

Dear authors,

Thank you for your thorough response to reviews. As you know, one reviewer had a second look at the revised manuscript to provide some clarification for their previous comments. Their comment is below, and I therefore request a brief response and amendments to the manuscript if appropriate before we move to the final decision.

Thank you for your patience with the review process.

Dr Liz Bagshaw

Reviewer#1:

The manuscript is acceptable in its current form, I would like to clarify one of my comments and let the authors consider it.

My comment about volume was not a liquid volume, but rather a volume of basal ice ( $\text{cm}^3$ ). I understand that g of basal ice is like a permafrost soil core and so volume (mL) doesn't make sense, but usually the permafrost soil also comes along with a soil water content and therefore a wet weight:dry weight ratio. I did not see any numbers on sediment content, which is important to know for biomass calculations. If you do want to stay with g of ice, that is fine, but is it g wet weight or g dry weight?

**We have added by-weight debris content to Table 2. We have also revised the caption to indicate that all measurements are normalized to sample wet weight.**

The names of the different basal ice types are informative, but need to be comparable to the next study.

**As described in the methods, the naming of the different basal ice types in our study follows the standardized classification scheme for basal ice defined in Hubbard et al. 2009.**