

Interactive comment on “Importance of within-lake processes in affecting the dynamics of dissolved organic carbon and dissolved organic and inorganic nitrogen in an Adirondack forested lake/watershed” by P.-G. Kang et al.

Anonymous Referee #2

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This paper provides valuable information on long-term C and N processes within a lake. Specifically, DOC, DIN and DON data is presented together in a long-term data set which makes possible interesting comparisons across time and seasons. The objectives and the structure of the work are well presented. However, the study mostly relies on the description of the dataset and statically analyses are rather scarce (or not well supported). The application of other statistical tools, such as, cross-correlation between inlet and outlet to take into accounted water residence time, will help to provide a more robust discussion based on more explicit objectives. Consider to reduce

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the number of figures/tables according to a more specific predictions. Some specific comments below which might help to improve the manuscript: P. 17294 L. 14: Is it possible to consider residence water time for retention estimates? That is compare the “same” water mass at the inlet to the outlet (after ~ 0.6 yr⁻¹) P. 17294 L. 19-20: which software was use for Seasonal Kendall trend analyses? P. 17295 L. 6: How precipitation data from 1941 was obtained? P. 17295 L. 6-14: This section shows that there no significant trend in precipitation, temperature or DOC concentration during the temporal period studied. Why you do not related these variables directly? Moreover, temperature and rainfall are not further discussed. P. 17298 L. 21: substitute “,” to “.” P.17306 L.7: remove dot Tables and figures. Table 1 Not sure which is the basis to provide correlations within months. Biological periods might make more sense, such as vegetative/growing periods or ice cover. Fig. 2 As far as it is presented now; I do not think this figure is needed. Fig. 5, 6 and 7 Consider to draw important year periods which are further discussed (vegetative/growing period; snowmelt)

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