

The online article is the official version and may contain additional content not available in this print issue. To access the full article, including multimedia, enhanced figures, supporting information, and other nonprinted content, go to <http://wileyonlinelibrary.com/journal/wrcr>.

Research Articles

- 7541 *Nans Addor, Ole Rössler, Nina Köplin, Matthias Huss, Rolf Weingartner, and Jan Seibert*
Robust changes and sources of uncertainty in the projected hydrological regimes of Swiss catchments
(doi 10.1002/2014WR015549)
- 7563 *G. Stecca, A. Siviglia, and A. Blom*
Mathematical analysis of the Saint-Venant-Hirano model for mixed-sediment morphodynamics
(doi 10.1002/2014WR015251)
- 7590 *Gregory J. Mount and Xavier Comas*
Estimating porosity and solid dielectric permittivity in the Miami Limestone using high-frequency ground penetrating radar (GPR) measurements at the laboratory scale (doi 10.1002/2013WR014947)
- 7606 *J. M. Szemis, H. R. Maier, and G. C. Dandy*
An adaptive ant colony optimization framework for scheduling environmental flow management alternatives under varied environmental water availability conditions (doi 10.1002/2013WR015187)
- 7626 *A. Dietzel and P. Reichert*
Bayesian inference of a lake water quality model by emulating its posterior density
(doi 10.1002/2012WR013086)
- 7648 *O. Giustolisi and L. Ridolfi*
A novel infrastructure modularity index for the segmentation of water distribution networks
(doi 10.1002/2014WR016067)
- 7662 *Kironmala Chanda, Rajib Maity, Ashish Sharma, and Rajeshwar Mehrotra*
Spatiotemporal variation of long-term drought propensity through reliability-resilience-vulnerability based Drought Management Index (doi 10.1002/2014WR015703)
- 7677 *Qiulan Zhang, S. M. Hassanizadeh, B. Liu, J. F. Schijven, and N. K. Karadimitriou*
Effect of hydrophobicity on colloid transport during two-phase flow in a micromodel
(doi 10.1002/2013WR015198)
- 7692 *Jonathan D. Herman, Harrison B. Zeff, Patrick M. Reed, and Gregory W. Characklis*
Beyond optimality: Multistakeholder robustness tradeoffs for regional water portfolio planning under deep uncertainty (doi 10.1002/2014WR015338)
- 7714 *Dingjiang Chen, Minpeng Hu, and Randy A. Dahlgren*
A dynamic watershed model for determining the effects of transient storage on nitrogen export to rivers
(doi 10.1002/2014WR015852)
- 7731 *Sanjeev Kumar Jha, Alessandro Comunian, Gregoire Mariethoz, and Bryce F. J. Kelly*
Parameterization of training images for aquifer 3-D facies modeling integrating geological interpretations and statistical inference (doi 10.1002/2013WR014949)
- 7750 *Jessica E. Liggett, Adrian D. Werner, Brian D. Smerdon, Daniel Partington, and Craig T. Simmons*
Fully integrated modeling of surface-subsurface solute transport and the effect of dispersion in tracer hydrograph separation (doi 10.1002/2013WR015040)
- 7766 *Amanda L. Mather and Richard L. Johnson*
Quantitative characterization of stream turbidity-discharge behavior using event loop shape modeling and power law parameter decorrelation (doi 10.1002/2014WR015417)
- 7780 *J. von Ruetten, P. Lehmann, and D. Or*
Effects of rainfall spatial variability and intermittency on shallow landslide triggering patterns at a catchment scale (doi 10.1002/2013WR015122)
- 7800 *E. Kwoil, M. Becker, and C. Winter*
With or against the tide: The influence of bed form asymmetry on the formation of macroturbulence and suspended sediment patterns (doi 10.1002/2013WR014292)

- 7816 *Jan Magnusson, David Gustafsson, Fabia Hüsler, and Tobias Jonas*
Assimilation of point SWE data into a distributed snow cover model comparing two contrasting methods
 (doi 10.1002/2014WR015302)
- 7836 *C. Bracken, B. Rajagopalan, and E. Zagona*
A hidden Markov model combined with climate indices for multidecadal streamflow simulation
 (doi 10.1002/2014WR015567)
- 7847 *Daniel R. Obenour, Andrew D. Gronewold, Craig A. Stow, and Donald Scavia*
Using a Bayesian hierarchical model to improve Lake Erie cyanobacteria bloom forecasts
 (doi 10.1002/2014WR015616)
- 7861 *Maria Staudinger, Kerstin Stahl, and Jan Seibert*
A drought index accounting for snow (doi 10.1002/2013WR015143)
- 7873 *Tairone Paiva Leão and Markus Tuller*
Relating soil specific surface area, water film thickness, and water vapor adsorption
 (doi 10.1002/2013WR014941)
- 7886 *Tariq Laattoe, Adrian D. Werner, and Vincent E. A. Post*
Spatial periodicity in bed form-scale solute and thermal transport models of the hyporheic zone
 (doi 10.1002/2014WR015361)
- 7900 *Joel Sholtes, Kevin Werbylo, and Brian Bledsoe*
Physical context for theoretical approaches to sediment transport magnitude-frequency analysis in alluvial channels (doi 10.1002/2014WR015639)
- 7915 *J. P. Newman, G. C. Dandy, and H. R. Maier*
Multiobjective optimization of cluster-scale urban water systems investigating alternative water sources and level of decentralization (doi 10.1002/2013WR015233)
- 7939 *O. D. L. Strack and Taha Namazi*
A new formulation for steady multiaquifer flow: An analytic element for piecewise constant infiltration
 (doi 10.1002/2014WR015479)
- 7957 *Benjamin L. Ruddell, Elizabeth A. Adams, Richard Rushforth, and Vincent C. Tidwell*
Embedded resource accounting for coupled natural-human systems: An application to water resource impacts of the western U.S. electrical energy trade (doi 10.1002/2013WR014531)
- 7973 *Mark Bakker*
Exact versus Dupuit interface flow in anisotropic coastal aquifers (doi 10.1002/2014WR016096)
- 7984 *Neil Edwin Matthew Dickson, Jean-Christophe Comte, Jennifer McKinley, and Ulrich Ofterdinger*
Coupling ground and airborne geophysical data with upscaling techniques for regional groundwater modeling of heterogeneous aquifers: Case study of a sedimentary aquifer intruded by volcanic dykes in Northern Ireland (doi 10.1002/2014WR015320)
- 8002 *William F. Vásquez*
Willingness to pay and willingness to work for improvements of municipal and community-managed water services (doi 10.1002/2014WR015913)
- 8015 *Di D. Wu, Emmanouil N. Anagnostou, Gailing Wang, Semu Moges, and Matteo Zampieri*
Improving the surface-ground water interactions in the Community Land Model: Case study in the Blue Nile Basin* (doi 10.1002/2013WR014501)
- *This article is part of a Special Section—Climate, Hydrology and Water Resources of Eastern Africa**
- 8034 *Stephen P. Good, Casey D. Kennedy, Jeremy C. Stalker, Lesley A. Chesson, Luciano O. Valenzuela, Melanie M. Beasley, James R. Ehleringer, and Gabriel J. Bowen*
Patterns of local and nonlocal water resource use across the western U.S. determined via stable isotope intercomparisons (doi 10.1002/2014WR015884)
- 8050 *M. G. Sassi, H. Leijnse, and R. Uijlenhoet*
Sensitivity of power functions to aggregation: Bias and uncertainty in radar rainfall retrieval
 (doi 10.1002/2013WR015109)
- 8066 *I. G. Pechlivanidis, B. Jackson, H. McMillan, and H. Gupta*
Use of an entropy-based metric in multiobjective calibration to improve model performance
 (doi 10.1002/2013WR014537)

- 8084 *Chenming Zhang, Ling Li, and David Lockington*
Numerical study of evaporation-induced salt accumulation and precipitation in bare saline soils: Mechanism and feedback (doi 10.1002/2013WR015127)
- 8107 *Ryan R. Morrison and Mark C. Stone*
Spatially implemented Bayesian network model to assess environmental impacts of water management (doi 10.1002/2014WR015600)
- 8125 *N. K. Karadimitriou, S. M. Hassanizadeh, V. Joekar-Niasar, and P. J. Kleingeld*
Micromodel study of two-phase flow under transient conditions: Quantifying effects of specific interfacial area (doi 10.1002/2014WR015388)
- 8141 *Joshua C. Koch, Colin P. Kikuchi, Kimberly P. Wickland, and Paul Schuster*
Runoff sources and flow paths in a partially burned, upland boreal catchment underlain by permafrost (doi 10.1002/2014WR015586)
- 8159 *Hanne Laine-Kaulio, Soile Backnäs, Tuomo Karvonen, Harri Koivusalo, and Jeffrey J. McDonnell*
Lateral subsurface stormflow and solute transport in a forested hillslope: A combined measurement and modeling approach (doi 10.1002/2014WR015381)
- 8179 *F. Castellví, P. Gavilán, and M. P. González-Dugo*
Combining the bulk transfer formulation and surface renewal analysis for estimating the sensible heat flux without involving the parameter kB^{-1} (doi 10.1002/2013WR014950)
- 8191 *Nicole A. Pierini, Enrique R. Vivoni, Agustin Robles-Morua, Russell L. Scott, and Mark A. Nearing*
Using observations and a distributed hydrologic model to explore runoff thresholds linked with mesquite encroachment in the Sonoran Desert* (doi 10.1002/2014WR015781)
- *This article is part of a Special Section—Eco-hydrology of Semiarid Environments: Confronting Mathematical Models with Ecosystem Complexity**
- 8216 *Colin P. Stark and Paola Passalacqua*
A dynamical system model of eco-geomorphic response to landslide disturbance (doi 10.1002/2013WR014810)
- 8227 *Georg J. Houben, Paul Koeniger, and Jürgen Sültenfuß*
Freshwater lenses as archive of climate, groundwater recharge, and hydrochemical evolution: Insights from depth-specific water isotope analysis and age determination on the island of Langeoog, Germany (doi 10.1002/2014WR015584)
- 8240 *Peyman Heidari and Li Li*
Solute transport in low-heterogeneity sandboxes: The role of correlation length and permeability variance (doi 10.1002/2013WR014654)
- 8265 *Michael P. Griffin, Timothy J. Callahan, Vijay M. Vulava, and Thomas M. Williams*
Storm-event flow pathways in lower coastal plain forested watersheds of the southeastern United States (doi 10.1002/2014WR015941)
- 8281 *Martin A. Briggs, Frederick D. Day-Lewis, John B. Ong, Judson W. Harvey, and John W. Lane*
Dual-domain mass-transfer parameters from electrical hysteresis: Theory and analytical approach applied to laboratory, synthetic streambed, and groundwater experiments (doi 10.1002/2014WR015880)
- 8300 *Paolo Porto and Des E. Walling*
Use of ^7Be measurements to estimate rates of soil loss from cultivated land: Testing a new approach applicable to individual storm events occurring during an extended period (doi 10.1002/2014WR015867)
- 8314 *Elena Gross and Isabel Günther*
Why do households invest in sanitation in rural Benin: Health, wealth, or prestige? (doi 10.1002/2014WR015899)
- 8330 *T. J. Peterson and A. W. Western*
Nonlinear time-series modeling of unconfined groundwater head (doi 10.1002/2013WR014800)
- 8356 *Vazken Andréassian, François Bourgin, Ludovic Oudin, Thibault Mathevet, Charles Perrin, Julien Lerat, Laurent Coron, and Lionel Berthet*
Seeking genericity in the selection of parameter sets: Impact on hydrological model efficiency (doi 10.1002/2013WR014761)

Technical Reports: Methods

8367 *Patrick M. Reed and David Hadka*

Evolving many-objective water management to exploit exascale computing (doi 10.1002/2014WR015976)

Data and Analysis Note

8374 *R. Daren Harmel, Richard L. Haney, Douglas R. Smith, Michael White, and Kevin W. King*

USDA-ARS Riesel Watersheds, Riesel, Texas, USA: Water quality research database

(doi 10.1002/2013WR015191)