



## Comment on **essd-2021-423**

Anonymous Referee #1

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Referee comment on "High-resolution streamflow and weather data (2013-2019) for seven small coastal watersheds in the Northeast Pacific coastal temperate rainforest, Canada" by Maartje C. Korver et al., Earth Syst. Sci. Data Discuss., <https://doi.org/10.5194/essd-2021-423-RC1>, 2022

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I found the article generally well-written, informative and supporting of the published data set. These data are unique and fill a needed hydrometric gap in the region. I was able to download and read the data and processing scripts. The data appear usable and include minimal metadata. The quantified uncertainty and measurement methods are well-documented and make this data set high-quality. I did find a few aspects confusing and would like to make recommendations for improvement.

1. Strictly speaking, GitHub and Google Drive are not intended to permanently store scientific data. I would suggest the authors consider using a dedicated data repository to host their data. Data hosting for academic and scientific data can be found through organizations like repositoryfinder, HydroShare, FAIRsharing, and re3data among many others.

2. When discussing land use history, I did not see any mention of forest age or specific details about what exactly constitutes "non-vegetated" and "non-forested" land covers.

3. Soil characteristics are mentioned in passing, but I found no information about soil texture, porosity, or saturated hydraulic conductivity.

4. I was confused by the inclusion of the ClimateNA model reference values. I understand this is an observation focused article, not a model validation study. Without corroborating independent observations, I'm not sure the model comparison lends anything to the article.

5. Some information about snow density, texture, or quality may be useful for readers attempting to estimate snow water equivalent from snow depth measurements.

6. The automated salt dilution measurement method for high flow discharge was very interesting to read about! I do wonder about potential changes in baseline salinity due to sediment mobilization during high flow events. What advice might the authors have for anyone attempting to duplicate this technique, especially in coastal regions?

7. My impression from the article is that these were perennial streams. However, I found 0 discharge values in the data set. How should we interpret these 0 values?

8. How did the authors decide on the  $0.001 \text{ m}^3 \text{ s}^{-1}$  discharge precision? This may have implications on minimum runoff precision for each catchment and the comparisons that can be reasonably made across these catchments, specifically during low flow.

9. The pressure transducer listed for discharge has an accuracy of  $\pm 0.05\%$  FS. In the 0-4 m depth range, I think this would correspond to an accuracy of  $\pm 0.2$  cm. However, I did not find any discussion of how this source of uncertainty may (or may not) have influenced discharge uncertainty, especially during low flow.

10. Some of the tables and figures seem a bit disjointed (superfluous even). I wonder if Tables 2, 3, and 4 could be heavily edited and resummarized more succinctly. The meteorological patterns shown in Figures 3 and 4 are sufficiently discussed in the text. I'm not sure these figures add anything.