

Research Articles

- 7502** *J. P. Beamer, D. F. Hill, D. McGrath, A. Arendt, and C. Kienholz*

Hydrologic impacts of changes in climate and glacier extent in the Gulf of Alaska watershed*
(doi 10.1002/2016WR020033)

*This article is part of a Special Section—Responses to Environmental Change in Aquatic Mountain Ecosystems

- 7521** *E. D. Johnson and E. A. Cowen*

Remote determination of the velocity index and mean streamwise velocity profiles (doi 10.1002/2017WR020504)

- 7536** *H. W. Fang, H. J. Lai, W. Cheng, L. Huang, and G. J. He*

Modeling sediment transport with an integrated view of the biofilm effects (doi 10.1002/2017WR020628)

- 7558** *John Sansom, Jan Bulla, Trevor Carey-Smith, and Peter Thomson*

The impact of conventional space-time aggregation on the dynamics of continuous-time rainfall
(doi 10.1002/2017WR021074)

- 7576** *L. Zhuang, S. M. Hassanizadeh, P. J. Kleingeld, and M.Th. van Genuchten*

Revisiting the horizontal redistribution of water in soils: Experiments and numerical modeling
(doi 10.1002/2017WR020410)

- 7590** *Camille Minaudo, Rémi Dupas, Chantal Gascuel-Odoux, Ophélie Fovet, Per-Erik Mellander, Philip Jordan, Mairead Shore, and Florentina Moatar*

Nonlinear empirical modeling to estimate phosphorus exports using continuous records of turbidity and discharge*
(doi 10.1002/2017WR020590)

*This article is part of a Special Section—Continuous Nutrient Sensing in Research and Management:
Applications Learned Across Aquatic Environments and Watersheds

- 7607** *Michael P. Lamb, Fanny Brun, and Brian M. Fuller*

Direct measurements of lift and drag on shallowly submerged cobbles in steep streams: Implications for flow resistance and sediment transport (doi 10.1002/2017WR020883)

- 7630** *John T. Abatzoglou and Darren L. Ficklin*

Climatic and physiographic controls of spatial variability in surface water balance over the contiguous United States using the Budyko relationship (doi 10.1002/2017WR020843)

- 7644** *Pete D. Akers, Jeffrey M. Welker, and George A. Brook*

Reassessing the role of temperature in precipitation oxygen isotopes across the eastern and central United States through weekly precipitation-day data (doi 10.1002/2017WR020569)

- 7662** *Patricia Gonzales, Newsha Ajami, and Yujie Sun*

Coordinating water conservation efforts through tradable credits: A proof of concept for drought response in the San Francisco Bay area*
(doi 10.1002/2017WR020636)

*This article is part of a Special Section—Socio-hydrology: Spatial and Temporal Dynamics of Coupled Human-Water Systems

- 7678** *Nadine Maier, Lutz Breuer, and Philipp Kraft*

Prediction and uncertainty analysis of a parsimonious floodplain surface water-groundwater interaction model
(doi 10.1002/2017WR020749)

- 7696** *Alberto de la Fuente and Carolina Meruane*

Spectral model for long-term computation of thermodynamics and potential evaporation in shallow wetlands
(doi 10.1002/2017WR020515)

- 7716** *N. Börsing, J. F. Wellmann, J. Niederau, and K. Regenauer-Lieb*

Entropy production in a box: Analysis of instabilities in confined hydrothermal systems
(doi 10.1002/2017WR020427)

- 7740** *Yueqing Xie and Jordi Batlle-Aguilar*

Limits of heat as a tracer to quantify transient lateral river-aquifer exchanges (doi 10.1002/2017WR021120)

- 7756** *Yi-Feng Chen, Shu Fang, Dong-Sheng Wu, and Ran Hu*

Visualizing and quantifying the crossover from capillary fingering to viscous fingering in a rough fracture
(doi 10.1002/2017WR021051)

- 7773** *E. N. Bray and T. Dunne*
Subsurface flow in lowland river gravel bars (doi 10.1002/2016WR019514)
- 7798** *Minxi Zhang and Guoliang Yu*
Critical conditions of incipient motion of cohesive sediments (doi 10.1002/2017WR021066)
- 7816** *L. E. Adams, J. R. Lund, P. B. Moyle, R. M. Quiñones, J. D. Herman, and T. A. O'Rear*
Environmental hedging: A theory and method for reconciling reservoir operations for downstream ecology and water supply (doi 10.1002/2016WR020128)
- 7832** *Xiuyu Liang, Hongbin Zhan, You-Kuan Zhang, and Keith Schilling*
Base flow recession from unsaturated-saturated porous media considering lateral unsaturated discharge and aquifer compressibility (doi 10.1002/2017WR020938)
- 7853** *David J. Millar, Brent E. Ewers, D. Scott Mackay, Scott Peckham, David E. Reed, and Adewale Sekoni*
Improving ecosystem-scale modeling of evapotranspiration using ecological mechanisms that account for compensatory responses following disturbance (doi 10.1002/2017WR020823)
- 7869** *Carolyn T. Hunsaker and Dale W. Johnson*
Concentration-discharge relationships in headwater streams of the Sierra Nevada, California*
(doi 10.1002/2016WR019693)
- *This article is part of a Special Section—Concentration-Discharge Relations in the Critical Zone
- 7885** *Man Li, Wenchao Xu, and Mark W. Rosegrant*
Irrigation, risk aversion, and water right priority under water supply uncertainty (doi 10.1002/2016WR019779)
- 7904** *Gustavo Ramos, Jesus Carrera, Susana Gómez, Carlos Minutti, and Rodolfo Camacho*
A stable computation of log-derivatives from noisy drawdown data (doi 10.1002/2017WR020811)
- 7917** *Paul R. J. Connolly, Sarah J. Vogt, Stefan Iglauser, Eric F. May, and Michael L. Johns*
Capillary trapping quantification in sandstones using NMR relaxometry (doi 10.1002/2017WR020829)
- 7933** *E. Borgonovo, X. Lu, E. Plischke, O. Rakovec, and M. C. Hill*
Making the most out of a hydrological model data set: Sensitivity analyses to open the model black-box*
(doi 10.1002/2017WR020767)
- *This article is part of a Special Section—Engagement, Communication, and Decision-Making Under Uncertainty
- 7951** *Pin Shuai, M. Bayani Cardenas, Peter S. K. Knappett, Philip C. Bennett, and Bethany T. Neilson*
Denitrification in the banks of fluctuating rivers: The effects of river stage amplitude, sediment hydraulic conductivity and dispersivity, and ambient groundwater flow (doi 10.1002/2017WR020610)
- 7968** *Oliver E. J. Wing, Paul D. Bates, Christopher C. Sampson, Andrew M. Smith, Kris A. Johnson, and Tyler A. Erickson*
Validation of a 30 m resolution flood hazard model of the conterminous United States
(doi 10.1002/2017WR020917)
- 7987** *Spencer Malott, Denis M. O'Carroll, and Clare E. Robinson*
Influence of instantaneous and time-averaged groundwater flows induced by waves on the fate of contaminants in a beach aquifer (doi 10.1002/2017WR020948)
- 8003** *Reshma William, Jugal Garg, and Ashlynn S. Stillwell*
A game theory analysis of green infrastructure stormwater management policies* (doi 10.1002/2017WR021024)
- *This article is part of a Special Section—Socio-hydrology: Spatial and Temporal Dynamics of Coupled Human-Water Systems
- 8020** *Naoki Mizukami, Martyn P. Clark, Andrew J. Newman, Andrew W. Wood, Ethan D. Gutmann, Bart Nijssen, Oldrich Rakovec, and Luis Samaniego*
Towards seamless large-domain parameter estimation for hydrologic models (doi 10.1002/2017WR020401)
- 8041** *Siroos Azizmohammadi and Stephan K. Matthäi*
Is the permeability of naturally fractured rocks scale dependent? (doi 10.1002/2016WR019764)
- 8064** *Kuai Fang and Chaopeng Shen*
Full-flow-regime storage-streamflow correlation patterns provide insights into hydrologic functioning over the continental US (doi 10.1002/2016WR020283)
- 8084** *Theodore C Lim and Claire Welty*
Effects of spatial configuration of imperviousness and green infrastructure networks on hydrologic response in a residential sewershed (doi 10.1002/2017WR020631)
- 8105** *Roberto Fernández and Marcelo H. Garcia*
Input-variable sensitivity assessment for sediment transport relations (doi 10.1002/2016WR020249)

Technical Reports: Methods

- 8120** *M. A. Gillman, S. F. Lamoureux, and M. J. Lafrenière*
Calibration of a modified temperature-light intensity logger for quantifying water electrical conductivity
(doi 10.1002/2017WR020634)
- 8127** *Ji-Peng Wang, Bertrand François, and Pierre Lambert*
Equations for hydraulic conductivity estimation from particle size distribution: A dimensional analysis
(doi 10.1002/2017WR020888)