

Interactive comment on “Hydrometeorological Data from Baker Creek Research Watershed, Northwest Territories, Canada” by Christopher Spence and Newell Hedstrom

Anonymous Referee #2

Received and published: 8 July 2018

General comments This is a fantastic dataset resulting from 13+ years of focused field observations in the Baker Creek catchment. A truly unique set of data that – as the authors state – is valuable for advancing hydrological understanding and has applications for engineering challenges in permafrost regions. The data note is very well written, and – I believe – complete with all necessary information (eg instrumentation, dates, locations, needed for the data user). I have no major comments, and only have minor – largely grammatical – comments. I suggest publication of this data note following addressing of said minor comments.

Major comments N/A

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Minor comments – Line 12. Use of word ‘seasonal’? – Line 14. “include” not “includes” – Line 17. Delete first “from” – Line 29. And Ontario? – Line 33-34. Could you spell out for us what effects on southerly latitudes via the Arctic Ocean? Circulation? – Line 38. Change “2” to “two”. – Line 38-39. Only two for the whole Canadian Shield?! Do you mean climates stations or do you mean research catchments? What time series length is needed to be adequate for long term change detection? – Line 44. Change “2000’s” to “2000s” – Line 46. Sentence beginning “These data...” doesn’t make much sense- suggest changing “These data are the only...” to “These data constitute the only...” – Figure 1. This needs enlarging; the font size on the axes and legend are too small. Perhaps rotate landscape and enlarge the fonts? This would also let us see the catchment details a little better. – Line 117. Delete the semicolon. Should be a comma. – Line 119. Comma after “surface characteristics” – Line 121. Comma after “(Kaimal and Finnigan, 1994)”? – Line 126 to 128. Too many “because”s in this sentence. Reads rather funny. Suggest re-writing. – Line 129. I’m unclear as to what you mean by “or sound conditions” – Line 132. Change “consistent” to “constant” – Line 153. Remove apostrophe from 1940s. Same for Line 158. – Line 155. Decreased by 27% – Line 159. Additional or alternative reference for the 2014 being the most extensive? Eg.??: Walker, XJ et al (2018) Cross-scale controls on carbon emissions from boreal mega-fires of the Northwest Territories, Canada. *Global Change Biology*, <https://doi.org/10.1111/gcb.14287>. – Line 183. Comma after “(07SB013)” – Line 196. This line doesn’t read well, maybe there is a word missing somewhere. Suggest re-reading and editing. – Line 206. Here you have written “Water Survey of Canada” in full, but in the previous paragraph you used the acronym. Be consistent: either use the full name or the acronym once defined. – Line 215. Suggest putting in a date here, at which this text is written. ie. “not experienced outflow since 2014 up until the time of writing (xx 2018..)”. Is this still the case? – Line 226. Change semicolon to colon. – Line 272. Delete “and” before “Stefan Goodman”? – Figures. Better consistency with font sizes, types and labelling between the figures. Eg. noticeably different font sizes between Figures 9

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and 10, and others. In Figure 5, you write “Jan-08” with a hyphen, while in Figure 9 it is “Jan/07” with a slash. Check inconsistencies among figures, and edit to improve.

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