

Mark B. Green

Senior Research Associate and
Adjunct Associate Professor
Department of Earth, Environmental, and Planetary Sciences
Case Western Reserve University, Cleveland, Ohio, USA
and
Research Hydrologist
Northern Research Station
United States Forest Service, New Hampshire, USA
email: mbg78@case.edu
cell: +1 603.217.7789

EDUCATION

Doctor of Philosophy, Water Resources Science, 2007
University of Minnesota
Dissertation: The hydrologic influence on stream water nitrogen to phosphorus ratios
Certificate: Preparing Future Faculty

Master of Science, Hydrology, 2002
University of Nevada, Reno
Thesis: Nutrient limitation of periphyton growth in the Truckee River, California-Nevada

Bachelor of Science, Biology, 2000
Minnesota State University, Mankato
Minor: Geology
Senior Thesis: Hydrologic properties of lake-bottom sediments, Mills Lake, Minnesota

EXPERIENCE

Senior Research Associate and Adjunct Associate Professor

Department of Earth, Environmental, and Planetary Sciences, Case Western Reserve University, Cleveland, OH
2/2019 to present

Associate Professor of Hydrology

Center for the Environment, Plymouth State University, Plymouth, NH
9/2014 to 5/2019

Assistant Professor of Hydrology

Center for the Environment, Plymouth State University, Plymouth, NH
9/2009 to 9/2014

Research Hydrologist

Northern Research Station, U.S. Forest Service, North Woodstock, NH
9/2009 to Present

Fulbright Fellow and Cooperating Visiting Researcher

Laboratory of Forest Hydrology and Erosion Control Engineering
Graduate School of Agricultural and Life Sciences, University of Tokyo, Japan
9/2012 to 6/2013

Post Doctoral Research Associate

Institute for the Study of Earth, Oceans, and Space, University of New Hampshire, Durham,
NH
and Department of Civil Engineering, The City College of New York, New York, NY
1/2008 to 8/2009

Research Fellow

Department of Bioproducts and Biosystems Engineering, University of Minnesota, Saint
Paul, MN
1/2007 to 12/2007

Project Scientist

Limno-Tech, Inc.
6/2006 to 1/2007

USDA National Needs Fellow and Graduate Research Assistant

Department of Bioproducts and Biosystems Engineering
Department of Soil, Water, and Climate
National Center for Earth-Surface Dynamics
University of Minnesota, Saint Paul, MN
9/2003 to 1/2007

Graduate Research Assistant and George Burke Maxey Hydrology Fellow

Division of Earth and Ecosystem Sciences, Desert Research Institute, Reno, NV
9/2000 to 5/2002

PEER-REVIEWED PUBLICATIONS

Rickert, K., M.B. Green, and J. Koonce. 2023. Impact of Beech Leaf Disease on sap flux density and soil moisture. *Trees* (submitted)

Yanai, R. D., A.R., Young, J.L. Campbell, J.A. Westfall, C.J. Barnett, G.A. Dillon, M.B. Green, and C.W. Woodall. 2022. Measurement uncertainty in a national forest inventory: results from the Northern Region of the USA. *Canadian Journal of Forest Research.*, doi: 10.1139/cjfr-2022-0062.

Green, M. B., S. Fraver, D.A. Lutz, C.W. Woodall, A.W. D'Amato, and D. M. Evans. 2022. Does deadwood moisture vary jointly with surface soil water content? *Soil Science Society of America Journal*, doi: 10.1002/saj2.20413.

Pardo, L.H., M.B. Green, S.W. Bailey, K.J. McGuire, and W. H. McDowell. 2022. Identifying controls on nitrate sources and flowpaths in a forested catchment using a hydrogeological framework. *Journal of Geophysical Research: Biogeosciences*, 127(2), e2020JG006140.

- Hanson, R., J. Hammond Rowan, and M. B. Green. 2022. An assessment of 2 watershed models to meet watershed planning needs. *Lake and Reservoir Management*, 38(1), 16-27.
- Green, M.B., S.W. Bailey, J.L. Campbell, K.J. McGuire, A.S. Bailey, T.J. Fahey, N. Lany, and D. Zietlow. 2021. A catchment water balance assessment of an abrupt shift in evapotranspiration at the Hubbard Brook Experimental Forest, New Hampshire, USA. *Hydrological Processes* doi: 10.1111/1752-1688.12941.
- Demers, D.J., M.B. Green, and S.W. Bailey. Semi-automated characterization of streamwater specific conductivity response to storms. 2021. *Journal of the American Water Resources Association* doi: 10.1002/hyp.14177.
- Oda, T., T. Egusa, N. Ohte, N. Hotta, N. Tanaka, M.B. Green, and M. Suzuki. 2021. Effects of changes in canopy interception on stream runoff response and recovery following clear-cutting of a Japanese coniferous forest in Fukuroyamasawa Experimental Watershed in Japan. *Hydrological Processes* doi: 10.1002/hyp.14177.
- Campbell, J.L., L.E. Rustad, S.W. Bailey, E.S. Bernhardt, C.T. Driscoll, M.B. Green, P.M. Groffman, G.M. Lovett, W.H. McDowell, K.J. McGuire, and E.J. Rosi. 2021. Watershed studies at the Hubbard Brook Experimental Forest: Building on a long legacy of research with new approaches and sources of data. *Hydrological Processes* doi: 10.1002/hyp.14016.
- Green, M.B., L. Pardo, S.W. Bailey, J.L. Campbell, W. McDowell, E. Bernhardt, and E. Rosi. 2020. Predicting high-frequency variation in stream solute concentrations with machine learning. *Hydrological Processes* doi: 10.1002/hyp.14000.
- Wilson, G., M.B. Green, J. Brown, J.L. Campbell, P. Groffman, J. Duran, and J. Morse. 2020. Snowpack affects soil microclimate throughout the year. *Climatic Change* 163, 705–722.
- Yanai, R.D., C. Wayson, D. Lee, A.B. Espejo, J.L. Campbell, M.B. Green, J.M. Zuskewitz, S.B. Yoffe, J.E. Aukema, A.J. Lister, J.W. Kirchner, and J.G.P. Garmarra. 2020. Improving uncertainty in forest carbon accounting for REDD+ mitigation efforts. *Environmental Research Letters* 15(12), 124002.
- Harrison, J. L., M. Blagden, M.B. Green, G. Salvucci, and P.H. Templer. 2020. Water sources for red maple trees in a northern hardwood forest under a changing climate. *Ecohydrology*, e2248.
- See, C. R., M.B. Green, R.D. Yanai, A.S. Bailey, J.L. Campbell, and J. Hayward. 2020. Quantifying uncertainty in annual runoff due to missing data. *PeerJ*, 8, e9531.
- Shrestha, A., M.B. Green, J.N. Boyer, and L.A. Doner. 2020. Effects of storm events on phosphorus concentrations in a forested New England stream. *Water, Air, & Soil Pollution*, 231(7), 1-16.
- Woodall, C. W., D.M. Evans, S. Fraver, S., M.B. Green, D.A. Lutz, and A.W. D’Amato. 2020. Real-time monitoring of dead wood moisture in forests: Lessons learned from an

intensive case study. *Canadian Journal of Forest Research*, doi: 10.1139/cjfr-2020-0110.

Bailey, S. W., K.J. McGuire, D.S. Ross, M.B. Green, and O.L. Fraser. 2019. Mineral weathering and podzolization control acid neutralization and streamwater chemistry gradients in upland glaciated catchments, northeastern USA. *Frontiers in Earth Science*, 7, 63.

Wilhelm, J. F., D.J. Bain, M.B. Green, K.F. Bush, and W.H. McDowell, W. 2019. Trace metals in Northern New England streams: Evaluating the role of road salt across broad spatial scales with synoptic snapshots. *PLoS One*, 14(2), e0212011.

Campbell, J.L., M.B. Green, R.D. Yanai, C.W. Woodall, S. Fraver, M.E. Harmon, M.A. Hatfield, C.J. Barnett, C.R. See, and G.M. Domke. 2019. Estimating uncertainty in the volume and carbon storage of downed coarse woody debris. *Ecological Applications*, doi: 10.1002/eap.1844.

Vadeboncoeur, M.A., M.B. Green, H. Asbjornsen, J.L. Campbell, M.B. Adams, E.W. Boyer, D.A. Burns, I.J. Fernandez, M.J. Mitchell, and J.B. Shanley. 2018. Systematic variation in evapotranspiration trends and drivers across the Northeastern United States. *Hydrological Processes*, 32 (23), 3547-3560.

Oda, T., M.B. Green, R. Urakawa, T.M. Scanlon, S. Sebestyen, K.J. McGuire, M. Katsuyama, K. Fukuzawa, M.B. Adams, and N. Ohte, 2018. Stream runoff and nitrate recovery times after forest disturbance in the USA and Japan. *Water Resources Research*, 54 (9), 6042-6054.

Wilson, G., M.B. Green, and K. Mack. 2018. Historical climate warming in the White Mountains of New Hampshire (USA): Implications for snowmaking water needs at ski areas. *Mountain Research and Development*, 38 (2), 164-171.

Evans, D. M., A.M. Villamagna, M.B. Green, and J.L. Campbell. 2018. Origins of stream salinization in an upland New England watershed. *Environmental Monitoring and Assessment*, 190 (9), 523.

Zuidema, S., W.M. Wollheim, M.M. Mineau, M.B. Green, and R.J. Stewart. 2018. Controls of chloride loading and impairment at the river network scale in New England. *Journal of Environmental Quality*, 47 (4), 839-847.

Green, M.B., J.L. Campbell, R.D. Yanai, S.W. Bailey, A.S. Bailey, N. Grant, I. Halm, E.P. Kelsey, and L.E. Rustad. 2018. Downsizing a long-term precipitation network: Using a quantitative approach to inform difficult decisions. *PLoS One* 13, (5), e0195966.

Inserillo, E.A., M.B. Green, J.B. Shanley, and J.N. Boyer. 2017. Comparing catchment hydrologic response to a regional storm using specific conductivity sensors. *Hydrological Processes*, 31 (5), 1074-1085.

Contosta, A.R., A. Adolph, D. Burchsted, E. Burakowski, M.B. Green, D. Guerra, M. Albert, J. Dibb, M. Martin, W.H. McDowell, M. Routhier, C. Wake, R. Whitaker, and W. Wollheim. 2016. A longer vernal window: the role of winter coldness and snowpack in

- driving spring transitions and lags. 2017. *Global Change Biology*, 23 (4), 1610-1625.
- Fuss, C.B., C.T. Driscoll, M.B. Green, and P.M. Groffman. 2016. Hydrologic flowpaths during snowmelt in forested headwater catchments under differing winter climatic and soil frost regimes. *Hydrological Processes*, 30 (24): 4617-4632.
- Campbell, J.L., R.D. Yanai, M.B. Green, G.E. Likens, C.R. See, A.S. Bailey, D.C. Buso, and D. Yang. 2016. Uncertainty in the net hydrologic flux of calcium in a paired-watershed harvesting study. *Ecosphere* 7 (6), doi: 10.1002/ecs2.1299.
- Benettin, P., S.W. Bailey, J. L. Campbell, M.B. Green, A. Rinaldo, G.E. Likens, K.J. McGuire, and G. Botter. 2015. Linking water age and solute dynamics in streamflow at the Hubbard Brook Experimental Forest, NH, USA. *Water Resources Research* 51 (11): 9256-9272.
- Fahey, T.J., P.H. Templer, B.T. Anderson, J.J. Battles, J.L. Campbell, C.T. Driscoll, A.R. Fusco, M.B. Green, K.S. Kassam, N.L. Rodenhouse, L. Rustad, P.G. Schaberg, and M.A. Vadeboncoeur. 2015. The promise and peril of intensive site-based ecological research: insights from the Hubbard Brook ecosystem study. *Ecology*, 96 (4): 885-901.
- Green, M.B., B.K. Laursen, J.L. Campbell, K.J. McGuire, and E.P. Kelsey. 2015. Stable water isotopes suggest sub-canopy water recycling in a northern forested catchment. *Hydrological Processes*, 29 (25): 5193-5202.
- McGuire, K.J., S.D. Sebestyen, N. Ohte, E.M. Elliott, T. Gomi, M.B. Green, B.L. McGlynn, and N. Tokuchi. 2014. Merging perspectives in the catchment sciences: the US-Japan Joint Seminar on catchment hydrology and forest biogeochemistry. *Hydrological Processes*, 28 (5): 2878-2880.
- Creed, I.F., D.M. McKnight, B.A. Pellerin, M.B. Green, B.A. Bergamaschi, G.R. Aiken, S.E.G. Findlay, D.A. Burns, J.B. Shanley, R.G. Striegl, B.T. Aulenbach, D.W. Clow, H. Laudon, B.L. McGlynn, K.J. McGuire, R.A. Smith, S.M. Stackpoole. 2015. The river as a chemostat: fresh perspectives on dissolved organic matter flowing down the river continuum. *Canadian Journal of Fisheries and Aquatic Sciences*, 72 (8): 1272-1285.
- Yanai, R.D., N. Tokuchi, J.L. Campbell, M.B. Green, E. Matsuzaki, S.N. Laseter, C.L. Brown, A.S. Bailey, P. Lyons, C.R. Levine, D.C. Buso, G.E. Likens, J. Knoepp, K. Fukushima. 2015. Sources of uncertainty in stream solute export from headwater catchments. *Hydrological Processes*, 29 (7): 1793-1805.
- Wollheim, W.M., M.B. Green, B. Pellerin, C. Hopkinson, N. Morse. 2015. Impacts of ecosystem service regionalization on a suburban New England watershed through time. *Estuaries and Coasts*, 38 (1): 19-34, doi: 10.1007/s12237-013-9646-8.
- Creed, I.F., A.T. Spargo, J.A. Jones, J.M. Buttle, M.B. Adams, F.D. Beall, E. Booth, J. Campbell, D. Clow, K. Elder, M.B. Green, N.B. Grimm, C. Miniati, P. Ramlal, A. Saha, S. Sebestyen, D. Spittlehouse, S. Sterling, M.W. Williams, R. Winkler, and H. Yao. 2014. Changing forest water yields in response to climate warming: Results from long-

term experimental watershed sites across North America. *Global Change Biology*, 20 (10): 3191-3208.

Green, M.B., A.S. Bailey, S. Bailey, J.J. Battles, J.L. Campbell, C.T. Driscoll, T.J. Fahey, L. Lepine, G.E. Likens, S.V. Ollinger, and P. Schaberg. 2013. Reply to Smith and Shortle: Lacking evidence of hydraulic efficiency changes. *Proceedings of the National Academy of Sciences*, 110 (40), E3740.

Campbell, J.L., A.S. Bailey, C. Eagar, M.B. Green, and J.J. Battles. 2013. Vegetation treatments and hydrologic responses at the Hubbard Brook Experimental Forest, New Hampshire. p.1-9. In A.E. Camp, L.C. Irland, and C.J.W. Carroll (Editors) Long-term Silvicultural & Ecological Studies: Results for Science and Management (Volume 2). Yale University, Global Institute of Sustainable Forestry, Research Paper 013. 187pp.

Green, M.B., A.S. Bailey, S. Bailey, J.J. Battles, J.L. Campbell, C.T. Driscoll, T.J. Fahey, L. Lepine, G.E. Likens, S.V. Ollinger, and P. Schaberg. 2013. Decreased water flowing from a forest amended with calcium silicate. *Proceedings of the National Academy of Sciences*, 110 (15): 5999-6003, doi: 10.1073/pnas.1302445110.

Yanai, R.D., C.R. Levine, M.B. Green, and J.L. Campbell. 2012. Quantifying uncertainty in forest nutrient budgets. *Journal of Forestry*, 110 (8): 448-456.

Groffman, P.M., L.E. Rustad, P.H. Templer, J.L. Campbell, L.M. Christenson, N.K. Lany, A.M. Soggi, M.A. Vadeboncoeur, P.G. Schaberg, G.F. Wilson, C.T. Driscoll, T.J. Fahey, M.C. Fisk, C.L. Goodale, M.B. Green, S.P. Hamburg, C.E. Johnson, M.J. Mitchell, J.L. Morse, L.H. Pardo, and N.L. Rodenhouse. 2012. Long-term integrated studies show complex and surprising effects of climate change in the northern hardwood forest. *BioScience*, 62 (12): 1056-1066.

Bain, D.J., M.B. Green, J.L. Campbell, J.F. Chamblee, S. Chaoka, J.M. Fraterrigo, S. Kaushal, S.L. Martin, T.E. Jordan, A.J. Parolari, W.V. Sobczak, D.E. Weller, W.M. Wollheim, E. Boose, J.M. Duncan, G. Gettel, B. Hall, P. Kumar, J.R. Thompson, J.M. Vose, E.M. Elliott, and D.S. Leigh. 2012. Legacies in material flux: structural catchment changes pre-date long term studies. *BioScience*, 62 (6): 575-584.

Bain, D.J., J.S. Arrigo, M.B. Green, B. Pellerin, and C.J. Vörösmarty. 2011. Historical legacies and contemporary water science and management. *Water*, 3 (2): 566-575.

Campbell, J.L., R.D. Yanai, and M.B. Green, 2011. Estimating uncertainties in watershed studies. *Eos*, Vol. 92, No. 26.

Pastore, C.L., M.B. Green, D.J. Bain, A. Munoz-Hernandez, C.J. Vörösmarty, J.S. Arrigo, S. Brandt, J. Duncan, F. Greco, H. Kim, S. Kumar, M. Lally, A. Parolari, B. Pellerin, N. Salant., C.A. Schlosser, and K. Zalzal. 2010. Tapping environmental history to recreate America's colonial hydrology. *Environmental Science & Technology*, 44 (23): 8798-8803.

Green, M.B. and J.C. Finlay. 2009. Patterns of hydrology controlling stream water total nitrogen to total phosphorus ratios. *Biogeochemistry*, 99 (1-3): 15-30.

Green, M.B. and D. Wang. 2008. Watershed flow paths and stream water nitrogen-to-phosphorus ratios under simulated precipitation regimes. *Water Resources Research*, 44, W12414, doi:10.1029/2007WR006139.

Green, M.B. and J.C. Finlay. 2008. Detecting characteristic hydrological and biogeochemical signals through nonparametric scatter plot analysis of normalized data. *Water Resources Research*, 44, W08455, doi:10.1029/2007WR006509.

Green, M.B., J.L. Nieber, G. Johnson, J. Magner, and B. Schaefer. 2007. Flow path influence on an N:P ratio in two headwater streams: A paired watershed study. *Journal of Geophysical Research*, 112, G03015, doi:10.1029/2007JG000403.

Green, M.B. and C.H. Fritsen. 2006. Spatial variation of nutrient balance in the Truckee River, California-Nevada. *Journal of the American Water Resources Association*, 42 (3): 659-674.

PEER REVIEWER

Journals: Biogeochemistry, Ecological Engineering, Environmental Management, Environmental Science & Technology, Geophysical Research Letters, Hydrological Processes, Hydrology and Earth System Sciences, Journal of Environmental Management, Journal of Environmental Quality, Journal of Historical Geography, Limnology and Oceanography, New Phytologist, Oecologia, Science Advances, Water Resources Research

Grant Programs: National Science Foundation, Tahoe Science Consortium, US Department of Agriculture - National Institute of Food and Agriculture, US Department of Energy

RESEARCH PROJECTS

U.S. Forest Service, Northern Research Station (2019-present), “Hydrological Processes in the Northern Forest”, \$329,000, PI.

National Science Foundation (2020-2023), “Collaborative Proposal: MSA: Controls on coupled nitrogen and carbon cycles of watersheds across eco-regions”, \$79,994

U.S. Forest Service, White Mountain National Forest (2010-2019), “Watershed Quality in the White Mountain National Forest”, \$77,000, PI.

U.S. Forest Service, Northern Research Station (2009-2019), “Hydrology of the Northern Forest”, \$540,000, PI.

National Science Foundation, Long Term Ecological Research (2017 - 2021) “Long-Term Ecological Research (LTER) at Hubbard Brook Experimental Forest (HBR)”, co-PI with PIs Peter Groffman and Gary Lovett (Cary Institute of Ecosystem Studies), \$120,000 sub-award.

National Science Foundation, Hydrologic Sciences (2013), “US-Japan joint seminar on responses of catchment hydrology and forest biogeochemistry to climatic and environmental change”, \$57,580, co-PI with PI Kevin McGuire (Virginia Tech).

National Science Foundation, Ecosystem Studies (2013-2018), “RCN: Quantifying uncertainty in ecosystem studies”, \$500,000, PI Ruth Yanai (SUNY ESF).

Northern States Research Cooperative (2012-2014), “Understanding the physical and biological drivers of observed evapotranspiration declines in the northern forest region”, \$125,328, co-PI with PI Heidi Asbjornsen (University of New Hampshire).

Long Term Ecological Research Network (2012-2013) - Synthesis Workshop, “Synthesizing long-term records and ecohydrologic modeling to quantify structural legacy effects”, \$15,000, co-PI with Dan Bain (University of Pittsburgh), Anthony Parolari (Massachusetts Institute of Technology), and Gaj Sivandran (Ohio State University).

National Science Foundation, Hydrologic Sciences (2012-2014), “The transport of dissolved organic matter by river networks from mountains to the sea: a re-examination of the role of flow across temporal and spatial scales”, \$25,400, PI with co-PIs Douglas Burns, Brian Pellerin, and James Shanley (U.S. Geological Survey). This funding is to co-support a USGS Powell Center working group.

National Science Foundation, EPSCoR Research Infrastructure (2011-2016) “Interactions among climate, land use, ecosystem services, and society”, \$988,466, PI of subaward from University of New Hampshire.

National Science Foundation, Ecosystem Studies - ROA Supplemental Award (2011-2012) “Soil moisture response to calcium fertilization in northern hardwood forest plots”, \$25,000, PI.

Northern States Research Cooperative (2010-2012) “Climate controls on organic carbon flux from northern forest watersheds”, \$92,820, co-PI with PI Jamie Shanley (U.S. Geological Survey).

National Science Foundation, Long Term Ecological Research - ROA Supplemental Award (2010-2011) “Hydrologic response to calcium fertilization in a northern hardwood forest”, \$25,000, PI.

National Science Foundation, Long Term Ecological Research (2010 - 2017) “Long-Term Ecological Research (LTER) at Hubbard Brook Experimental Forest (HBR)”, co-PI with PIs Charles Driscoll (Syracuse University) and Timothy Fahey (Cornell University).

National Science Foundation, Paleo Perspectives on Climate Change (2010 - 2014) “Collaborative Research RUI: Decadal cyclicity in NAO proxies from northwest Iceland lake sediments”, \$643,672, co-PI with PI Lisa Doner (Plymouth State University).

Long Term Ecological Research Network (2008 - 2009) Synthesis Workshop - “Long Term Hydrologic Change: Disturbance Legacies in Material Fluxes”, \$17,475, co-PI with Dan Bain (University of Pittsburgh).

MENTORING

Undergraduate Students (Hubbard Brook REU, Plymouth State U., and Case Western): Rachel Allen, Shannon Brunelle, Benjamin Engel, Sara Olmsted, Kyle Rickert, Colin Smith, Alexander Soroka, Erik Thatcher, Amanda Theall, Ellis Wright, Jenna Zukswert

Primary Adviser of M.S. Students: Bradley Bowers, Daniel Demers, Brittani Doran, Carolyn Ellis, Adam Finkelman, Ashley Inzerillo, Joseph Molloy, Chris Nealen, Anju Shrestha, Christina Strong, Pat Tarpey, Jessica Wilhelm

Committee Member of M.S. Students: Jordan Christ, Greg DiSanto, Rebecca Hanson, Donovan King, Jonathon Loos, Mysti Martin, Brandon Mitchell, Lisa Scott, Lily Zahor

Committee Member of Ph.D. Students: Colin Fuss (Syracuse Univ.), Nathaniel Morse (Univ. of New Hampshire), Shan Zuidema (Univ. of New Hampshire)

TEACHING EXPERIENCE

Adjunct Associate Professor

Course: Hydrogeology

Department of Earth, Environmental and Planetary Sciences, Case Western Reserve University

Fall Semester 2021

Assistant and Associate Professor

Courses: Forest Ecosystems, Watershed Hydrology, Watershed Systems, Contaminant Hydrology, Environmental Data Analysis, Research Design and Data Visualization

Department of Environmental Science and Policy, Plymouth State University

Fall Semester 2009 to Spring Semester 2019

Adjunct Professor

Course: Earth Science for Elementary Educators

Department of Chemistry and Geology, Minnesota State University, Mankato

Fall Semester 2007

Laboratory Instructor

Course: Vadose Hydrology

Department of Soil, Water, and Climate, University of Minnesota

Fall Semester 2005

HONORS AND AWARDS

Award for Distinguished Scholarship (2015) - Plymouth State University

Fulbright Scholar, Japan (2012-2013) - U.S. Department of State

USDA National Needs Fellowship (2003-2006) - University of Minnesota

George Burke Maxey Hydrology Fellowship (2001-2002) - Desert Research Institute

Hydrologic Sciences, Master of Science, Student of the Year (2002) - University of Nevada

PROFESSIONAL SERVICE

Workshop Convener, Better Monitoring through Uncertainty Analysis: Optimize allocation of effort, save time and money, Long Term Ecological Research All Scientists' Meeting, 2018

Member, Squam Lakes Association, water quality technical committee, 2018 to 2020

Member, Interdisciplinary Studies Council, Plymouth State University, 2016 to 2018

Associate Editor, Progress in Earth and Planetary Science, Japan Geosciences Union, 2013 to 2019

Judge, US Junior Stockholm Water Prize, 2012

Panelist, US Department of Agriculture, AFRI Grant Program, 2010 & 2012

Member, Education and Outreach Committee, Consortium of Universities for the Advancement of Hydrologic Science, Inc., 2009 to 2012

Member, Technical Committee on Water Quality, Hydrology Section, American Geophysical Union, 2008 to 2011

Workshop Coordinator, Exploring Total Maximum Daily Load Case Studies, 2007 Minnesota Water Conference

Technical Advisory Committee Member, Browns Creek Biological Stressor Identification Study, Washington Conservation District, Minnesota, 2007