Dear Editor and Reviewer:

We are submitting this cover letter which includes our response to reviewer's comments.

We thank the reviewer for taking the time to review our manuscript. We have carefully considered reviewer's comments and made the necessary revisions in the revised manuscript; please see below for detailed replies.

Reviewer 3

I am very impressed with the article presented for review. The introduction objectively addresses the researched problem, presents the possible potential of the researched area as well as possible weaknesses of the proposed solutions. Then, the scope of research and the model used to simulate the water quality were presented. The data for the analysis were collected for two years, so they represent a representative value. The added value is also the comparison with other ecosystems. The performed analysis allows us to understand to understand nitrogen and phosphorus dynamics in Barataria Basin where largescale diversions of Mississippi River water are planned.
However, the article needs a few corrections, mainly editorial:

1. There is no chapter 2.2, but there are two chapters 2.1. Please correct it.

Thank you for catching it. It was corrected.

2. In my opinion, figures B1, B2, B3 and B4 also need improvement. The version of these figures submitted for review is of poor quality, practically unsuitable for study.

The publication is a valuable source of information and forms the basis for further analyzes and implementation of new solutions.

Thank you for considering my opinion. I encourage the authors to continue working on improving the manuscript.

Thank you for your comment regarding the figure resolutions. We have made the necessary modifications by increasing the resolution to provide better visual clarity and more detailed information.