

Interactive comment on “Stream depletion rate with horizontal or slanted wells in confined aquifers near a stream” by Pei Rong Tsou et al.

Anonymous Referee #1

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Review of “Stream depletion rate with horizontal or slanted wells in confined aquifers near a stream” by Tsou et al.

This article provides new solutions about flow to a horizontal and/or slanted well near a stream and it has potentials to apply for river bank infiltration. The mathematical derivation is easy to follow and correct. The solutions are a new and important addition into the knowledge base of horizontal/slanted well literatures in hydrology. I recommend accepting this article after the following minor revision.

1. On P2349, 2nd line, delete “the” in front of “groundwater”. 2. In section 3, I have no problem to see the analysis in dimensionless format. However, I still hope that the authors can convert the dimensionless parameters into dimensional ones to give readers a sense of reality of the problem. Meanwhile, the authors need to explain what

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kind of input parameters such as the hydraulic conductivity, storativity, horizontal well length, etc., and why those values are chosen. It is always to put physical background into any mathematical model. 3. The figures are fine, but it may look better if the lines can be thicker. Now they are a little thin.

Overall, I enjoy reading this article.

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 7, 2347, 2010.

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7, C889–C890, 2010

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