

Interactive comment on “Modeling nitrogen loading in a small watershed in Southwest China using a DNDC model with hydrological enhancements” by J. Deng et al.

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Thank you for the truly helpful comments on the manuscript. We have further improved the manuscript through following the suggestions. Our detailed responses are attached below. General comments: This MS validates the enhanced DNDC model (with added hydrological features) described in Deng et al. (2011) against measured data from a watershed. The addition of the ability to account for lateral flows represents a significant advance in the widely used DNDC model, and therefore the testing of the model performance at watershed scale will be of interest to researchers in this area. In general the MS is well-written and logically structured. Specific comments: The

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caption of table 2 should state that these are modeled rather than measured values. Response: Revised by following this suggestion. We have stated that the N loss for different land use types are modeled results in the caption of Table 2 in the revised manuscript. Specific comments: It would be helpful to mark on Figures 3 and 4 which data was used for calibration and where the validation data begins. Also, for time series that span more than one year it would be more useful to show month and year on the x-axis rather than month and day. Response: We have marked which data was used for calibration and which was used for validation on these figures. Also, we have labeled the year-month-date on the x-axis in the revised manuscript by following this suggestion. Technical correction: There are two papers listed as Zhu et al. 2006 in the references. These should be labelled Zhu et al. 2006a and Zhu et al. 2006b. Response: Revised according to the comment. The first authors of these two papers are not the same person, so we have labeled these two papers as “Zhu Z et al., 2006” and “Zhu B et al., 2006”, respectively, in the revised manuscript. We appreciate for you warm work earnestly, and hope that the correction will meet with your approval. Sincerely yours, Bo Zhu and co-authors

Please also note the supplement to this comment:

<http://www.biogeosciences-discuss.net/8/C3247/2011/bgd-8-C3247-2011-supplement.pdf>

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