



Interactive comment on “Carbon sources of benthic fauna in temperate lakes across multiple trophic states” by Annika Fiskal et al.

Anonymous Referee #2

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The manuscript submitted by Annika Fiskal et al. aimed to investigate various carbon sources' contribution to the benthic macrofaunal biomass across the sediments from five lakes in the temperate region. Though the introduction is short, the section is well written with current knowledge and associated gap addressed through the present work. The methodology is well described and elaborated. The results and discussion section are well written, along with all the pertinent figures and tables. The authors have substantially concluded the paper. The present study deals with methane-derived carbon to the benthic macrofaunal community, a poorly studied area that will give additional understating to the benthic carbon cycle. Therefore the communicated manuscript is recommended for acceptance with few minor technical revisions. Comments mentioned below may be considered while revising the MS.

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Materials and methods: It has been referred to as Fiskal et al. 2019 about the sampling locations and map in the method section. A map and short description of the depths would be catchier to easy access for the readers because few hypoxic depths are present too. How many replicates were collected for estimation of the density and biomass of macrofauna? As per the reference mentioned for detail collection in Fiskal et al. 2019, it appeared that only a single core at each station had been considered for macrofaunal estimation. What is the justification for single-core collection for macrofaunal quantification? It is always suggested to collect sufficient replicates to estimate the benthic faunal community and be statistically justified because macrofauna quantification could impact estimating the budget of other related data. p.5. L 4-5. The PCoA analysis line may be added to the statistical analyses section.

Results: Page 5, lines 17 – 19, expressing of density may be like average density 75 ± 86 ind.m⁻². It should be mentioned that SD/SE is used to expressing the density data.

Interactive comment on Biogeosciences Discuss., <https://doi.org/10.5194/bg-2020-318>, 2020.

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