

Interactive comment on “Environmental DNA simultaneously informs hydrological and biodiversity characterization of an Alpine catchment” by Elvira Mächler et al.

Anonymous Referee #1

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This manuscript presents genetic data collected in an Alpine catchment at various hydrologically relevant spatially distributed locations and as a function of time. The idea to link aquatic diversity with hydrologic processes is interesting. Authors present a coherent, innovative, and I think rather labour intensive work, which starts answering questions related to hydrologic connectivity of sources and eDNA diversity. I am not an expert in eDNA, but to me, the enormous variability seems an issue. I also see that authors recognize this. My main (minor) problem with the approach followed is that authors seem to lose sight of eDNA mass. Perhaps eDNA diversity weighed for mass could have been beneficial in order to reduce the diversity somewhat, and to focus more on a subset of most important ZOTUs or something like that. I understand that

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the various steps in determining DNA sequences prevent working quantitative. In the future work section they could perhaps devote some attention to this aspect.

Two micro issues:

On page 2, Line 31 sodium. I don't get it why sodium all of a sudden is so important here. Usually chloride is more important as this behaves conservative in groundwater.

Page 3 L18: stream): the opening parenthesis is missing.

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., <https://doi.org/10.5194/hess-2020-490>, 2020.

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