REPLY TO THE REFEREE #2 (RC2) -- gmd-2023-135

This paper presents a unified version of the RIVE model for the water column, including formalisms for bacterial communities, primary producers, zooplankton, nutrients, inorganic carbon, and dissolved oxygen cycles. It is in my opinion well suited for a publication in this journal. The presentation of the open access RIVE model is well described. It is no small task as it groups the work of many years under one program and two platforms. The experiments are interesting and describe well the interest in process based models. The comparison of the results from both platforms are similar and therefore, one should be able to use either or, depending on preference and easiness of implementation. I would recommend this open-source model to analyse the key processes affecting water quality in freshwater but also as a development tool to test further new hypothesis. I recommend this manuscript for publication in this journal.

Thank you very much for your thoughtful and positive feedback on our paper. We greatly appreciate your assessment of the unified RIVE model and your kind words about its presentation. We are delighted to hear that you find the experiments interesting and that they effectively demonstrate the value of process-based models. Your point about using either platform (C-RIVE or pyRIVE) aligns with our goal of making the model as accessible as possible and enhancing the collaboration.

We are truly honored by you recommendation for publication in this journal. Thank you again for your support and encouragement.