

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

Dana Ariel Lapidés and Michael Manga

danalapidés@gmail.com

Received and published: 18 November 2019

Thank you for your comments. We have altered the manuscript to address the concerns that were raised. The bulk of the comments address the scaling between channel dimensions and LWD size. This perspective is valuable and greatly appreciated. Specific changes are detailed below.

Abstract: We have altered the abstract to 1. add a statement about the hydrograph of runoff streams, 2. Include the full content of lines 60-64, 3. Correct language for clarity, 4. Add a statement about logjams, 5. Remove repetitive phrases.

C1

Introduction: We have altered the introduction to 6. Clarify the meaning of the sentence, 7. Clarify the intent of the Griffiths et al (2008) study, 8. Describe recruitment mechanisms.

Field area: We have altered the field area section to 9. Describe why the El Tatio streams were included in this study. They are the most reliable example of spring-fed streams not containing wood. In order to assess whether wood causes spring-fed streams to be wide, we would like to compare spring-fed streams with wood to spring-fed streams without wood. The only other spring-fed streams in this study that don't contain wood likely had wood in the past since they run through forested watersheds.

Methods: 10. The table contains stream width and LWD dimensions. We altered the methods section to 11. State the likely resolution of Google Earth Pro imagery and 12. Describe why precision was tested only for longer LWD pieces. All of the LWD observed at the site visited was long. There were no shorter pieces available.

Discussion. We altered the discussion to 13. A clearer description of the meaning of the sentence, 14. Explain that we suggest that longer wood is spanning the channel or the majority of a given piece (not the majority of wood pieces) is outside the channel when the channel is comparatively narrow, 15. Clarify that channel width is in comparison to wood dimensions, and 16. Describe that streams wider than 30 m (corrected to 30 in all places) are significantly wider than LWD in this study. Thus, we hypothesize that LWD length should be more important for streams narrower than 30m than those wider than 30m in this study.

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

C2