## Check for updates

## **OPEN ACCESS**

EDITED AND REVIEWED BY Oliver S. Schilling, University of Basel, Switzerland

\*CORRESPONDENCE Amelia Peeples © peeples@princeton.edu Reed M. Maxwell © reedmaxwell@princeton.edu

RECEIVED 11 April 2025 ACCEPTED 24 April 2025 PUBLISHED 08 May 2025

#### CITATION

Peeples A and Maxwell RM (2025) Corrigendum: Subgrid channel formulation in an integrated surface-subsurface hydrologic model. *Front. Water* 7:1610405. doi: 10.3389/frwa.2025.1610405

## COPYRIGHT

© 2025 Peeples and Maxwell. This is an open-access article distributed under the terms of the Creative Commons Attribution License (CC BY). The use, distribution or reproduction in other forums is permitted, provided the original author(s) and the copyright owner(s) are credited and that the original publication in this journal is cited, in accordance with accepted academic practice. No use, distribution or reproduction is permitted which does not comply with these terms.

# Corrigendum: Subgrid channel formulation in an integrated surface-subsurface hydrologic model

## Amelia Peeples<sup>1\*</sup> and Reed M. Maxwell<sup>1,2,3\*</sup>

<sup>1</sup>Department of Civil and Environmental Engineering, Princeton University, Princeton, NJ, United States, <sup>2</sup>High Meadows Environmental Institute, Princeton University, Princeton, NJ, United States, <sup>3</sup>Integrated GroundWater Modeling Center, Princeton University, Princeton, NJ, United States

#### KEYWORDS

channel flow, integrated hydrologic model, subgrid formulation, subgrid parameterization, ParFlow

## A Corrigendum on

Subgrid channel formulation in an integrated surface-subsurface hydrologic model

by Peeples, A., and Maxwell, R. M. (2025). *Front. Water* 6:1520913. doi: 10.3389/frwa.2024.1520913

In the published article, there was an error. A correction has been made to **Methods**, *Idealized test case*, paragraph 2. The model timestep was incorrectly stated to be 1 hour when it is was 0.1 hours. This sentence previously stated: "Four hours of spatially invariable rainfall are applied at the beginning of each simulation and then the simulation continues with hourly timesteps until outflow is approaching zero."

The corrected sentence appears below:

"Four hours of spatially invariable rainfall are applied at the beginning of each simulation and then the simulation continues with 0.1-h timesteps until outflow is approaching zero."

A correction has been made to **Results**, *Coarse baseline model performance*, paragraph 3. The units for Manning's *n* were incorrectly reported as being  $s/m^{1/3}$  when the values given were in min/m<sup>1/3</sup>. This sentence previously stated: "Overall, the largest discrepancy in peak flow of 78.40% is seen in the scenario where channel width is 100 m, rainfall intensity is 0.5 cm/hr, Manning's *n* is 6e-3 s/m<sup>1/3</sup>, and bottom slope is 1e-4 m/m."

The corrected sentence appears below:

"Overall, the largest discrepancy in peak flow of 78.40% is seen in the scenario where channel width is 100 m, rainfall intensity is 0.5 cm/hr, Manning's *n* is 3.6e-1 s/m<sup>1/3</sup>, and bottom slope is 1e-4 m/m."

There was an error in Table 2 as published. The units for Manning's *n* were incorrectly reported as being  $s/m^{1/3}$  when the values given were in min/m<sup>1/3</sup>. The corrected Table 2 and its caption appear below.

There was an error in Figure 5 as published. The units for Manning's *n* were incorrectly reported as being  $s/m^{1/3}$  when the values given were in min/m<sup>1/3</sup>. The corrected Figure 5 and its caption appear below.

There was an error in Figure 6 as published. The units for Manning's *n* were incorrectly reported as being  $s/m^{1/3}$  when the values given were in min/m<sup>1/3</sup>. The corrected Figure 6 and its caption appear below.

There was an error in Figure 8 as published. The units for Manning's *n* were incorrectly reported as being  $s/m^{1/3}$  when the values given were in min/m<sup>1/3</sup>. The corrected Figure 8 and its caption appear below.

The authors apologize for these errors and state that they do not change the scientific conclusions

of the article in any way. The original article has been updated.

## Publisher's note

All claims expressed in this article are solely those of the authors and do not necessarily represent those of their affiliated organizations, or those of the publisher, the editors and the reviewers. Any product that may be evaluated in this article, or claim that may be made by its manufacturer, is not guaranteed or endorsed by the publisher.

## TABLE 2 All input parameters varied and their corresponding values.

Channel width (m)	Rainfall intensity (cm/hr)	Manning's $n$ (s/m <sup>1/3</sup> )	Bottom slope (m/m)
100	0.5	3.6e-3	1e-4
200	1	1.8e-2	1e-3
500	5	3.6e-2	1e-2
1,000	10	1.8e-1	1e-1
-	-	3.6e-1	4e-1



Percentage difference in peak flow between the coarse baseline and high-resolution baseline models. Here channel width is not an input in the coarse baseline model but instead is only used to define the domain resolution of the high-resolution model.



frontiersin.org

