

Interactive comment on “Woody debris as a confounding factor in interpreting the width of spring-fed streams” by Dana Ariel Lapidés and Michael Manga

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Received and published: 4 December 2019

Thank you for your comments. We have altered the manuscript to address the suggestions and concerns that were raised. This review is thorough and thoughtful, and much appreciated. Specific changes are described below.

Thank you for pointing out the importance of logjams for causing channels to develop multiple threads. There are small reaches in some of the streams in this study that are multi-threaded, and these reaches contain a significant amount of wood and logjams. We included this observation in the manuscript and added a brief statement about the impact of logjams on multi- or single-threads in channels around Line 55, as

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recommended.

We added a citation for logjams in runoff-fed streams in the hypothesis on Line 53, as recommended.

For clarity, we included a statement at the beginning of the field area section that notes that all streams in the study run through erodible material. The underlying hardrock geology is required to produce the upwelling of flow for the spring-fed channels, but the channels themselves are able to adapt quickly.

We added $q_{.95}$ values to the caption for Figure 4 to demonstrate that the streams have similar flow.

It is nice to hear that quantifying the accuracy of satellite-derived wood measurements is so valuable. We added an extra couple of sentences in the conclusion to highlight that the comparison between field measurements and remote sensing yielded good agreement, increasing confidence in the accuracy of remote sensing for producing quantitative results.

We added symbol shapes to a legend in Figure 5 so that both colors and shapes are clearly labeled in the figure.

We added more discussion about wood mobility, specifically focused on the finding of increased std of wood length with increasing stream width in spring-fed streams. The std for wood length in runoff-fed streams is generally comparable with the std for wood length in larger spring-fed streams in the same geographic area. Although mobility appears to be higher in runoff-fed streams than spring-fed streams, the increase in std with increasing stream width in spring-fed streams may be indicative of increased mobility compared to smaller spring-fed streams. There is likely a maximum std given the population of wood available in a geographic area.

We appreciate the suggestion to replace the acronym LWD with LW to avoid the negative connotations associated with ‘debris.’ We now use the acronym LW.

C2

We removed the last sentence of the conclusion.

Interactive comment on Earth Surf. Dynam. Discuss., <https://doi.org/10.5194/esurf-2019-60>, 2019.