

Accepted Manuscript

Simulation of dynamic expansion, contraction, and connectivity in a mountain stream network

Adam S. Ward , Noah M. Schmadel , Steven M. Wondzell

PII: S0309-1708(17)30279-8
DOI: [10.1016/j.advwatres.2018.01.018](https://doi.org/10.1016/j.advwatres.2018.01.018)
Reference: ADWR 3074



To appear in: *Advances in Water Resources*

Received date: 21 March 2017
Revised date: 19 January 2018
Accepted date: 19 January 2018

Please cite this article as: Adam S. Ward , Noah M. Schmadel , Steven M. Wondzell , Simulation of dynamic expansion, contraction, and connectivity in a mountain stream network, *Advances in Water Resources* (2018), doi: [10.1016/j.advwatres.2018.01.018](https://doi.org/10.1016/j.advwatres.2018.01.018)

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

1 **Simulation of dynamic expansion, contraction, and connectivity in a mountain**
2 **stream network**

3
4 *Submitted for Publication in Advances in Water Resources*

5
6 Adam S. Ward¹

7 Noah M. Schmadel^{1,2}

8 Steven M. Wondzell³

9
10 1. School of Public and Environmental Affairs, Indiana University, Bloomington,
11 IN 47405, USA.

12 2. Now at U.S. Geological Survey, Reston, Virginia, USA

13 3. Pacific Northwest Research Station, Forest Service, United States Department
14 of Agriculture.

15
16 Corresponding Author:

17 Adam S. Ward

18 School of Public and Environmental Affairs

19 Indiana University

20 430 MSB-II

21 Bloomington, IN 47405

22
23 Email: adamward@indiana.edu

24 Phone: 812-865-4820

25
26 **Highlights:**

- 27 • Implementation of a mechanistic, dynamic model of network expansion and
28 contraction
- 29 • Importance of geologic setting and hydrologic forcing change through a
30 water year
- 31 • Network expansion is insensitive to hydrologic forcing under wet conditions
- 32 • Geologic setting matters most under low and moderate discharge conditions
- 33 • Prediction of channel network dynamics may inform management of river
34 corridors

35
36 **Key Words:**

- 37 • river corridor
- 38 • hyporheic
- 39 • solute tracer
- 40 • riparian
- 41 • network
- 42 • stream

Download English Version:

<https://daneshyari.com/en/article/8883332>

Download Persian Version:

<https://daneshyari.com/article/8883332>

[Daneshyari.com](https://daneshyari.com)