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Hydrology and Earth System Sciences
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Discussions

Interactive comment on "Determination of cost coefficients of priority-based water allocation linear programming model – a network flow approach" *by* F. N.-F. Chou and C.-W. Wu

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First of all, we wish to express our sincere appreciation for the review and comments offered by both Anonymous Referees. At the suggestion of the first reviewer, an appendix has been added to the revised manuscript. It presents an example simplified from the case study section to demonstrate how the linear programming formulation is established by the proposed method. The linear inequalities converted from different allocation rules are presented in order to clarify for more readers how the proposed method might be applied to their own applications.

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As for the economic implications of the calculated coefficients, we prefer to treat these values purely as priority weighting factors for efficient water allocation analysis only. Since the applied model belongs to the descriptive simulation category, the expected economic benefits and costs of a specific allocation strategy can be calculated post simulation. The most beneficial strategy can be obtained by either testing the performances of different proposed strategies through different simulation runs involving only priority-based water allocation, or linking the simulation model to another optimization algorithm to calibrate the optimal strategy.

Last but not least, all figures have been re-uploaded to provide sufficient resolution with reasonable file size in the revised manuscript.

Please also note the supplement to this comment:
http://www.hydrol-earth-syst-sci-discuss.net/10/C8143/2014/hessd-10-C8143-2014-supplement.pdf

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Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 10, 15033, 2013.