

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

### **Anonymous Referee #1**

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#### GENERAL COMMENTS

The paper addresses a relevant scientific question within the scope of HESS, namely, the hydrological response after fire events of different severity. The dataset used for the paper is novel and includes numerous watersheds in the western United States. The tools used are classical statistical tools. Figures provided in order to support the results are sufficient, but two of them should be redrawn in higher quality. Overall, the paper is clear and well structured, provides interesting conclusions and is well contextualized in the current state of research in the field.

SPECIFIC COMMENTS: a section addressing individual scientific questions/issues

4.2.2 Rensponse variability by cluster Could you discuss the different responses of different meteorological clusters? What are the determinant factors in the authors's

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view?

5 Conclusions Could you compare your results with other published results from different areas of the world?

#### TECHNICAL CORRECTIONS:

Page 1 lines 1-3 The authors refer to the increasing number of wildfires "in the United States" (line 1), but then talk about the consequences "in many parts of the world" (line 3) within the same sentence. This sentence needs to be rephrased in order to maintain consistency.

Page 3 line 22 The authors refer to "average percent area burned" but they should refer to "percent area burned", as they provide a range of values corresponding to all watersheds. line 23 km<sup>2</sup>

Figure 2 - 3 captions are inverted

Page 6 line 19 The acronym for high-flow should be "HF" instead of "LF"

Page 7 line 20 regionalized

Figure 6 The Figure reports variations in explanatory variables by cluster, and is described in 4.1. In the text body, %Snow/PPT, AI, and Elevation are invoked among the most determinant variables, but they are not reported in Figure 6 as they would be expected to be. On the other hand, five variables reported in Figure 6, namely BS\_low, BS\_mod, BS\_high, Slope and Aspect are not described in the text body. Moreover, some of the legends on the second row of plots are cropped.

Figure 8 Some of the legends on the second row of plots are cropped.

Page 11 line 10 a verb is missing here

Figure 11 axis labels are unreadable In the caption, "Filled squares are  $R^2 > 0.5$ " should be "Filled squares are  $R^2 > 0.5$ ".

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