

Earth Syst. Sci. Data Discuss., referee comment RC3  
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## Comment on **essd-2021-155**

Anonymous Referee #2

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Referee comment on "Multi-year, spatially extensive, watershed-scale synoptic stream chemistry and water quality conditions for six permafrost-underlain Arctic watersheds" by Ariel J. Shogren et al., Earth Syst. Sci. Data Discuss., <https://doi.org/10.5194/essd-2021-155-RC3>, 2021

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Shogren et al. represent a valuable dataset consisting of water chemistry across six watersheds in northern Alaska. The authors have already addressed all previous reviewer's concerns. Here, I have only one comment regarding the measurement of "the spatial stability" for your consideration:

As shown in Eq.3, Spearman's rho was used to assess the correlation between  $rgx$  and  $rgy$ , and  $ggx$  is the rank correlation of sub-catchments? Is this correct? Moreover, the significance test should be given for Figure 9.