

Interactive comment on “Exchange between a river and groundwater, assessed with hydrochemical data” by E. Hoehn and A. Scholtis

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Dear Editor, Handling Editor, and Reviewers:

In their General Comments, both reviewers addressed in the manuscript a lack of relationship between hydrochemical results and their change after river restoration measures. We responded to this point with more precise statements in an expansion of Section 5 (which has become Sect. 4 now, see below) and in the Abstract.

Reviewer #1 furthermore addressed a lack in distinctive description of the aim of the study. We responded to this point with more precise statements in the Abstract and the Introduction Section. The latter was slightly shortened to this end.

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Reviewer # 2 addressed in his Specific Comments several additional points, as follows:

Page 9027, Line 17: We responded by explaining, why we focus on "enlargements of the river bed" as a restoration measure with specific consequences on groundwater quality.

Page 9029, Lines 3ff: We concede that the distance of 300 m chosen as the end of the zone containing "fresh and young" bank-filtration groundwater is accidental and originates from the availability of wells. We omit the expression "end-member" for the river and the groundwater at greater distances.

Section 2.4.: We responded to the point of what "Water from Valley Slopes" means by deepened explanations. We renamed Section 2.4. as "Groundwater from valley slopes, recharged by precipitation. We think that introducing a cross section would not significantly add value.

Page 9031, Lines 8ff: Good point! We responded to the remark that anoxic groundwaters are easily treated by aerating, with more information about the Swiss practice of providing a resource, which is fit for drinking without treatment, whenever possible.

Figures 2 and 3: Hueing in the captions seems O.K. to us.

Figure 4: We explain better in the text the generic origin of the "green" groundwater.

Figure 5 and Section 4: Temporal changes of groundwater quality are indeed outside the scope of our paper. We, therefore, deleted both.

Section 5: We responded to the questions in this section (now Sect. 4) to the best of our knowledge. We are convinced that the text has been improved accordingly.

Page 9032: The sentence, which did not make sense to the reviewer, was deleted.

With best regards, Eduard Hoehn & Andreas Scholtis