

**Review, revised version of “Electrical Resistivity Dynamics beneath a Fractured Sedimentary Bedrock Riverbed in Response to Temperature and Groundwater/Surface Water Exchange” by Steelman, et al.**

The authors presented a well-considered revision and addressed the majority of the suggested changes. The study in its current form is better structured and its purpose is clear. While the introduction / background is now able to explain the purpose of the study, its survey design and its expected results, the amount of the data, results and findings are huge and still hinder at some part the narrative and comprehensibility of the study. I meanwhile tend to think, you could omit some of the results, in order to keep the structure plainer. For example, what does the EMI data essentially contribute to the final findings of this study? I like Figure 8 and the pattern in low to high stage periods become impressive visible, but do you need this additional information for your outcome? Not sure, particularly since you came up with similar results in Figure 11. Omitting of EMI could easily be done and will assist to focus on ERT.

In addition, the conclusion still lacks of a short comprehensive and supra-regional message to the scientific community. In relation to the huge data sets the study dealt with, the conclusion is too large and contained too many site specific information but transferrable conclusions. It should be shortened by emphasizing its transferrable findings.

Please find below a few further suggestions.

Line 457 Reword “some distances away” into ‘in a certain distance’

Line 500 – The Archie equation is still incomplete, I would either, mention that it is simplified or add the missing tortuosity factor and the saturation exponent, even if you later on neglected these variables as mentioned “Eq. (1) is considered to be a reasonable approximation for this environment.”

Line 508 - The value 1.4 *form* seems reasonable, still please strengthen it by adding a reference for this assumption.

Line 1117 - Change “will be” into “is”, but the whole sentence is in my opinion not a proper start for a conclusion. The positions of the transects within the riverbed will influence the ERT data anyway, at least spatial, even if no flow dynamic occurred at all. I would reword it because you are not interested on different ERT responses but in its potential to discover flow zones and its dynamic, right? Maybe you should start with something like: “We performed a time-lapse resistivity measurements collected across a 200 m reach of the Eramosa River during low and high-stage periods. The results showed highly spatio-temporal variability within the riverbed morphology, which could be attributed to its exposure of bedding plane, vertical fractures, and competency of the rock surface.”

Line 1126 to 1174 These are good findings; still, the amount of lines should be shortened.

Line 1175 - I like the last paragraph, however please reword line 1175 toward your desired outcome, instead of “This study demonstrated that surface electrical resistivity has the capacity to detect and resolve changes in electrical resistivity due to...” I would rather go for somewhat like “This study demonstrated that time-lapse ERT has the capacity to image the magnitude and scale of transience within the riverbed...”. Your results are strong enough for a more confident statement.