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Geoscientific Model Development
Discussions

Interactive comment on "Modeling dissolved organic carbon in temperate forest soils: TRIPLEX-DOC model development and validation" *by* H. Wu et al.

Anonymous Referee #2

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General comments: This is an interesting manuscript that focuses on key processes of the carbon cycle in forest ecosystems. In particular, the literature on dissolved organic carbon model components in carbon cycling process-based models for forest ecosystems is not very important. My only concern is that the validation dataset is only for one site and one forest type. The authors should strengthen the description of the contribution of their work in the light of existing literature. The paper is generally well written and flows well. I did not see any major spelling error.

Specific comments: The introduction is well written and contains many interesting topics. However, it is far too long. For the revised version, the authors should make a special effort to have a more concise introduction by focusing more on the contribu-

tion of their paper relative to what has been done. Section 2, model description and methods, is well written and contains sufficient details on the model. Section 3, Model input and test data, should be changed for Model input and validation data. Validation could also be changed for evaluation. As mentioned above, the fact that the validation dataset focuses on one site and one forest type is not sufficient. In paraticular, it is mentioned on line 322 that the model "can be used to predict to predict temperate forest growth for different stand ages". The fact that only one forest type was studied is not sufficient to make that claim.

Section 4, Model validation, is far too short. The model is rich in details and simulates many processes. So, there is a lot of material to show results of different ecosystem pools in relation to dissolved organic content pools. In particular, it would be interesting to show interactions in the prediction of the pools, simulate different scenarios, including the effect of change in some input site conditions, and conduct sensitivity analysis. It is mentioned that sensitivity tests were performed, but it is not evident in the results.

Interactive comment on Geosci. Model Dev. Discuss., 6, 3473, 2013.