

## Correction

### **Numerical simulation of a managed aquifer recharge system designed to supply drinking water to the city of Amsterdam, The Netherlands**

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CORRECTION

# Correction: Numerical simulation of a managed aquifer recharge system designed to supply drinking water to the city of Amsterdam, The Netherlands

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**Correction: Hydrogeology Journal (2023) 31:1291–1309**  
<https://doi.org/10.1007/s10040-023-02659-w>

An error was made in the definition of the density parameter  $\rho$  in Equations 7, 8 and 9 of the original article. It was defined as the bulk density of the aquifer, whereas it should have been the density of pore water. Additionally the density of the aquifer solid matrix  $\rho_s$ , used in equation 11 to compute the retardation factor, was not defined in the original article.

The misuse of the bulk density instead of water density resulted in incorrect values of the computed thermal distribution coefficient, i.e. the bulk thermal diffusivity, and the retardation factor in Table 5. Some of the units were also incorrect. The corrected table is given here.

**Table 5** Parameters for heat transport simulation (corrected).

Parameter <sup>a</sup>	Units	Layers							
		1	2	3	4	5	6	7	8
$\theta$	-	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30
$\rho$	kg/m <sup>3</sup>	1000	1000	1000	1000	1000	1000	1000	1000
$\rho_s$	kg/m <sup>3</sup>	2643	2643	2643	2643	2643	2643	1571	2643
$K_{T \text{ fluid}}$	W/(m °C)	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58
$K_{T \text{ solid}}$	W/(m °C)	0.40	1.30	2.40	2.40	1.80	2.40	1.70	2.40
$K_{T \text{ bulk}}$	W/(m °C)	0.45	1.08	1.85	1.85	1.43	1.85	1.36	1.85
$C_{p \text{ fluid}}$	J/(kg °C)	4186	4186	4186	4186	4186	4186	4186	4186
$C_{p \text{ solid}}$	J/(kg °C)	1255.8	1255.8	1255.8	1255.8	1255.8	1255.8	1255.8	1255.8
$D_{m \text{ temp}}$	m <sup>2</sup> /d	0.031	0.075	0.128	0.128	0.099	0.128	0.094	0.128
$K_{d \text{ temp}}$	m <sup>3</sup> /kg	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003
$R_d$	-	2.85	2.85	2.85	2.85	2.85	2.85	2.10	2.85

<sup>a</sup> $\rho$  is the density of pore water;  $\rho_s$  is the density of the aquifer solid matrix

The original article can be found online at <https://doi.org/10.1007/s10040-023-02659-w>.

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As a result, the sub-section '*Temperature variations in the recovered water in wells*' should be corrected through stating the following: With a corrected retardation factor of 2.85, the average residence time of sources of water contributing to the wells is 74 days, which is sufficiently long to improve the water quality.

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