

Interactive comment on “Now You See It Now You Don’t: A Case Study of Ephemeral Snowpacks in the Great Basin U.S.A.” by Rose Petersky and Adrian Harpold

S. Carey (Editor)

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Dear Authors

I would like to thank you for the time and care that has gone in to the revised manuscript and for detailing your response to the reviewers comments. The issue of ephemeral snow is a vexing one, and indeed one that is not limited to mountain basins where the rain/snow transition is changing. The snow literature in hydrology is strongly biased towards deep mountain snowpacks and 'water tower' systems with less emphasis on the accumulation/melt cycle that dominates many environments that rise and fall below freezing throughout winter. I would particularly like to note the efforts you have made

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to outline new metrics to define ephemeral snow systems, and highlight the factors that control this process in the Great Basin.

There are a number of small revisions that I would like you to consider in a final revised manuscript, which I believe is suitable for publication in the HESS Special Issue on Understanding and predicting Earth system and hydrological change in cold regions.

Figure 1. The labels on the right are very large and I believe the figure would improve if they were smaller. In addition, State boundaries would help the reader locate the Great Basin within the United States. In a number of the later figures, the geographical extent changes (Figure 10 for example). I believe a standardized map domain with State boundaries (or a larger boundary for context) would help non US readers. In later figures, labels are also very large.

On page 15, GRIDMET is used as an acronym but this product needs to be explained in more detail.

Page 15, line 23. Change its to it is, or simply state "for any year, SNODAS struggles to..."

Table 1. Elevation probably does not need a sub-meter resolution.

Finally, the manuscript uses a lot of first-person viewpoints. "We" was used 66 times in the manuscript and I believe that with some simple editing, could be reduced.

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