

***Interactive comment on “Macroinvertebrate  
community responses to a dewatering  
disturbance gradient in a restored stream” by  
J. D. Muehlbauer et al.***

**E. Mitchell (Editor)**

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Dear authors,

Thank you for submitting this revised version of your paper and addressing the issues raised by the two reviewers. I have the following comments.

Both reviewers asked for clarifications in the methods and interpretation of results. You made some changes but I feel that there is still room for further improvements, especially in the methods section and depending on these changes also in the results, discussion and abstract.

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I find your use of the term “wettered perimeter” somewhat confusing. Reader may expect a perimeter to be defined as  $2 \times (\text{length} + \text{width})$ . Perhaps the term “perimeter” is not appropriate? I think section 2.2 could be modified to make it less confusing. Please ask colleagues unfamiliar with your work to read the first paragraph of section 2.2.

The description of numerical analyzes is rather limited and would require more detail information. Did you check for data normality or equality of variance? Did you correct p-values for multiple tests in the MANOVA? If no correction was applied then several tests will not be significant (see below). If you chose to use uncorrected p-values, please justify this and indicate it clearly in the text, both in the methods and when presenting and discussing the results. If you use modified p-values, please check carefully the results, discussion and abstract for consistency. Using corrected p-values will lead to the following changes:

In table 4, the comparison between pre- and during will not be significant, which can be explained by the fact that you have a range of intensity of change.

Table 4 also, slight will no-longer be significantly different from moderate and severe – this is actually more logical.

Table 5. Only 4 of the 10 comparisons among strength of impact are significant. Please correct the text “non significant differences coming from comparisons between adjacent or next to adjacent sites (Table 5)”

Regarding the correlation between the macrofauna data and pH, you mention that this variable is correlated to the second axis which explained only 18% of variance. It is frequent in community ecology to have ca. 30-40% of variance explained in total (e.g. in CCA or RDA), so 18% for a secondary axis is not especially low and deserves some discussion. More generally I believe all significant variables should be discussed.

Legend of fig 1, please remove mention of percentages as this was removed from the

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figure.

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Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 7, 9599, 2010.

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