

Interactive comment on “A multitemporal remote sensing approach to parsimonious streamflow modeling in a southcentral Texas watershed, USA” by B. P. Weissling et al.

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This is an interesting paper on using time series of remotely sensed data to derive a simple statistical model. However, the three reviewers raised important issues. To summarize the most important concerns are the lack of any test of the derived model for independent data, i.e. another time period and/or catchment. Without such a test the model is of limited use because we do not know how robust the derived relationships are outside the calibration period. For a more appropriate assessment of the model quality the results of the 'new'; model should also be compared with another calibrated model. Comparison with the 'quick and dirty'; (as one reviewer expressed it) SCS

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CN method is no fair comparison for a model which is calibrated on streamflow data. I am also concerned with the model time step of 8 days. While the MODIS data is not available on a shorter time step I would argue that one still could run the model on a daily time step (but updating the MODIS derived parameters only each 8th day). There is also a need for an uncertainty analysis. As nicely summarized recently by Pappenberger and Beven (2006) there are no good reasons for not evaluating model uncertainties!

While these comments require a significant amount of new computations, these additional analyses certainly will improve the paper. There are also a number of smaller comments and questions for clarification which need to be addressed. Based on the authors comments I am optimistic that the revised version of the paper will address all the raised major and minor issues.

Pappenberger, F., and K. J. Beven (2006), Ignorance is bliss: Or seven reasons not to use uncertainty analysis, *Water Resour. Res.*, 42, W05302, doi:10.1029/2005WR004820.

Interactive comment on *Hydrol. Earth Syst. Sci. Discuss.*, 4, 1, 2007.

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