

***Interactive comment on* “Landscape scale patterns in the character of natural organic matter in a Swedish boreal stream network” by J. Temnerud et al.**

Anonymous Referee #2

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General comments

The paper discussing landscape scale patterns of dissolved natural organic matter (NOM) address relevant scientific questions within the scope of HESS. The scientific significance and quality are good. The novelty lies in the large number and range of sites and large number of parameters that are included in the discussion that leads to substantial conclusions. Methods and assumptions are valid and clearly outlined and the results are as far as I can see reproducible and sufficient to support the interpretations and conclusions. Proper credit is given to related work and the authors

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clearly indicate their own contributions. Regarding the title I suggest that “during low flow conditions” should be added. I am not convinced that the results represent high flow conditions as the authors also doubt on (p. 3279, l. 21,). The abstract is concise (includes low flow) and provide a complete summary. The language is fluent and the overall presentation is well structured and clear. The number and quality of references seem appropriate except for a missing reference to the international standard method for measurement of alkalinity. End-point titration to pH 5.6 (p. 3266) seems high. The SI unit for conductivity is siemens per metre (Sm⁻¹) and the unit presented on p 3274 should be corrected. The open circles and grey dots are difficult to locate in Figure 1. In Table 3 the groups 1), 2) and 3) defined in the text could be referred to as 1), 2) and 3) in the table and the index 3 on “polydispersity” lack explanation. Except for this I cannot see any need for clarifications, reductions, combinations, eliminations or for supplementary materials.

Specific comments

Changing the title as suggested will not in my opinion reduce the significance of the paper.

Why are the samples filtered through 0,22 and 1,2 μm filters? Generally 0,45 μm filters are used. The difference in pore size may influence the results and then the possibilities to compare results, comments?

Technical corrections

p. 3263, l. 16 ...and biotic process (... p. 3265, l. 17 What little arable land there is (... p. 3266, l. 10 (Ivarsson, 2000) is not in the reference list p. 3266, l. 17 ...performed with one month p. 3276, l. 11 ...20% of are ... p. 3277, l. 7 ...delete “as the fish swims” p. 3278, l. 22 ... along O ... (outlet of the catchment?) p. 3278, l. 24 ... many NOM character ... p. 3279, l. 16 (Pettersson, 2002) is not in the reference list p. 3284, l. 20 ... less than <10% ... p. 3284, l. 26 ... does exit derives ... p. 3290, l. 15 adjust

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