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Interactive comment on “Trace metal concentrations in acidic, headwater streams in Sweden explained by chemical, climatic, and land use variations” by B. J. Huser et al.

Anonymous Referee #3

Received and published: 12 September 2012

General comments

In this paper Huser et al. examine the influence of different factors on trace metal variability in small, acidic streams in Sweden, which is an interesting topic. A wide variety of variables are used to seek explanations for the changes in metal concentrations, and indeed it is difficult to think of relevant missing ones just off the top of one’s head.

Detailed comments

- Which factors motivated the authors to study Pb, Zn and Cr of all existing trace metals? From what I can read, there is nothing unusual (such as very high concentrations, on the contrary, Cr-concentrations are mentioned to be low) about mentioned metals in

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the investigated streams. I have nothing against these metals, but I guess this question rose because the answer doesn't seem obvious.

P 1796->: I found it a bit difficult to follow the steps in the "methods"-section, and am not sure if I could reproduce the results. Of course, just following the process theoretically is different from actually trying it out.

P 1797: The investigated metals and some of the modelled variables are mentioned here. However, I felt that there should at least be a reference to table 1 if the rest of the variables aren't mentioned here.

P 1799: Filtered absorbance, using what filter? Also table 1: In some cases the authors have specified that total concentrations have been used for mentioned variable, or that samples have been filtered (using what?), whereas in others there is no information whether filtered or unfiltered concentrations have been used, which confuses the reader. Please specify.

- Have you considered calculating metal speciation using a modelling software, in case those results could at least help to understand the poor results for Cr?

Technical comments

P 1796, line 21: "that had maximum catchment size ", "a" is missing from in between "had" and "maximum".

P 1798, line 24: "It has been successful applied " → successfully

P 1809: Reference is made to figure 6, which does not exist. Figure 3 seems to contain the information that was referenced to.

Interactive comment on Biogeosciences Discuss., 9, 1793, 2012.

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