Review of revised manuscript, "Watershed zonation approach for tractably quantifying above-and-belowground watershed heterogeneity and functions"
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The authors have carried out significantly more analysis following my suggestions of investigating multiple scales of hillslope partitioning, and the scale dependence of hillslope characterization of covarying environmental factors. Results are interesting, with an emergent scale that appears to provide improved partitioning of a set of environmental drivers, reflecting the organizing framework of topoclimatic and geologic patterns. Interestingly, the identified scale is very close to the scale developed for the Representative Elementary Area analysis for the Coweeta watershed in North Carolina by Wood et al. 1988[1]. More detailed soil information is also included with the adoption of Chaney's POLARIS dataset.

The only substantive suggestion I have is that these new developments should be reflected in the major hypotheses and conclusions of the paper. As previously pointed out, hypothesis 1: suites of aboveground/belowground properties co-vary with each other, is a widely accepted, broadly known and demonstrated tenet of a number of environmental sciences, and has been widely published on and quantified. What this paper does more uniquely is demonstrate the scale (hillslope) dependence of this covariation, and sensitivity to partitioning method (e.g. hillslopes vs. upscaled grids). I think that making this clear up front in the stated hypotheses would better reflect the revised major analytical methods and conclusions.

Otherwise, with minor corrections, I think the paper is ready to go. Most of these minor corrections are spelling, typos, etc. in the revised sections that a good read will find. The authors have done a good a job with the additional analysis – I look forward to seeing additional research follow-on.

[1] https://doi.org/10.1016/0022-1694(88)90090-X