

## Research Articles

- 7067** *Benzhong Zhao, Christopher W. MacMinn, Herbert E. Huppert, and Ruben Juanes*  
**Capillary pinning and blunting of immiscible gravity currents in porous media**  
(doi 10.1002/2014WR015335)
- 7082** *Masoud Asadzadeh, Bryan A. Tolson, and Donald H. Burn*  
**A new selection metric for multiobjective hydrologic model calibration** (doi 10.1002/2013WR014970)
- 7100** *Paulo Tarso S. Oliveira, Mark A. Nearing, M. Susan Moran, David C. Goodrich, Edson Wendland, and Hoshin V. Gupta*  
**Trends in water balance components across the Brazilian Cerrado** (doi 10.1002/2013WR015202)
- 7115** *Khurram M. Shahzad and Erich J. Plate*  
**Flood forecasting for River Mekong with data-based models** (doi 10.1002/2013WR015072)
- 7134** *Lihua Xiong, Kun-xia Yu, and Lars Gottschalk*  
**Estimation of the distribution of annual runoff from climatic variables using copulas**  
(doi 10.1002/2013WR015159)
- 7153** *Daniel L. McLaughlin, David A. Kaplan, and Matthew J. Cohen*  
**A significant nexus: Geographically isolated wetlands influence landscape hydrology**  
(doi 10.1002/2013WR015002)
- 7167** *Ethan Gutmann, Tom Pruitt, Martyn P. Clark, Levi Brekke, Jeffrey R. Arnold, David A. Raff, and Roy M. Rasmussen*  
**An intercomparison of statistical downscaling methods used for water resource assessments in the United States** (doi 10.1002/2014WR015559)
- 7187** *Dulce B. B. Rodrigues, Hoshin V. Gupta, and Eduardo M. Mendiondo*  
**A blue/green water-based accounting framework for assessment of water security**  
(doi 10.1002/2013WR014274)
- 7206** *Christopher V. Henri and Daniel Fernández-García*  
**Toward efficiency in heterogeneous multispecies reactive transport modeling: A particle-tracking solution for first-order network reactions** (doi 10.1002/2013WR014956)
- 7231** *Martin W. Doyle, Lauren A. Patterson, Yanyou Chen, Kurt E. Schnier, and Andrew J. Yates*  
**Optimizing the scale of markets for water quality trading** (doi 10.1002/2014WR015395)
- 7245** *Cherry May Mateo, Naota Hanasaki, Daisuke Komori, Kenji Tanaka, Masashi Kiguchi, Adisorn Champathong, Thada Sukhapunnaphan, Dai Yamazaki, and Taikan Oki*  
**Assessing the impacts of reservoir operation to floodplain inundation by combining hydrological, reservoir management, and hydrodynamic models** (doi 10.1002/2013WR014845)
- 7267** *Sanghyun Kim*  
**Hydrometric transit times along transects on a steep hillslope** (doi 10.1002/2013WR014746)
- 7285** *Gabriel Fink, Martin Schmid, and Alfred Wüest*  
**Large lakes as sources and sinks of anthropogenic heat: Capacities and limits** (doi 10.1002/2014WR015509)
- 7302** *Chadi Sayde, Javier Benitez Buelga, Leonor Rodriguez-Sinobas, Laureine El Khoury, Marshall English, Nick van de Giesen, and John S. Selker*  
**Mapping variability of soil water content and flux across 1–1000 m scales using the Actively Heated Fiber Optic method** (doi 10.1002/2013WR014983)
- 7318** *Monique Beyer, Rob van der Raaij, Uwe Morgenstern, and Bethanna Jackson*  
**Potential groundwater age tracer found: Halon-1301 (CF<sub>3</sub>Br), as previously identified as CFC-13 (CF<sub>3</sub>Cl)**  
(doi 10.1002/2014WR015818)
- 7332** *Boian S. Alexandrov and Velimir V. Vesselinov*  
**Blind source separation for groundwater pressure analysis based on nonnegative matrix factorization**  
(doi 10.1002/2013WR015037)

- 7348** *Kirsten Davies, Corinna Doolan, Robin van den Honert, and Rose Shi*  
**Water-saving impacts of Smart Meter technology: An empirical 5 year, whole-of-community study in Sydney, Australia** (doi 10.1002/2014WR015812)
- 7359** *Jie Niu, Chaopeng Shen, Shu-Guang Li, and Mantha S. Phanikumar*  
**Quantifying storage changes in regional Great Lakes watersheds using a coupled subsurface-land surface process model and GRACE, MODIS products** (doi 10.1002/2014WR015589)
- 7378** *O. Mohnke, M. Stiebler, and N. Klitzsch*  
**Joint numerical microscale simulations of multiphase flow and NMR relaxation behavior in porous media using Lattice Boltzmann methods\*** (doi 10.1002/2013WR014684)
- \*This article is part of a Special Section—Patterns in Soil-Vegetation-Atmosphere Systems: Monitoring, Modelling and Data Assimilation**
- 7394** *C. Nathan Jones, Durelle T. Scott, Brandon L. Edwards, and Richard F. Keim*  
**Perirheic mixing and biogeochemical processing in flow-through and backwater floodplain wetlands** (doi 10.1002/2014WR015647)
- 7406** *Ali N. Ebrahimi and Dani Or*  
**Microbial dispersal in unsaturated porous media: Characteristics of motile bacterial cell motions in unsaturated angular pore networks\*** (doi 10.1002/2014WR015897)
- \*This article is part of a Special Section—Environments: Confronting Mathematical Models with Ecosystem Complexity**
- 7430** *Cinzia Miracapillo and Hubert J. Morel-Seytoux*  
**Analytical solutions for stream-aquifer flow exchange under varying head asymmetry and river penetration: Comparison to numerical solutions and use in regional groundwater models** (doi 10.1002/2014WR015456)
- 7445** *M. Hrachowitz, O. Fovet, L. Ruiz, T. Euser, S. Gharari, R. Nijzink, J. Freer, H. H. G. Savenije, and C. Gascuel-Oudou*  
**Process consistency in models: The importance of system signatures, expert knowledge, and process complexity** (doi 10.1002/2014WR015484)
- 7470** *Flavia Tauro, Maurizio Porfiri, and Salvatore Grimaldi*  
**Orienting the camera and firing lasers to enhance large scale particle image velocimetry for streamflow monitoring** (doi 10.1002/2014WR015952)
- 7484** *David Russo, Asher Laufer, Zev Gerstl, Daniel Ronen, Noam Weisbrod, and Eitan Zentner*  
**On the mechanism of field-scale solute transport: Insights from numerical simulations and field observations** (doi 10.1002/2014WR015514)

### Data and Analysis Note

- 7505** *Graham P. Weedon, Gianpaolo Balsamo, Nicolas Bellouin, Sandra Gomes, Martin J. Best, and Pedro Viterbo*  
**The WFDEI meteorological forcing data set: WATCH Forcing Data methodology applied to ERA-Interim reanalysis data** (doi 10.1002/2014WR015638)

### Opinion Article

- 7515** *Ali Mirchi, David W. Watkins Jr., Casey J. Huckins, Kaveh Madani, and Peder Hjorth*  
**Water resources management in a homogenizing world: Averting the Growth and Underinvestment trajectory** (doi 10.1002/2013WR015128)

### Comments and Replies

- 7527** *Jeffrey Olsen, Jeff Mortensen, and Aleksey S. Telyakovskiy*  
**Comment on "Traveling wave solution of the Boussinesq equation for groundwater flow in horizontal aquifers" by H. A. Basha** (doi 10.1002/2014WR016074)
- 7529** *H. A. Basha*  
**Reply to comment by Jeffrey Olsen et al. on "Traveling wave solution of the Boussinesq equation for groundwater flow in horizontal aquifers"** (doi 10.1002/2014WR016193)

**7530** *Sascha C. Iden and Wolfgang Durner*

**Comment on “Simple consistent models for water retention and hydraulic conductivity in the complete moisture range” by A. Peters (doi 10.1002/2014WR015937)**

**7535** *A. Peters*

**Reply to comment by S. Iden and W. Durner on “Simple consistent models for water retention and hydraulic conductivity in the complete moisture range” (doi 10.1002/2014WR016107)**