Hydrology and Earth System Sciences Discussions

Hydrol. Earth Syst. Sci. Discuss., referee comment RC6
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# Reply on AC1

Anonymous Referee #1

Referee comment on "Seasonal forecasting of lake water quality and algal bloom risk using a continuous Gaussian Bayesian network" by Leah A. Jackson-Blake et al., Hydrol. Earth Syst. Sci. Discuss., https://doi.org/10.5194/hess-2021-621-RC6, 2022

Thanks to the authors for the thorough response to my comments. All make sense to me and I'm happy with the proposed changes.

With respect to comment 20 and bias adjustment of box-cox, this was exactly what I was getting at. The following paper might be relevant, which provides a Taylor series expansion for the mean and variance of a "box-cox normal" distribution:

Peter K. Kitanidis & Kuo-Fen Shen (1996): Geostatistical interpolation of chemical concentration. Advances in Water Resources, Vol. 19, No. 6, pp. 369-318, 1996.

This paper also shows how to include the box-cox parameter in the likelihood function for parameter estimation (essentially punishes higher degree of transformation, i.e. lower values of the box cox transformation parameter); although, I'm not sure this latter part is relevant to your study .

Good luck with the revisions