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Comparing the efficiency of hypoxia mitigation strategies in an urban, turbid tidal river, using a coupled hydro sedimentary–biogeochemical model

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Comment and replies to the reviewer 1

We thank the reviewer for the positive evaluation of our work and for the detailed and useful comments that contributed to improve the manuscript. All the modifications proposed will be made and will send the article for correction for English before submitting the revised MS.

Comment 1: L 17,.....Lajaunie-Salla and supported...[This is an example of how to reduce words without losing meaning.]

Reply 1: We will modify the sentence in the revised MS as suggested.

Comment 2: L 24,...to limit hypoxia

Reply 2: We will correct the sentence in the revised MS as suggested.

Comment 3: L 25,.....improves DO levels but only locally

Reply 3: We will add “but” in the revised MS as suggested.

Comment 4: L 26,....discharges mitigates totally hypoxia low dissolved oxygen conditions

Reply 4: In this sentence “hypoxia” means “low dissolved oxygen conditions”. Because the Highlights section is limited in size and number of characters we have kept the sentence as is.

Comment 5: L 27,....Support of river flow.... Is not clear.

Reply 5: We will modify this highlight by “Water replenishment improves DO in the upper estuary.”

Comment 6:L 28,.....combination of different management actions.... Be more specific.

Reply 6: Again, because the Highlights section is limited in size and number of characters, we cannot give many details here; we decide to remove this highlight as it was not essential for the main message of the paper.

Comment 7: L 32 and 37, I do not see the need for this abbreviation. The impact will be greater in the text if the words were used in the text. Also WS: watershed and WW: wastewater, why not just spell them out. I am predicting that I will see a manuscript full of abbreviations that would be better expressed with words.

Reply 7: Abbreviations that were not necessary were removed from the MS: NT (neap tide) and ST (spring tide), WW (wastewater) and WS (watershed), and we spell them out throughout the text.

Comment 8: L 45-56, In view of future coastal hypoxia widespreading, it is essential to define management solutions to preserve a good quality of coastal ecosystems. These two sentences are awkward in English. Suggest: Coastal water hypoxia is increasing globally, and

the need to define management solutions to support improved water quality of coastal ecosystems is necessary.....

Reply 8: As suggested by the reviewer we will modify this sentence as following: “Coastal water hypoxia is increasing globally **due to global warming and urbanization**, and the need to define management solutions to support improved water quality of coastal ecosystems becomes important.”

Comment 9: This manuscript has much to offer and will advance the study of mitigation of sources that may lead to the decline of dissolved oxygen in estuaries. The current text does not meet the standards of an appropriate translation to English to make it understandable, succinct, and to the point. I recommend that an additional person help with the English translation. This translation and re-writing will not be by this reviewer.

Reply 9: As suggested by the reviewer, we will send the MS for English corrections before resubmission.