The paper presents a three-dimensional semi-analytical solution that simulates flow in an unconfined aquifer as well as groundwater recharge.

Analytical solutions for solving the Richards equation are limited in the literature because, as these authors underline, the analytical solutions don't exist in most cases. However, this semi-analytical solution is identical to the one proposed by Tartakovsky and Neuman (2007), Mishra and Neuman (2010), Mishra and Neuman (2011), the authors could have cited their work in the introduction lines 25-26 (page 2), although, Mishra's solution was applied to pumping test. Authors should highlight the differences between their analytical solution and those proposed by Mishra et al., if there is any differences.

It is certainly common in hydrogeological modeling to consider recharge as an input to hydrodynamics models of aquifers. However, several studies have been dedicated to calculate recharge in the literature, these models are both empirical or conceptual (Sophocleous et Perkins 2000; Facchi et al. 2004; Markstrom et al. 2008) and physical solving the Richards equation (Twarakavi et al. 2008; Thoms et al. 2006; Shen et Phanikumar 2010; Kuznetsov et al. 2012; Zhu et al. 2012). On contrary to what the authors stated in lines 9-10 (page 1), to be clear, they may have to add in the case of an analytical solution. Also, it is well known that the consideration of the unsaturated zone in the modeling of the recharge is important, unlike pumping. The recharge reflects the amount of water that comes from the precipitation and reaches the water table, this amount of water flow through the entire unsaturated zone. While in the case of pumping, water is directly extract from the saturated zone and several models neglect the contribution of the unsaturated zone located above. Hence the effects of the unsaturated zone in the case of pumping are discussed in the literature. I don't believe that studying the effect of the unsaturated zone in case of recharge will be something new, neither their analytical solution, since this one was already applied to pumping test. Also, the effects of Gardner parameters on the unsaturated zone flow have been discussed in (Mishra and Neuman 2011).

The paper is not well written, the English must be significantly improved. Mathematical equations aren't well written and test cases (and results) are not well described. Moreover, the first three conclusions drawn are not original. I don't recommend publication of this article.

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