temporally by chronologically.
Fig. 1	I am missing the city of Kaiserslautern in the map... add, or omit from the caption. Also, add a green cross to the legend, or explain it in the caption.	Thanks for the hint, Kaiserslautern is covered by the overview map of Germany and was deleted in the caption. Now, the green crosses are explained in the caption.
Fig. 3-5	Add axis labels!	Done.
Fig. 4	Any explanation for the 50 °C outlier mentioned earlier?	Thanks for this hint. Indeed, this sample was assigned to the wrong hydrogeological region, because it is located very close to the border of HYR-3 and HYR-8, which is defined in this area by the Taunus Border Fault (cf. page 3, lines 20-24). The Taunus Border Fault belongs to a several km wide fault zone. There are numerous tectonic blocks and parallel to subparallel faults. The exact position of single faults and blocks is especially in urban areas unknown. The sample is no longer an outlier after its relocation to HYD-8. Figures 3 and 4 were revised accordingly.
Tab. 3	Please check the used font, it is obviously different from the rest of the article.	Done.

Database	In column K, I suggest to concretize “Altitude” – I guess it is the elevation of the drilling/sampling site?	We realized this suggestion in the second release of the database (its column J in the second version).
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All technical corrections were implemented.