

1 General comments

The authors responded carefully to my earlier remarks.

One point remains. The reference they included w.r.t. formula (23) in the original manuscript (p. 12258) about the solution for time-varying recharge rate does not learn us more than just the same formula. It is advised to include a reference for the Duhamel Principle in a well-known book, e.g. Bear (1972, p. 300) or Bear (1979, formula (5-150)) (both without proof; from the presentation in these references the formula (23) can easily be derived by the method of Integration by Parts) or a reference with a mathematical proof (e.g. Sneddon (1986, p. 279-281) or Bartels and Churchill (1942)). The last reference uses the Laplace Transform technique.

Response: Thanks for the suggestion. The related sentence is rewritten as:

“The present solution, Eq. (30), is applicable to arbitrary time-dependent recharge rates on the basis of Duhamel’s theorem expressed as (e.g., Bear, 1979, p. 158)

$$\bar{h}_{It} = \bar{h}_{I0} + \int_0^{\bar{t}} \frac{\partial \xi_t(\tau)}{\partial \tau} \bar{h}(\bar{t} - \tau) / \xi \, d\tau \quad (33)''$$

(lines 302-304, page 13)

2 Some minor remark

Page 12272, l. 1: Change "Ralte" into "Rate".

Response: Many thanks, it has been corrected as suggested.

References

- R.C.F. Bartels and R.V. Churchill. Resolution of boundary problems by the use of a generalized convolution. Bulletin of the American Mathematical Society, 48:276—282, 1942.
- J. Bear. Dynamics of Fluids in Porous Media. American Elsevier, New York, 1972.
- Jacob Bear. Hydraulics of Groundwater. McGraw-Hill, New York, 1979.
- Ian N. Sneddon. Elements of Partial Differential Equations. McGraw-Hill, New York, 1986.

References

- Bear, J.: Hydraulics of Groundwater, McGraw-Hill, New York, 158, 1979.