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Hydrology and Earth System Sciences
Discussions

Interactive comment on "Characterization of post-fire streamflow response across western US watersheds" *by* Samuel Saxe et al.

Anonymous Referee #2

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I congratulate the authors to this conceptually excellent piece of research. Watershed reposes to fire have been examined in a wide range of previous studies, but none have examined them across such a broad range of watersheds, climatic settings and fire events as done in this study. The patterns found provide a thorough and quantitative confirmation for what has been indicated previously from case studies, but also throw up some important new findings.

The analysis is robust and appropriate for publication in HESS. Where the manuscript falls short is the discussion. In my view, the main and most valuable part of the work is excluded here: what are the specific factors driving the diverse watershed responses found? The authors briefly list a few at the end on the manuscript and refer to a future manuscript that covers these. ("A complementary paper is forthcoming that will incorporate multiple regression models to identify how various geophysical parameters

control flow response".) This should have been the 'meat' of this paper and the fact that this is not included here severely limits the value of this manuscript. I strongly suggest that this analysis is included here. If that is beyond the space limit of this manuscript, I suggest submission as two linked manuscripts that are both reviewed together.

Notwithstanding this and excluding the discussion, what is presented so far in this manuscript is excellent and the only further suggestion I have is to update some of the partially dated references in the introduction regarding climate effects on fire in the western US and on suppression costs to more recent ones. For example, Westerling has a follow-up analysis in the Philosophical Transactions of The Royal Society B (2016) issue 371 and in the same issue, Doerr and Santin examine trends in suppression costs in the US.

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