Thank you for your comprehensive response to reviewers' comments. Due to the extensive nature of their comments, the reviewers will be given an opportunity to provide feedback on the proposed revisions. Please note that inclusion of additional references, suggested by the reviewers, is entirely at your own discretion. In addition to the comments provided by the reviewers, I have two small observations:

R1C1 In the Introduction, would it be possible to include a brief introduction to Bayesian state-space models and their application in freshwater ecology/ water quality modelling to set this work into a wider context for a less familiar reader, with a few key references?

R2C17 I believe that this clarification may also be useful for inclusion in the actual manuscript.