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(a) Professional Preparation

Susquehanna University, Selinsgrove, PA	Environmental Science	B.S., 1997
Penn State, University Park, PA	Forest Resources	M.S., 1999
Oregon State University, Corvallis, OR	Forest Engineering	Ph.D., 2004
Georgia Institute of Technology	Hydrology	Postdoc, 2004-2005

(b) Appointments

2010-present **Associate Director**, Virginia Water Resources Research Center, Virginia Tech
2014-present **Associate Professor**, Dept. of Forest Resources and Environmental Conservation, Virginia Tech
2012-2014 **Assistant Professor**, Dept. of Forest Resources and Environmental Conservation, Virginia Tech
2009-2012 **Research Assist. Prof.**, Virginia Water Resources Research Center, Virginia Tech
2005-2008 **Assistant Professor**, Center for the Environment, Plymouth State University
2005-2008 **Research Hydrologist**, Northern Research Station, US Forest Service

(c) Select Products (from >60 peer-reviewed articles)

1. Jensen, C. K., **McGuire, K. J.**, Prince, P. S., 2017. Headwater stream length dynamics across four physiographic provinces of the Appalachian Highlands, *Hydrological Processes*, 31(19): 3350–3363, doi: 10.1002/hyp.11259.
2. Kelly, C.N., **McGuire, K.J.**, Miniati, C.F., Vose, J.M., 2016. Forest management changes streamflow response to increasing precipitation extremes, *Geophysical Research Letters*, 43(8), 3727–3736, <http://dx.doi.org/10.1002/2016GL068058>.
3. Brown, K.R., **McGuire, K.J.**, Hession, W.C., Aust, W.M., 2016. Can the Water Erosion Prediction Project (WEPP) model be used to evaluate BMP effectiveness from forest roads? *Journal of Forestry*, 114(1): 17-26, <http://dx.doi.org/10.5849/jof.14-101>.
4. Benettin, P., Bailey, S.W., Campbell, J.L., Green, M.B., Rinaldo, A., Likens, G.E., **McGuire, K.J.**, Botter, G., 2015. Linking water age and solute dynamics in streamflow at the Hubbard Brook Experimental Forest, NH, USA, *Water Resources Research*, 51(11): 9256–9272, <http://dx.doi.org/10.1002/2015WR017552>.
5. Gillin, C.P., Bailey, S.W., **McGuire, K.J.**, Gannon, J.P., 2015. Mapping of hydrogeologic spatial patterns in a steep headwater catchment, *Soil Science Society of America Journal*, 79(2): 440-453, <http://dx.doi.org/10.2136/sssaj2014.05.0189>.
6. Gannon, J.P., Bailey, S.W., **McGuire, K.J.**, 2014. Organizing groundwater regimes and response thresholds by soils: A framework for understanding runoff generation in a headwater catchment, *Water Resources Research*, 50(11): 8403–8419, <http://dx.doi.org/10.1002/2014WR015498>.

7. Bailey, S.W., Brousseau, P.A., **McGuire, K.J.**, Ross, D.S., 2014. Influence of landscape position and transient water table on soil development and carbon distribution in a steep, headwater catchment, *Geoderma*, 226–227:279–289, <http://dx.doi.org/10.1016/j.geoderma.2014.02.017>.
8. **McGuire, K.J.**, Torgersen, C.E., Likens, G.E., Buso, D.C., Lowe, W.H., Bailey, S.W., 2014. Network analysis reveals multiscale controls on streamwater chemistry, *Proceedings of the National Academy of Sciences*, 111(19): 7030-7035, <http://dx.doi.org/10.1073/pnas.1404820111>.
9. **McGuire, K.J.**, McDonnell, J.J., 2010. Hydrological connectivity of hillslopes and streams: characteristic timescales and nonlinearities. *Water Resources Research*, 46(10): W10543, <http://dx.doi.org/10.1029/2010WR009341>.
10. **McGuire, K.J.**, McDonnell, J., Weiler, M., Kendall, C., Welker, J., McGlynn, B., Seibert, J., 2005. The role of topography on catchment-scale water residence time. *Water Resources Research*, 41, W05002, <http://dx.doi.org/10.1029/2004WR003657>.

(d) Synergistic Activities

1. Conference Chair: University Council of Water Resources Annual Conference, 2017-2018; International Gordon Research Conference on Catchment Science, 2015/2017; NH Water Conference, 2007/2008
2. Co-organizer/co-convener: 5 NORTH-WATCH workshops; 7 AGU/EGU sessions; US-Japan Catchment Hydrology & Forest Biogeochemistry Symposium, 2013
3. Representative: VT Commission on Research CNRE representative, 2016-present; University representative, Consortium of Universities for the Advancement of Hydrologic Science, Inc. (CUAHSI), 2009-present
4. Associate Editor: *Hydrological Processes*, *Journal of Environmental Quality*, *Water Resources Research*

(e) Teaching and Student Centered Activities

- Current Courses: FOR 3104 Principles of Watershed Hydrology, FOR 4354 Forest Soil and Watershed Management, FOR 5144 Hillslope and Watershed Hydrology
- Student Group Advisor: VT Chapter of the AWRA, Xi Sigma Pi
- Program Chair: Watershed Management minor and graduate certificate

(f) Select Grants and Funding

- Lateral weathering gradients typify critical zone architecture in glaciated catchments, 2017-2020, NSF Geobiology and Low Temperature Geochemistry, PI, \$509,292
- Integrated environmental quality sensing system prototype and field validation, 2017-2019, DOE SBIR/STTR, CoPI, \$1,435,169
- LTER: Long-Term Ecological Research at the Hubbard Brook Experimental Forest, 2017-2023, NSF Long-term Ecological Research, \$104,981 (of \$6,762,000)
- C-CAP (Conservation Credit for Agroforestry Production), 2015-18, USDA Natural Resources Conservation Service and National Fish and Wildlife Foundation, CoPI, \$536,626
- Landform controls on the coupling and feedbacks between pedogenesis and runoff generation processes, 2010-2014, NSF Hydrologic Sciences, PI, \$422,037
- A summer research experience at Hubbard Brook Experimental Forest: investigating and communicating change in ecosystems. 2008-2010, PI, NSF DBI/EAR, \$233,443