Dear Editor,

we are glad to see that you and the referees were happy with our revisions. We agree with all suggestions by Referee #3 and have sharpened the introduction accordingly.

We have uploaded two versions of the manuscript, the second with tracked changes so that you can easily identify the last modifications.

Best regards,

Christina Tecklenburg

Response to comments by Referee #3

We would like to thank the Referee #3 for the very constructive comments to further focus the paper. Please find detailed responses to the reviewers' suggestions below.

I commend the authors on a very detailed analysis of local and non-local groundwater discharge in a lacustrine setting. For my review I paid particular attention to the author's responses and edits to the initial set of reviews. Overall, I believe the manuscript is novel based upon the methods applied and the amount of data that was collected. I do believe the authors provide a context that is important for future research and applications that seek to understand the influence of local topography versus groundwater recharge controlled systems. They also provide evidence for the role of sediment permeability and its ability to mediate topographic drivers. The authors have revised the manuscript substantially in terms of structure and the story line. While the manuscript does not provide major new insights, it provides a great analysis and data set that tests/confirms what others have shown – I believe this is important and a solid iteration for hydrologic sciences.
I have two specific comments:
1. The study has too many general/vague research questions. I'd suggest being more specific to help the reader. For example
a. combine question 1 and 2 to "How does LGD vary in space and time?"
b. combine question 2 and 3 to "What are the relative roles of regional groundwater discharge, local topography and sediment permeability for spatial patterns of LGD?
c. Delete "Can we predict LGD patterns"

Thank you for this constructive advice. We changed the research questions as suggested.

2. The introduction section 1.2 is dense and a lot of this could be saved for the methods section. I'd suggest condensing this and focusing on the major point that is highlighted starting on line 18. Previous studies have focused either on large or small scale LGD patterns. You use multiple techniques and lines of inference to evaluate both local and non local controls on LGD. This is the new contribution.

Thank you for this comment. We have sharpened the introduction accordingly.