Interactive comment on "Weather, snow, and streamflow data from four western juniper-dominated experimental catchments in southwestern Idaho, USA" by Patrick R. Kormos et al.

Anonymous Referee #2

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Review of 'Weather, snow, and streamflow data from four western juniper-dominated experimental catchments in southwestern Idaho, USA' by Patrick Kormos et al.

The authors present a six-year hydrometeorologic dataset from four neighboring juniper-dominated experimental catchments. Data are presented from six meteorological stations and four streamflow weirs. Also included are lidar-derived DEM and vegetation height models. The datasets are of excellent quality and provide the necessary input and verification data for hydrologic simulations. The paper is well-written and data are well-described. I find no major flaws and have only limited minor comments.

In my opinion, the paper and dataset are publishable with adequate attention to these points.

Page 1, Line 1: The authors should be more clear in the description of the data being published. "Weather, snow, stream, topographic, and vegetation data . . ." should be clarified as "Meteorological, snow, streamflow, topographic, and vegetation height data . . .". For example, 'stream data' is vague and could be interpreted differently by a hydrologist, geomorphologist, or biogeochemist. The vegetation data is limited to height data. Best to be as clear as possible in this first sentence.

Page 1, Line 13: The logical order of the first paragraph could be improved.

Page 1, Line 13: The sentence starting with 'Because' doesn't adequately describe the issues facing managers and ranchers w.r.t. juniper encroachment, in my opinion. Please provide a succinct example of a specific challenge that encroachment presents to each group, rather than a general statement (ecological and economic impacts) that isn't elaborated upon. E.g., how juniper encroachment economically impacts ranchers is not explained.

Page 1, Line 15: If the 'changing fire regimes' term describes 'fire suppression efforts', please state that.

Page 1, Line 17: Move the Juniperus spp. definition to the first use of the word 'juniper' on Line 13.

Page 2 'Site Description': I think the fact that the catchments are neighboring (many share borders) is a unique characteristic that should be described. For example, some distributed hydrological models may benefit from this information in the treatment of lateral connectivity.

Page 2 'Site Description': Please consider providing a size metric for each lidar product (e.g., the # of grid cells in the east and west directions).

Page 2 'Site Description': Please describe the buffer distance around the catchment

boundaries (i.e., that the lidar products are not tightly 'cropped' to the catchment extent).

Page 2, Line 13: I am accustomed to the order (latitude, longitude) rather than the reverse.

Page 2, Line 23: I prefer spelling out 'six-year' rather than '6 year'. Here and elsewhere.

Page 3, Line 1: " . . . a snow-free airborne lidar survey . . ."?

Page 3, Line 5: typo.: 'described'

Page 3, Line 30: Change 'zero' to 'the freezing point' or to $0°C$.

Page 4, Lines 7-9: The second sentence is largely redundant with the first paragraph of this section. I suggest: "Dew point temperature was calculated from measured values of air temperature and relative humidity (Marks et al., 2013)."

Page 4, Line 22: Typo: change " . . . of the dataset of 14.3 . . ." to " . . . of the dataset was 14.3 . . ."

Page 6, Line 1: 'Catchment M' should have a capital 'C'

Page 6, Line 15: change 'at a 1 m resolution' to 'at 1 m resolution'.

Page 6, Lines 16-17: Suggest changing 'represent' to 'adequately capture'.

Figure 1: Label one upper and one lower contour line to give the reader a better sense of the elevation distribution. Please state the contour interval in the figure caption.

Figure 6: I think this should be a February storm event (typo. in caption that says 'January').