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Hydrology and Earth System Sciences Discussions

Interactive comment on "Discharge simulations performed with a hydrological model using bias corrected regional climate model input" *by* S. C. van Pelt et al.

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We would like to thank you for your valuable comments about our study. The textual comments and minor remarks are being dealt with and corrected where needed. The suggested references are added. The other comments/major remarks we will briefly discuss below.

4. The lack of information on the WD method prohibits the real understanding of the method itself. It is unclear, which simulated wet days are deleted, and also how new ones are created in the simulated time series. Thus, fundamental issues of the method

are not explained.

Response: The wet days are sorted for each month on basis of the amount of precipitation. Selection of wet days to delete is made on basis of this sorting. The PDF of the wet days should remain constant, as much as possible. Another condition is that wet days are only deleted if days before or after are smaller than a threshold value. As the uncorrected precipitation data were overestimating the precipitation, it is not likely that wet days were created. This information is also added to the text.

6. In the concluding section 6, I miss a clear conclusion drawn from the results of using the two bias corrections. Which bias correction is better suitable for the use in climate change impact studies? Or can you name specific applications where the WD method is recommended, and other cases where the MV method is more adequate?

Response: In the concluding section, some remarks regarding this issue are made.

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 6, 4589, 2009.