Interactive comment on "The Canadian Hydrological Model (CHM): A multi-scale, multi-extent, variable-complexity hydrological model – Design and overview" *by* Christopher B. Marsh et al.

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Dear Editor,

I reviewed the submitted manuscript by Marsh et al., and I'm happy to recommend it for publication. The paper was exciting to read. It is relevant to the scientific community and is well written. It introduces a novel modelling framework for hydrological models, which at the same time aims at increasing spatial resolution where the terrain is complex and decrease spatial resolution where the terrain is more homogeneous.

Unstructured mesh models have been used in ice flow models for a while and it's exciting to introduce them to surface mass balance processes of the cryosphere. And while introducing modules into model frameworks is generally standard for many models and it's not exactly a novel approach, I still think that it fits nicely with into the model framework.

Furthermore, the examples that the authors have presented to explain the strengths of the model framework and appropriate and make the technical nature of the paper easier to digest and understand. They also highlight the relevance of the approach. I look forward to more exciting studies (especailly process-based studies) with the CHM.

I only have a few minor comments:

- Figure 3 is not very useful and can be removed from the manuscript. - Figure 4 is poorly readable and the resolution should be increased. - As stated above, the modular approach to models is not exactly new and that could be a bit toned down in the manuscript.

I look forward to the publication of this manuscript.

Sincerely, Ruzica Dadic