

SC1, Ylva Sjöberg.

We thank Ylva Sjöberg for her comments to our study and the additional references provided. All mentioned studies are cited in the revised version of the manuscript:

Kurylyk, B. L., M. Hayashi, W. L. Quinton, J. M. McKenzie, and C. I. Voss (2016), Influence of vertical and lateral heat transfer on permafrost thaw, peatland landscape transition, and groundwater flow, *Water Resour. Res.*, 52, doi:10.1002/2015WR018057.

This reference is now included in the new manuscript in Sect. 5.3 and 5.4.

Sjöberg, Y., P. Marklund, R. Pettersson, and S. W. Lyon (2015), Geophysical mapping of palsa peatland permafrost, *The Cryosphere*, 9(2), 465-478.

This reference is now included in the new manuscript in Sect. 3 and 5.3.

Åkerman, H. J., and Johansson, M.: Thawing permafrost and thicker active layers in sub-arctic Sweden, *Permafrost Periglac.*, 19, 279-292, 10.1002/ppp.626, 2008.

This reference is now included in the new manuscript in Sect. 5.3.

Payette, S., A. Delwaide, M. Caccianiga, and M. Beauchemin (2004), Accelerated thawing of subarctic peatland permafrost over the last 50 years, *Geophysical Research Letters*, 31(18).

This reference is incorporated in Sect. 1 and 5.2.

On behalf of the authors,

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