

Response to interactive comments of Reviewer 1 (bg-2018-516)

We thank L. Thieme for the helpful comments. Our response to specific comments (reprinted in bold) are provided below

This manuscript by Bowering et al. presents a study of seasonal variations on concentrations and fluxes of DOC as well as soil respiration from organic horizons of mature boreal spruce forests and of harvested sites 10 years after clear cutting.

The authors provided a lot of details regarding their sampling schemes, their approaches and their analysis. Very well done. The overall presentation is well structured and clear. The manuscript contains a bulk of detailed information about how DOC concentrations and fluxes, soil temperature and moisture and soil respiration changes along the year and highlights statistical differences between the two plot types (mature and harvested). Their discussion on organic horizon DOC flux dynamics and relation to water fluxes as well as the possible impact of climate changes are sound.

One minor comment regarding Figure 1: The axis captions are hard to read. The same applies to the error bars and the asterisks in panel d-f.

Will revise axis captions, error bars and asterisk so that they are easier to read.