

Interactive comment on “The importance of parameterization when simulating the hydrologic response of vegetative land-use change” by Jeremy White et al.

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Thank you for your review. We will work address all of your comments in the final draft. However, I would like respond to your comments regarding the large number of behavioral realizations and the use of more strict GLUE selection cutoff thresholds. We specifically chose a likelihood function (including the cutoff thresholds) based on "common" hydrologic modeling practice to demonstrate two problems. First, using the standard 3-component likelihood function does not eliminate parameter non-uniqueness - as you say, we found several thousands stochastically generated parameter sets that simultaneously meets these three criteria. Second, a more importantly, considerable QOI-5 uncertainty remains even after conditioning the realizations against this likeli-

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hood function if a more robust parameterization is used.

We briefly investigated the use of stricter cutoffs during the analysis. We found that as we "tighten up" and require realizations that reproduce the observed discharge increasingly well, the behavioral distributions for the verification QOIs become overly narrow and they no longer capture the observed value - basically, overfitting occurs. We add some of information to the discussion in the final draft.

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C2