

## Brian L. McGlynn

<http://mcglynnlab.com>

Professor of Watershed Hydrology and Biogeosciences

Our research focuses on the spatial and temporal scaling of hydrological and ecological processes across natural and disturbed watersheds and stream networks.

### **Professional Preparation**

- 2002 Ph.D. Watershed Hydrology, SUNY College of Environmental Science and Forestry, Syracuse New York. *Characterizing Hillslope–Riparian–Stream Interactions: A scaling Perspective*. Major Professor: Jeff McDonnell
- 1997 M.S. Watershed Hydrology, SUNY College of Environmental Science and Forestry, Syracuse New York. *Flowpaths in the Riparian Zone: Reconciling Hydrometric, Chemical, and Isotopic Evidence*. Major Professor: Jeff McDonnell
- 1993 B.A. Environmental Science (double major), Gettysburg College, Gettysburg PA.
- 1993 B.A. History (double major), Gettysburg College, Gettysburg PA

### **Appointments**

- 2014- Chair, Division of Earth Sciences, Nicholas School of the Environment, Duke University, Durham, North Carolina
- 2012- Professor of Hydrology and Biogeosciences, Division of Earth and Ocean Sciences, Nicholas School of the Environment, Duke University, Durham, North Carolina
- 2007-12 Associate Professor, Watershed Hydrology and Biogeosciences, Department of Land Resources and Environmental Sciences, Montana State University - Bozeman
- 2002-07 Assistant Professor, Watershed Hydrology, Department of Land Resources and Environmental Sciences, Montana State University - Bozeman
- 2001-02 Faculty Research Assistant, Forest Engineering Dept., Oregon State Univ.
- 2000 Teaching Assistant, Tropical soils hydrology, Rondonia, Brazil,
- 2000-01 Research Assistant, SUNY College of Environmental Science and Forestry
- 1998 Instructor, SUNY College of Environmental Science and Forestry
- 1997-99 Research Assistant, New York City Dept. of Environmental Protection
- 1997 Program Coordinator, Oswego County NY, Environmental Management Council
- 1996 Hydrological Technician, USGS, Montpelier VT
- 1994-96 Environmental Consultant, Oswego County NY, Environmental Management Council

### **Select Awards, Honors, or Significant Recognition**

- 2014 AGU Chapman Conference: Catchment Spatial Organization and Complex Behavior **[INVITED KEYNOTE]**
- 2014 Future of the NRC Committee on Hydrologic Sciences invitee
- 2014 National Science Foundation “Water Sustainability and Climate Program” **review panel** member
- 2014 **Nominated** and considered for the Chartered Science Advisory Board for the US EPA
- 2013-14 **Science Chair**, Consortium of Universities for the Advancement of Hydrologic Science Biennial Science Meeting, summer 2014
- 2013 PhD student **mentor** for Fabian Nippgen who earned the American Geophysical Union **Horton Research Award** (1 of 3 international recipients for PhD research)
- 2013- Elected for a second term to the **Board of Directors** for the Consortium of Universities for the Advancement of Hydrologic Science, Inc. (CUAHSI)
- 2013 External **review panel** member (1 of 3) for the American Association for the Advancement of Science (AAAS) review of the Wyoming NSF EPSCoR Program and the Wyoming Center for Environmental Hydrology and Geophysics (WyCEHG)
- 2013- USGS Powell Center and NSF sponsored **work group member**: Dissolved Organic Matter Transported by Rivers
- 2012 Canadian Geophysical Union **Woo Lecturer [INVITED KEYNOTE]**
- 2011 Nominated for the Montana State University **Cox Family Faculty Excellence Award**
- 2011 Invited to join the AGU *Water Resources Research* **editorial team** as an Associate Editor (declined/postponed)
- 2011 The Universities Council on Water Resources (UCOWR) awarded the 2011 **Education and Public Service Award** to our NSF CCLI Modular Curriculum for Hydrologic Advancement (MOCHA) Project
- 2011 Process interactions and synthesis in catchment hydrology. Vienna Catchment Sciences Symposium, Vienna Austria. April 2011. **[INVITED KEYNOTE]**
- 2011 Expanding dimensions in hydrologic sciences. University of Colorado Hydrological Sciences Symposium. April 2011. **[INVITED KEYNOTE]**
- 2011 National Science Foundation EPSCoR Program **review panel member**
- 2010- Elected to the **Board of Directors** for the Consortium of Universities for the Advancement of Hydrologic Science, Inc. (CUAHSI)
- 2010 External **review panel member** (1 of 4) for the American Association for the Advancement of Science (AAAS) review of the Nevada NSF EPSCoR Program *Nevada Infrastructure for Climate Change Science, Education, and Outreach* representing ecohydrology
- 2010- **Editorial Board**: *Hydrology and Earth System Science (HESS)*
- 2010 National Science Foundation Cross Directorate Water, Sustainability, and Climate **review panel member**

- 2009-13 Member of the **selection committee** for the Hydrology Early Career Award, American Geophysical Union and co-initiator of the award at AGU
- 2008 PhD student **mentor** for Diego Riveros-Iregui who earned the American Geophysical Union **Horton Research Award** (1 of 2 international recipients for PhD research)
- 2008 PhD student mentor for Diego Riveros-Iregui who earned the Montana State University **Graduate Achievement Award** for Outstanding Performance in a Doctoral Program (the only recipient)
- 2008 Landscape structure controls on streamflow generation and land-atmosphere fluxes: Moving from point observations to watershed scales. Berkeley Catchment Science Symposium. December 2008. **[INVITED KEYNOTE]**
- 2008 Hydrologic connectivity from hillslope to landscape scales: Implications for runoff generation and water quality. NSF EPSCoR Water Dynamics Workshop, Burlington, VT. November 2008. **[INVITED KEYNOTE]**
- 2006 Landuse change impacts on water quality: The importance of spatial location. Swedish Institute of Hydrology, Stockholm, Sweden. April 2006. **[INVITED KEYNOTE]**
- 2005 NASA LBA (Large-Scale Biosphere Atmosphere experiment in Amazonia) **review panel member**
- 2004 National Science Foundation Hydrologic Sciences Program **review panel member**
- 2003 European Geophysical Union **Young Scientist Award nominee** selected by the Hydrology Technical Committee Chairs for the EGU-wide award
- 2001 American Geophysical Union **Horton Research Award** (1 of 2 international recipients for PhD research)

### **Publications - Refereed Journal Articles**

*Current or recent \*graduate, \*postdoc, or \*\* undergraduate student authors*

- \*Somers, K.A., E.S. Bernhardt, B.L. **McGlynn**, and D.L. Urban. Tentatively accepted pending minor revisions. Downstream dissipation of storm flow heat pulses: A case study and its landscape-level implications. *Journal of the American Water Resources Association*.
- \*Welch, C., P. Stoy, A. \*Raines, A. \*Johnson, and B.L. **McGlynn**. In press. The impacts of mountain pine beetle disturbance on the energy balance of snow during the melt period. *Hydrological Processes*. DOI: 10.1002/hyp.10638
- \*Nippgen, F., B.L. **McGlynn**, and R. Emanuel. 2015. The spatial and temporal evolution of contributing areas. *Water Resources Research*. 10.1002/2014WR016719
- \*Kelleher, C., T. Wagner, B.L. **McGlynn**. 2015. Model-based analysis of the influence of catchment properties on hydrologic partitioning across five mountain headwater sub-catchments. *Water Resources Research*. 10.1002/2014WR016147
- \*Mitchell, S., R. Emanuel, and B.L. **McGlynn**. 2015. Land-atmosphere carbon and water

flux relationships to vapor pressure deficit, soil moisture, and stream flow. *Agricultural and Forest Meteorology*.  
<http://dx.doi.org/10.1016/j.agrformet.2015.04.003>

- Creed, I.F., D.M. McKnight, B.A. Pellerin, M.B. Green, B.A. Bergamaschi, G.R. Aiken, D.A. Burns, S.E.G. Findlay, J.B. Shanley, R.G. Striegl, B.T. Aulenbach, D.W. Clow, H. Laudon, B.L. **McGlynn**, K.J. McGuire, R.A. Smith, and 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*.
- Shanley, J.B., S. Sebestyen, J. McDonnell, B.L. **McGlynn**, and T. Dunne. 2015. Water's Way at Sleepers River watershed - revisiting flow generation in a post-glacial landscape, Vermont USA. *Hydrological Processes*. doi: 10.1002/hyp.10377.
- \*Chen, X., M. Kumar, and B.L. **McGlynn**. 2014. Variations in streamflow response to large hurricane-season storms in a southeastern US watershed. *Journal of Hydrometeorology*. doi:10.1175/JHM-D-14-0044.1
- Band, L., J.J. McDonnell, A. Barros, A. Bejan, T. Burt, W.E. Dietrich, J. \*Duncan, T. Hwang, G. Katul, Y. Kim, B. **McGlynn**, B. \*Myles, A. Porporato, C. Scaife, and P. Troch. 2014. Ecohydrological flow networks in the subsurface. *Ecohydrology*.
- \*Mallard, J., B.L. **McGlynn**, and T. \*Covino. 2014. Lateral inflows, stream-groundwater exchange, and network geometry influence streamwater composition. *Water Resources Research*. doi: 10.1002/2013WR014944
- Liang, L., D. Riveros-Iregui, R. Emanuel, and B.L. **McGlynn**. 2014. A Simple Framework to Estimate Distributed Soil Temperature from Discrete Air Temperature Measurements in Data-Scarce Regions. *Journal of Geophysical Research - Atmospheres*. 2013JD020597RR.
- \*Smith, T., L. Marshall, B.L. **McGlynn**. 2014. Calibrating hydrologic models in flow-corrected time. *Water Resources Research*. doi: 10.1002/2013WR014635
- \*Kelleher, C., T. Wagener, F. \*Pianosi, B.L. **McGlynn**. 2014. Controls on hydrologic partitioning: Using a mechanistic model for comparative hydrology across ungauged sub-catchments in a mountain headwater basin. International Environmental Modelling and Software Society (iEMSs) 7th Intl. Congress on Env. Modelling and Software, San Diego, CA, USA. Daniel P. Ames, Nigel W.T. Quinn and Andrea E. Rizzoli (Eds.)
- 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*. DOI: 10.1002/hyp.10129
- \*Smith, T., L. Marshall, B.L. **McGlynn**, and K. \*Jencso. 2013. Using field data to inform and evaluate a new model of catchment hydrologic connectivity. *Water Resources Research*. doi:10.1002/wrcr.20546, 2013
- \*Kelleher, C., T.W. Wagener, B.L. **McGlynn**, A.S. \*Ward, M.N. Gooseff, and R.A. \*Payn. 2013. Can transient storage models characterize stream reach processes? *Water Resources Research*. doi:10.1002/wrcr.20413. *WRR* cover article

- \*Montross, G., B.L. **McGlynn**, S. \*Montross, K. \*Gardner. 2013. Nitrogen production from geochemical weathering of rocks in southwest Montana. *Journal of Geophysical Research - Biogeosciences*. DOI: 10.1002/jgrg.20085
- Emanuel, R.E., A. \*\*Hazen, B.L. **McGlynn**, and K.G. \*Jencso. 2013. Vegetation and topographic influences on the connectivity of shallow groundwater between hillslopes and streams. *Ecohydrology*. Manuscript ID ECO-12-0116.R1
- \*Mullen, R., L. Marshall, B.L. **McGlynn**. 2013. A beta regression model for improved solar radiation predictions. *Journal of Applied Meteorology and Climatology*. doi:10.1175/JAMC-D-12-038.1
- \*Patil, S., T. \*Covino, A. Packman, B.L. **McGlynn**, J. \*Drummond, R. \*Payn, and R. Schumer. 2013. Intra-stream variability in solute transport: Hydrologic and geomorphic controls on solute retention. *Journal of Geophysical Research - Earth Surface*.
- \*Ward, A.S., R.A. \*Payn, M.N. Gooseff, B.L. **McGlynn**, K.E. Bencala, C.A. \*Kelleher, S.M. Wondzell, and T. Wagener. 2013. Variations in surface water–ground water interactions along a headwater mountain stream: comparisons between transient storage and water balance analyses. *Water Resources Research*. doi: 10.1002/wrcr.20148, in press.
- Gooseff, M.N., M.A. \*Briggs, K.E. Bencala, B.L. **McGlynn**, and D.T. Scott. 2013. Do transient storage parameters directly scale in longer, combined stream reaches? Reach length dependence of transient storage interpretations. *Journal of Hydrology*. <http://dx.doi.org/10.1016/j.jhydrol.2012.12.046>
- \*Jones, L.A., C.C. Muhlfeld, L.A. Marshall, B.L. **McGlynn**, and J.L. Kershner. 2013. Estimating Thermal Regimes of Bull Trout and Assessing the Potential Effects of Climate Warming on Critical Habitats. *River Research and Applications*. DOI: 10.1002/rra.2638
- \*\*Kaiser. K., B.L. **McGlynn**, and R.E. Emanuel. 2013. Ecohydrology of an outbreak: Mountain pine beetle impact trees in drier landscape positions first. *Ecohydrology*. doi: 10.1002/eco.1286
- Wagener, T., \*Kelleher, C., Weiler, M., **McGlynn**, B., Gooseff, M., Marshall, L., Meixner, T., McGuire, K., \*Gregg, S., Sharma, P., and Zappe, S. 2012. It takes a community to raise a hydrologist: the Modular Curriculum for Hydrologic Advancement (MOCHA), *Hydrol. Earth Syst. Sci. (HESS)*, 16, 3405-3418, doi:10.5194/hess-16-3405-2012, 2012.
- \*Mason, S.J.K., B.L. **McGlynn**, and G. Poole. 2012. Hydrologic response to channel reconfiguration on Silver Bow Creek, Montana. *Journal of Hydrology*. doi.org/10.1016/j.jhydrol.2012.03.010
- \*Payn, R.A., M.N. Gooseff, B.L. **McGlynn**, S.M. Wondzell, and K.E. Bencala. 2012. Exploring changes in the spatial distribution of stream baseflow generation during a seasonal recession. *Water Resources Research*. doi:10.1029/2011WR011552
- \*Covino. T.P., B.L. **McGlynn**, and R. \*McNamara. 2012. Land use / land cover and scale influences on in-stream nitrogen uptake kinetics. *Journal of Geophysical Research - Biogeosciences*. doi:10.1029/2011JG001874

- \*Riveros-Iregui, D.A., B.L. **McGlynn**, R.E. \*Emanuel, and H.E. Epstein. 2012. Complex terrain modulates bi-directional responses of soil respiration to inter-annual water availability. *Global Change Biology*. doi: 10.1111/j.1365-2486.2011.02556.x
- \*Kelleher, C., T. Wagener, M. Gooseff, B.L. **McGlynn**, K. McGuire, and L. Marshall. 2012. Investigating controls on the thermal sensitivity of Pennsylvania streams. *Hydrological Processes*. doi: 10.1002/hyp.8186.
- \*Covino, T.P., B.L. **McGlynn**, and J. \*Mallard. 2011. Stream – groundwater exchange and hydrologic turnover at the network scale. *Water Resources Research*. doi:10.1029/2011WR010942
- \*Nippgen, F., B.L. **McGlynn**, L. Marshall, and R. Emanuel. 2011. Landscape structure and climate influences on hydrologic response. *Water Resources Research*. 47, W12528, doi:10.1029/2011WR011161. [WRR FEATURED ARTICLE]
- \*Jencso, K.J. and B.L. **McGlynn**. In press. Hierarchical controls on runoff generation: Topographically driven hydrologic connectivity, geology, and vegetation. *Water Resources Research*. doi:10.1029/2011WR010666
- \*Gardner, K.K., B.L. **McGlynn**, and L. Marshall. 2011. Quantifying watershed sensitivity to spatially variable N loading and the relative importance of watershed N retention mechanisms. *Water Resources Research*. W08524, doi:10.1029/2010WR009738.
- \*Emanuel, R.E., D.A. Riveros-Iregui, B.L. **McGlynn**, and H.E. Epstein. 2011. Addressing the spatial heterogeneity of net ecosystem productivity in complex landscapes. *Ecosphere*. 2(7):art86. doi:10.1890/ES11-00074. [NEW FAST-TRACK ESA JOURNAL].
- \*Campos, N., R. Lawrence, B.L. **McGlynn**, and K.K. Gardner. 2011. Using Quickbird and Landsat imagery to analyze temporal changes in mountain resort development: Big Sky, Montana 1990-2005. *Journal of Applied Remote Sensing*.
- \*Riveros-Iregui, D.A., B.L. **McGlynn**, L.A. Marshall, D.L. Welsch, R.E. Emanuel, and H.E. Epstein. 2011. A watershed-scale assessment of a process soil CO<sub>2</sub> production and efflux model. *Water Resources Research*. DOI:10.1029/2010WR009941.
- \*Pacific, V.J., B.L. **McGlynn**, \*D.A. Riveros-Iregui, D.L. Welsch, and H.E. Epstein. 2011. Landscape structure, groundwater dynamics, and soil water content influence soil respiration across riparian-hillslope transitions, Tenderfoot Creek Montana. *Hydrological Processes*. DOI: 10.1002/hyp.7870.
- \*Grabs, T., \*K.G. Jencso, B.L. **McGlynn**, J. Seibert. 2010. Calculating terrain indices along streams - a new method for separating stream sides. *Water Resources Research*. DOI:10.1029/2010WR009296.
- Emanuel, R.E., H.E. Epstein, B.L. **McGlynn**, D.L. Welsch, \*D.J. Muth, and P. D’Odorico. 2010. Spatial and temporal controls on watershed ecohydrology in the northern Rocky Mountains. *Water Resources Research*. VOL. 46, W11553, DOI:10.1029/2009WR008890.
- \*Jencso, K.G., B.L. **McGlynn**, M.N. Gooseff, K.E. Bencala, and S.M. Wondzell. 2010. Hillslope hydrologic connectivity controls riparian groundwater turnover:

- Implications of catchment structure for riparian buffering and stream water sources. *Water Resources Research*. VOL. 46, W10524, DOI:10.1029/2009WR008818.
- \*Covino, T., B.L. **McGlynn**, and \*R.A. McNamara. 2010. Tracer Additions for Spiraling Curve Characterization (TASCC): Quantifying stream nutrient uptake kinetics from ambient to saturation. *Limnology and Oceanography: Methods*. DOI 10:4319/lom.2010.8.484
- \*Covino, T., B.L. **McGlynn**, and M.A. Baker. 2010. Separating physical and biological nutrient retention and quantifying uptake kinetics from ambient to saturation in successive mountain stream reaches. *Journal of Geophysical Research - Biogeosciences*. VOL. 115, G04010, DOI:10.1029/2009JG001263, 2010.
- Wagener, T., M. Sivapalan, P.A. Troch, B.L. **McGlynn**, C.J. Harman, H.V. Gupta, P. Kumar, P.S.C. Rao, N.B. Basu, and J.S. Wilson. 2010. The future of hydrology: An evolving science for a changing world. *Water Resources Research*, 46, W05301, DOI:10.1029/2009WR008906.
- \*Pacific, V.J., \*K.G. Jencso, and B.L. **McGlynn**. 2010. Variable flushing mechanisms and landscape structure control stream DOC export during snowmelt in a set of nested catchments. *Biogeochemistry*. DOI: 10.1007/s10533-009-9401-1
- \*Shoutis, L. Patten, D.T., and B.L. **McGlynn**. 2010. Terrain-based predictive modeling of riparian vegetation in a northern Rocky Mountain watershed. *Wetlands*. 30:621–633 DOI 10.1007/s13157-010-0047-5
- Wondzell, S.M., M.N. Gooseff, and B.L. **McGlynn**. 2010. Hyporheic exchange flows and diel fluctuations in discharge during baseflow recession. *Hydrological Processes*. DOI: 10.1002/hyp.7507
- \*Campos, N, R. Lawrence, B.L. **McGlynn**, and \*K.K. Gardner. 2010. Effects of LiDAR-Quickbird fusion on object-oriented classification of mountain resort development. *Journal of Applied Remote Sensing*. Vol. 4, 043556. DOI: 10.1117/1.3519370.
- \*Payn, R.A., M.N. Gooseff, B.L. **McGlynn**, S.M. Wondzell, and K.E. Bencala. 2009. Longitudinal distribution of channel water balance through summer discharge recession in a Rocky Mountain headwater stream, Montana, USA. *Water Resources Research*. DOI:10.1029/2008WR007644.
- \*Pacific, V.J., B.L. **McGlynn**, \*D.A. Riveros-Iregui, H.E. Epstein, and D.L. Welsch. 2009. Differential soil respiration responses to changing hydrologic regimes. *Water Resources Research*, DOI: 10.1029/2009WR007721.
- \*Jencso, K.G., B.L. **McGlynn**, M.N. Gooseff, S.M. Wondzell, and K.E. Bencala. 2009. Hydrologic connectivity between landscapes and streams: Transferring reach and plot scale understanding to the catchment scale, *Water Resources Research*. DOI:10.1029/2008WR007225.
- \*Riveros-Iregui, D.A. and B.L. **McGlynn**. 2009. Landscape structure controls soil CO<sub>2</sub> efflux variability in complex terrain: Scaling from point observations to watershed scale fluxes. *Journal of Geophysical Research – Biogeosciences*. DOI: 10.1029/2008JG000885.
- \*Gardner, K.K. and B.L. **McGlynn**. 2009. Seasonality in spatial variability and influence

- of land use/land cover and watershed characteristics on streamwater nitrate concentrations in a developing watershed in the Rocky Mountain West. *Water Resources Research*. DOI: 10.1029/2008WR007029.
- \*Riveros-Iregui, D.A., B.L. **McGlynn**, H.E. Epstein, and D.L. Welsch. 2008. Interpretation and evaluation of combined measurement techniques for soil CO<sub>2</sub> efflux: Surface chambers and soil CO<sub>2</sub> concentration probes. *Journal of Geophysical Research – Biogeosciences*. DOI: 10.1029/2008JG000811.
- \*Pacific, V.J., B.L. **McGlynn**, \*D.A. Riveros-Iregui, D.L. Welsch, and H.E. Epstein. 2008. Variability in soil CO<sub>2</sub> production and surface CO<sub>2</sub> efflux across riparian-hillslope transitions. *Biogeochemistry*. DOI: 10.1007/s10533-008-9258-8.
- \*McIlroy, S.K., C. Montagne, C. Jones, and B.L. **McGlynn**. 2008. Identifying linkages between land use, geomorphology, and aquatic habitat in a mixed-use Watershed. *Environmental Management*. 42:867–876 DOI 10.1007/s00267-008-9166-7
- Wondzell, S.M., M. Gooseff, and B.L. **McGlynn**. 2007. Flow Velocity and the hydrologic behavior of streams during baseflow. *Geophysical Research Letters*. VOL. 34, L24404, DOI:10.1029/2007GL031256.
- \*Covino, T. and B.L. **McGlynn**. 2007. Stream gains and losses across a mountain-to-valley transition: Impacts on watershed hydrology and stream water chemistry, *Water Resources Research*, 43, W10431, DOI:10.1029/2006WR005544.
- \*Riveros-Iregui, D.A., \*R.E. Emanuel, \*D.J. Muth, B.L. **McGlynn**, H.E. Epstein, D.L. Welsch, and \*V.J. Pacific. 2007. Diurnal hysteresis between soil temperature and soil CO<sub>2</sub> is controlled by soil water content. *Geophysical Research Letters*, 34, L17404, DOI:10.1029/2007GL030938.
- Wagener, T., M. Weiler, B.L. **McGlynn**, M. Gooseff, T. Meixner, L. Marshall, K. McGuire, and M. McHale. 2007. Taking the pulse of hydrology education. *Hydrological Processes*. 21, 1789–1792. DOI: 10.1002/hyp.6766.
- Seibert J. and B.L. **McGlynn**. 2007. A new triangular multiple flow-direction algorithm for computing upslope areas from gridded digital elevation models. *Water Resources Research*. 43, W04501, DOI:10.1029/2006WR005128.
- \*McGuire, K.J., J.J. McDonnell, B.L. **McGlynn**, M. Weiler, C. Kendall, J.M. Welker, and J. Seibert. 2005. Watershed residence time and the role of topography. *Water Resources Research*. 41, W05002, DOI:10.1029/2004WR003657.
- McDonnell, J.J., **McGlynn**, B.L., Vache, K., and I. Tromp van Meerveld. 2005. A perspective on hillslope hydrology in the context of PUB, *International Association of Hydrological Sciences (IAHS)*.
- Gooseff, M.N. and B.L. **McGlynn**. 2005. A practical and cost-efficient stream tracer technique utilizing ionic tracers and electrical conductance data. *Hydrological Processes*. 19, 2491–2506, DOI: 10.1002/hyp.5685.
- McGlynn**, B.L., J.J. McDonnell, J. Seibert, and C. Kendall. 2004. Scale effects on headwater catchment runoff timing, flow sources, and groundwater-streamflow relations. *Water Resources Research*, 40, W07504, DOI:10.1029/2003WR002494.



- McGlynn**, B.L., and J.J. McDonnell. 2003. Quantifying the relative contributions of riparian and hillslope zones to catchment runoff, *Water Resources Research*. 39(11), 1310 DOI:10.1029/2003WR002091.
- Weiler, M., **McGlynn**, B.L., McGuire, K.J., and J.J. McDonnell. 2003. How does rainfall become runoff? A combined tracer and runoff transfer function approach. *Water Resources Research*. 39(11), 1315, DOI:10.1029/2003WR002331.
- McGlynn**, B.L. and J.J. McDonnell. 2003. The role of discrete landscape units in controlling catchment dissolved organic carbon dynamics. *Water Resources Research*, 39(4), 1090, DOI:10.1029/2002WR001525
- McGlynn**, B.L. and J. Seibert. 2003. Distributed assessment of contributing area and riparian buffering along stream networks. *Water Resources Research*, 39(4), 1082, DOI:10.1029/2002WR001521.
- McGlynn**, B.L., J.J. McDonnell, J. Seibert, and M.K. Stewart. 2003. On the relationships between catchment scale and streamwater mean residence time. *Hydrological Processes*, 17(175-181).
- McGlynn**, B.L., J.J. McDonnell, and D. Brammer. 2002. A review of the evolving perceptual model of hillslope flowpaths at the Maimai Catchments, NZ. *Journal of Hydrology*, 257(1-26).
- McGlynn**, B.L., J.J. McDonnell, J.B. Shanley, and C. Kendall. 1999. Riparian zone flowpath dynamics during snowmelt in a small headwater catchment. *Journal of Hydrology*, 222(75-92).
- McDonnell, J.J., B.L. **McGlynn**, K. Kendall, J.B. Shanley, and C. Kendall. 1998. The role of near-stream riparian zones in the hydrology of steep upland catchments. *International Association of Hydrological Sciences (IAHS)* 248(173-180).

### **Refereed Conference Proceedings**

- \*Grabs, T., J. Seibert, \*K. Jencso, and B.L. **McGlynn**. 2009. Calculation of side-separated contributions to stream networks – A new tool to characterize riparian zones. *Proceedings of Geomorphometry 2009*. Zurich, Switzerland, 31 August - 2 September, 2009.
- Gooseff, M.N., S. M. Wondzell, and B.L. **McGlynn**. 2008. On the relationships among temporal patterns of evapo-transpiration, stream flow and riparian water levels in headwater catchments during baseflow. *36th IAH Congress Proceedings* in Toyama, Japan.
- \*Campos, N., R.L. Lawrence, B.L. **McGlynn**, and \*K. Gardner. 2008. Object-oriented mapping of mountain resort development in Big Sky, Montana. *ASPRS 2008 Conference Proceedings*.

### **Invited Book Chapters and Commentaries (peer reviewed)**

- McGlynn**, B.L., Blöschl, M. Borga, H. Borman, R. Hurkmans, L. Nandagiri, R. Uijlenhoet,

- and T. Wagener. 2013. A data acquisition framework for runoff prediction in ungauged basins. In: *Runoff Prediction in Ungauged Basins: Synthesis across Processes, Places and Scales*. Edited by G. Bloschl, M. Sivapalan, T. Wagener, A. Viglione, H. Savenije. Cambridge University Press. **[INVITED]**
- \*Riveros-Iregui, D.A. and B.L. **McGlynn**. 2008. Measuring and modeling CO<sub>2</sub> and H<sub>2</sub>O fluxes in complex terrain. In: Baldocchi D.D., and R. Vargas (eds). *FLUXLETTER*. Vol 1 (4): 12-13. **[INVITED COMMENTARY]**.
- Wagener, T., M. Sivapalan, and B.L. **McGlynn**. 2008. Catchment Classification and Services – Towards a new Paradigm for Catchment Hydrology Driven by Societal Needs. *Encyclopedia of Hydrological Sciences*, Wiley. **[INVITED]**.
- McGlynn**, B.L. 2005. The role of riparian zones in steep mountain catchments. *Global Change and Mountain Regions*. “Advances in Global Change Research” book series, Martin Beniston (ed), Kluwer. **[INVITED]**
- Seibert, J. and B.L. **McGlynn**. 2005. Landscape element contributions to storm runoff across catchment scale. *Encyclopedia of Hydrological Sciences*. Wiley. **[INVITED]**

### **Refereed publications**

- Wondzell, S, \*K.G. Jencso, \*R. Payne. 2009. Water, doesn't it just run downhill? Exploring the hydrologic connections between landscapes and streams. *U.S. Forest Service Pacific Northwest Research Station Annual Science Findings Issue 119*. (Summarized work from my lab for a general audience)
- Wagener, T., M. Weiler, B. **McGlynn**, M. Gooseff, T. Meixner, L. Marshall, K. McGuire, and M. McHale. 2006. TEACHING HYDROLOGY: Are we providing an interdisciplinary education? *International Association of Hydrological Sciences (IAHS)*. NL 87. December 2006.

### **Non-refereed publications**

- Bernhardt, E., J. Bradford, W.B. Bowden, J. Duncan, M. Gooseff, J. Jones, C. Kendall, B.L. **McGlynn**, T. Meixner, P. Mulholland, D. Robinson, and J. Selker. 2006. Advancing Biogeochemical Research in the Field Hydrological Sciences: The CUAHSI Hydrological Measurement Facility - Biogeochemical Component. White Paper for the Consortium of Universities for the Advancement of Hydrologic Science (CUAHSI), 27 pp.
- McGlynn**, B.L. 2002. *Characterizing hillslope–riparian–stream interactions: A scaling perspective, Maimai, New Zealand*. Ph.D. Dissertation. SUNY College of Environmental Science and Forestry (ESF). 194 pp.
- McGlynn**, B.L. 1997. *Flowpaths in the riparian zone: Reconciling hydrometric, chemical and isotopic evidence*. M.S. Thesis. SUNY College of Environmental Science and Forestry (ESF) 78pp.

### **Journal Articles in Review**

(Grad students as denoted with \* and undergrads denoted with \*\*)

- \*Nippgen, F., B. L. McGlynn, and R. E. Emanuel, and J.M. Vose. In review. Watershed memory at the Coweeta Hydrologic Laboratory: The effect of past precipitation and storage on hydrologic response. *Water Resources Research*.
- \*Kelleher, C. T. Wagener, and B.L. McGlynn (In review). Model-based analysis of the influence of catchment properties on hydrologic partitioning across five mountain headwater sub-catchments. *Water Resources Research*.
- \*Smith, T., K. \*Hayes, L. Marshall, B.L. McGlynn, and K. \*Jencso. In review. Diagnostic calibration and cross-catchment assessment of a simple process-consistent hydrologic model. *Water Resources Research*.

#### **Journal Articles in Internal Review** (near final draft unless otherwise noted)

- \*\*Bergstrom, A., J. \*Mallard, B. **McGlynn**, and T. Covino. In internal review. Stream network travel times and the influence of watershed structure and stream network geometry. For submission to *Hydrological Processes*.
- \*Gardner, K.K. and B.L. **McGlynn**. In internal review. A multi-analysis approach to assess the spatio-temporal patterns of watershed response to localized inputs of nitrogen associated with landuse change. For submission to *Water Resources Research*.
- \*Baker, S. K. \*Jencso, and B.L. **McGlynn**. In internal review. The relative influence of climate, landscape structure and forest harvest on suspended sediment export in forested mountain catchments. For submission to *Water Resources Research*.
- \*\*Kalinin, A., T. \*Covino, and B.L. **McGlynn**. In internal review. Investigating the hydrologic controls on nutrient distribution, export, and flowpaths through a mountain lake. For submission to *Biogeochemistry*.
- McGlynn**, B.L. and \*R.A. McNamara. In preparation. Stream nitrogen uptake dynamics from ambient to saturation across seasons in a sub-alpine stream. For submission to *Ecology*.
- \*Mallard, J., T.P. \*Covino, and B.L. **McGlynn**. In preparation. In A dynamic model of watershed network nutrient retention that incorporates nitrogen uptake kinetics and hydrologic turnover processes. For submission to *Journal of Geophysical Research – Biogeosciences*.

#### **Extension Publications** (together with Cornell Cooperative Extension)

- McGlynn**, B.L. 1996. *Riparian Buffer Zones to Protect and Promote Water Quality*. Oswego County NY Planning and Environmental Management Council.
- McGlynn**, B.L. 1996. *Eastern Lake Ontario Dune Guide*. Lake Ontario Dune Coalition.
- McGlynn**, B.L. 1996. Quarterly Oswego County Environmental Management Council newsletter. 1994-1998.
- McGlynn**, B.L. 1995. *Private drinking water well protection fact sheet*. Oswego County Water Quality Coordinating Council.
- McGlynn**, B.L. 1995. *Private aerobic septic system maintenance fact sheet*. Oswego

County Water Quality Coordinating Council.

**McGlynn**, B.L. 1995. *Invasive plant species fact sheets: Purple loosestrife, Water chestnut, Eurasian water milfoil*. Oswego County Environmental Management Council.

**Student Theses and Dissertations** (major advisor or co-advisor)

Fabian Nippgen. 2014. PhD Dissertation. Dept. of Land Resources and Environmental Sciences, Montana State University-Bozeman.

Tim Covino. 2012. PhD Dissertation. Dept. of Land Resources and Environmental Sciences, Montana State University-Bozeman.

Randall Mullen. 2012. PhD Dissertation. Dept. of Land Resources and Environmental Sciences, Montana State University-Bozeman.

Tyler Smith. 2012. PhD Dissertation. Dept. of Land Resources and Environmental Sciences, Montana State University-Bozeman.

John Mallard. 2012. MS Thesis. Dept. of Land Resources and Environmental Sciences, Montana State University-Bozeman.

Leslie Jones. 2012. MS Thesis. Dept. of Land Resources and Environmental Sciences, Montana State University-Bozeman.

Dustin Anderson. 2012. MS Thesis. Dept. of Land Resources and Environmental Sciences, Montana State University-Bozeman.

Gardner, Kristin. 2010. PhD Dissertation. Spatial and seasonal variability of watershed response to anthropogenic nitrogen loading in a mountainous watershed. Dept. of Land Resources and Environmental Sciences, Montana State University-Bozeman.

Jencso, Kelsey. 2010. PhD Dissertation. Hydrological linkages between landscapes and stream networks. Dept. of Land Resources and Environmental Sciences, Montana State University-Bozeman.

Mason, Seth. 2010. MS Thesis. Hydrologic response to channel realignment of Silver Bow Creek: Science to inform the restoration process. Dept. of Land Resources and Environmental Sciences, Montana State University-Bozeman.

McNamara, Rebecca. 2010. MS Thesis. Stream nitrogen uptake kinetics from ambient to saturation across development gradients, stream network position, and seasons. Dept. of Land Resources and Environmental Sciences, Montana State University-Bozeman.

Pacific, Vince. 2009. PhD Dissertation. Carbon export from a subalpine catchment: the control of hydrology and landscape structure. Ph.D Dissertation. Dept. of Land Resources and Environmental Sciences, Montana State University-Bozeman.

Payn, Rob A. 2009. PhD Dissertation. Stream hydrologic characterizations across time and space, Ph.D. dissertation, Colorado School of Mines, Golden, Colorado, USA.

Riveros-Iregui, DiegoA. 2008. PhD Dissertation. hydrologic-carbon cycle linkages in a subalpine catchment. PhD Dissertation. Dept. of Land Resources and Environmental Sciences, Montana State University-Bozeman.

- Cook, Steve. 2007. M.S. Thesis. Dept. of Land Resources and Environmental Sciences, Montana State University-Bozeman.
- Pacific, Vince. 2005. M.S. Thesis. Dept. of Land Resources and Environmental Sciences, Montana State University-Bozeman.
- Covino, Tim P. 2005. Stream-groundwater interactions in a mountain to valley transition: Impacts on watershed hydrologic response and stream water chemistry. Masters thesis, Montana State University, 102 pp.

**Invited Keynote Addresses and Invited Conference Presentations / Published Abstracts** (51+) (Graduate students denoted \* and undergrads denoted \*\*)

- McGlynn**, B.L., K.G. \*Jencso, F. \*Nippgen, C. \*Kelleher, R.E. Emanuel, T.J. \*Smith, L.A. Marshall. June 2015. Moving from field observations of watershed structure, storage, and hydrologic connectivity to modeling conceptualizations. Gordon Research Conference on Catchment Science: Interactions of Hydrology, Biology & Geochemistry [INVITED]
- \*Zimmer M.A. and B.L. **McGlynn**. 2015. Flowpath and stream network activation threshold influences on Piedmont runoff generation and biogeochemistry. Gordon Research Conference on Catchment Science, June 13-14, Andover, NH. [INVITED]
- \*Ross, M., F. \*Nippgen, B.L. **McGlynn**, and E. Bernhardt. 2015. When everything changes: Catchment scale biogeochemical impacts of mountaintop mining. Gordon Research Conference on Catchment Science, June 14-19, Andover, NH. [INVITED]
- McGlynn**, B.L., K.G. Jencso, F. Nippgen, and R.E. Emanuel. 2014. On the role of spatial patterns of watershed storage in observed storage-discharge relationships. Eos Trans. AGU, Fall Meet. Suppl., Abstract [INVITED]
- McGlynn** B.L., E.C. Seybold, M.A. Zimmer, K.E. Kaiser, J.M. Mallard, A. Bergstrom, K.G. Jencso, and F. Nippgen. 2014. Continuous monitoring of watershed signals: Disentangling compounded processes. Eos Trans. AGU, Fall Meet. Suppl., Abstract [INVITED]
- \*Covino, T.P., B.L. **McGlynn**, E. Wohl. 2014. Physical and biological controls on reach to catchment scale nutrient retention and streamwater composition. Eos Trans. AGU, Fall Meet. Suppl., Abstract [INVITED]
- McGlynn**, B.L. et al., 2014. AGU Chapman Conference: Catchment Spatial Organization and Complex Behavior [INVITED KEYNOTE]
- McGlynn**, B.L., F. \*Nippgen, K.G. \*Jencso, R.E. Emanuel. 2013. Spatial and temporal patterns of hydrologic connectivity between upland landscapes and stream networks. Eos Trans. AGU, Fall Meet. Suppl., Abstract H43K-03. [INVITED]
- Wagener, T., C. \*Kelleher, B.L. **McGlynn**, A.S. Ward, M.N. Gooseff, R.A. Payn. 2013. Understanding Uncertainty in the Characterization of Transient Storage Zone Processes in Rivers. Eos Trans. AGU, Fall Meet. Suppl., Abstract B24B-08. [INVITED]

- Emanuel, R.E., A. Hazen, B.L. **McGlynn**, and K.G. Jencso. 2013. Vegetation and topographic influences on the connectivity of shallow groundwater between hillslopes and streams. Geological Society of America Annual Meeting. Paper # 10-1. **[INVITED]**
- McGlynn**, B.L., F. Nippgen, K.G. Jencso, R.E. Emanuel, and M.N. Gooseff. 2012. Spatial and temporal patterns of hydrologic connectivity between upland landscapes and stream networks. Section: Public Affairs. Eos Trans. AGU, Fall Meet. Suppl., Abstract **[INVITED]**
- McGlynn**, B.L., K.G. Jencso, and S. Carlson. 2012. Hysteresis in catchment storage – discharge relationships: Implications for interpreting catchment biogeochemical fluxes. Section: Hydrology. Eos Trans. AGU, Fall Meet. Suppl., Abstract **[INVITED]**
- Gooseff, M.N. Taptich, A.N. Wlostowski, K. Gerech, A.N. Wlostowski, R.A. Payn, A.S. Ward, W.B. Bowden, M. Fitzgerald, B.L. **McGlynn**, K. Singha, and W.M. Wollheim, 2012. Connecting Streams to Watersheds Through Stream–Groundwater Exchange as Determined from the Channel. Section: Hydrology. Eos Trans. AGU, Fall Meet. Suppl., Abstract **[INVITED]**
- McGlynn**, B.L., K. Jencso, F. Nippgen, R. Emanuel, S. Carlson, T. Smith, and L. Marshall. 2012. Moving from field observations of catchment storage and hydrologic connectivity to new modeling conceptualizations. International Association for Hydrologic Sciences: Completion of the IAHS decade on Prediction in Ungauged Basins and the way ahead. Delft, NL. **[INVITED]**
- McGlynn**, B.L. Woo Lecturer. Canadian Geophysical Union. 2012. **[INVITED KEYNOTE]**.
- McGlynn**, B.L. K.K. Gardner, and T. Covino. 2012. Landuse change associated with mountain resort development: The physical, biological, and spatio-temporal dynamics of nutrient retention and export. Geophysical Research Abstracts Vol. 13, EGU2011-5301, 2011 EGU General Assembly. **[INVITED]**
- McGlynn**, B.L., L. Piper, W. Cross, T.P. Covino. 2011. Stream nutrient uptake stoichiometry: Coupled N and P kinetics from ambient to saturation. Eos Trans. AGU, Fall Meet. Suppl., Abstract B11F-08. **[INVITED]**
- McGlynn**, B.L., D. Riveros-Iregui, R.E. Emanuel, and H.E. Epstein. 2011. Organization and scaling of carbon dynamics in complex landscapes: Implications of water, life, and landform feedbacks for terrestrial carbon cycling. Eos Trans. AGU, Fall Meet. Suppl., Abstract EP31G-08. **[INVITED]**
- Marshall, L.A., B.L. **McGlynn**, T. Smith, and K. Jencso. 2011. (H113) Doing hydrology forward: Using field experimental data to inform a conceptual model of landscape driven hydrologic connectivity. Eos Trans. AGU, Fall Meet. Suppl., Abstract H24G-02. **[INVITED]**
- Wondzell, S. M., B.L. **McGlynn**, and M.N. Gooseff. 2011. How do hyporheic exchange and streamflow velocity drive diurnal fluctuations in discharge during baseflow recession? Eos Trans. AGU, Fall Meet. Suppl., Abstract H54F-08. **[INVITED]**

- Riveros-Iregui, D., K.G. Jencso, R.E. Emanuel, V.J. Pacific, and B.L. **McGlynn**. 2011. Emerging patterns in coupled terrestrial–aquatic processes. *Eos Trans. AGU, Fall Meet. Suppl.*, Abstract B34A-08. **[INVITED]**
- Gooseff, M.N., A.S. Ward, R.A. Payn, T. Voltz, E. Bernzott, M. Fitzgerald, B.L. **McGlynn**, K.E. Bencala, S.M. Wondzell, K. Singha, and D.M. McKnight. 2011. not sure of exact title. *Eos Trans. AGU, Fall Meet. Suppl.*, Abstract H53P-03. **[INVITED]**
- McGlynn**, B.L., K.G. Jencso, D. Riveros-Iregui, R.E. Emanuel, \*T. Covino, and \*J. Mallard. 2011. Process interactions and synthesis in catchment hydrology. Vienna Catchment Sciences Symposium, Vienna Austria. **[INVITED KEYNOTE]**
- McGlynn**, B.L., K.G. Jencso, D. Riveros-Iregui, R.E. Emanuel, \*T. Covino, \*J. Mallard. 2011. Expanding dimensions in hydrologic sciences. University of Colorado Hydrological Sciences Symposium **[INVITED KEYNOTE]**
- McGlynn**, B. and T. Covino. 2011. Tracer additions for quantifying stream nitrogen uptake kinetics from ambient to saturation: The physical, biological, and spatio-temporal dynamics of nutrient retention. *Geophysical Research Abstracts Vol. 13, EGU2011-5301*, 2011 EGU General Assembly. **[INVITED]**
- McGlynn**, B.L., \*V.J. Pacific, \*K.G. Jencso. 2010. Landscape structure controls on watershed DOC export. *Eos Trans. AGU, Fall Meet. Suppl.*, Abstract B31J-07. **[INVITED]**
- McGlynn**, B.L., \*D. Riveros-Iregui, R.E. Emanuel, \*V.J. Pacific, H.E. Epstein, D.L. Welsch. 2010. Landscape structure controls on biogeochemical fluxes in complex terrain. *Eos Trans. AGU, Fall Meet. Suppl.*, Abstract U33B-06. **[INVITED]**
- Gooseff, M.N., K.E. Bencala, W.B. Bowden, B.L. **McGlynn**, R.A. Payn, K. Singha, A.S. Ward, A.N. Wlostowski, W.M. Wollheim. 2010. Context conundrums: Observations and conceptual models are primary controls on interpretations of temporal and spatial scales of stream-groundwater interactions. *Eos Trans. AGU, Fall Meet. Suppl.*, Abstract H33J-01 **[INVITED]**
- \*Jencso, K.G., and B.L. **McGlynn**. 2010. Water across interfaces: Hillslope-channel processes. Consortium of Universities for the Advancement of Hydrologic Sciences (CUAHSI) Biennial Science Meeting, Boulder, CO, July 19-22. **[INVITED]**
- McGlynn**, B.L., \*T. Covino, and \*R. McNamara. 2010. Recent breakthroughs in stream solute studies: Identifying new methods, applications, and limitations for tracing ecosystem and catchment processes. Joint meeting of the American Society of Limnology and Oceanography and the American Benthological Society **[INVITED]**
- Gooseff, M.N., R. Payn, \*M.A. Briggs, B.L. **McGlynn**, K.E. Bencala, S.M. Wondzell, and R. Haggerty. 2010. Methods, applications, and limits of assessing residence time distributions of solutes in streams. Joint meeting of the American Society of Limnology and Oceanography and the North American Benthological Society. Santa Fe, NM #S58 **[INVITED]**
- McGlynn**, B.L., \*K. Gardner, and L. Marshall. 2010. Exceeding the limitations of watershed outlet sampling: Multi-approach analysis of synoptic streamwater

- chemistry data. European Geophysical Union Annual Meeting. Spring, 2010. Geophysical Research Abstracts Vol. 12, EGU2010-7552-3, 2010 EGU General Assembly 2010 **[INVITED]**
- McGlynn**, B.L., \*K.G. Jencso, \*D. Riveros, and \*V. Pacific. 2010. Landscape structure controls on water and carbon distribution and flux in complex terrain. European Geophysical Union Annual Meeting. Spring, 2010. Geophysical Research Abstracts Vol. 12, EGU2010-7558-1, 2010 EGU General Assembly 2010. **[INVITED]**
- \*Jencso, K.G., B.L. **McGlynn**, M. N. Gooseff, S. M. Wondzell, and K. E. Bencala. 2009. Hillslope hydrologic connectivity controls riparian groundwater turnover: Implications of landscape structure and organization for catchment scale source water dynamics. American Geophysical Union, Fall Meeting 2009 H32A-05 **[INVITED]**
- Emanuel, R.E. and B.L. **McGlynn**. 2009. Interpreting the propagation and filtering of hydrological and biogeochemical signals in forested watersheds through the intersection of vegetation organization and topography. Fall AGU 2009. H34E-04 **[INVITED]**
- McGlynn**, B.L. 2009. Water quality, quantity, and carbon balances of the Tenderfoot Creek Experimental Forest. Society American Foresters Annual Meeting, Montana Chapter. Forest Management: Enhancing recreation, water, and range. **[INVITED]**
- McGlynn**, B.L. 2008. Landscape structure controls on streamflow generation and land-atmosphere fluxes: Moving from point observations to watershed scales. Berkeley Catchment Science Symposium. **[INVITED KEYNOTE]**
- McGlynn**, B.L., \*K. Jencso, \*K. Gardner, M. Gooseff, and \*R. Payn. 2008. Climate variability effects on landscape hydrologic connectivity, riparian buffering potential, and solute fluxes. American Geophysical Union Fall Meeting. Fall, 2008. **[INVITED]**
- McGlynn**, B.L. 2008. Hydrologic connectivity from hillslope to landscape scales: Implications for runoff generation and water quality. NSF EPSCoR Water Dynamics Workshop, Burlington VT, Nov 9-11, 2008. **[INVITED KEYNOTE]**
- McGlynn**, B.L., K.G. Jencso, R. Payn, M. Gooseff, T. Covino, and J. Seibert. 2007. Conceptualizing, testing, and transferring watershed characteristic-runoff generation relationships. Fall AGU **[INVITED]**
- McGlynn**, B.L. and K. Gardner. 2007. Landuse change impacts on water quality in a developing mountain watershed. EPA STAR Understanding Ecological Thresholds in Aquatic Systems through Retrospective Analysis workshop/project review. EPA, Washington DC. **[INVITED]**
- McGlynn**, B.L. and \*K. Gardner. 2006. Landuse change impacts on water quality: The importance of spatial location. Swedish Institute of Hydrology Meeting, Stockholm, Sweden. . **[INVITED KEYNOTE]**
- McGlynn**, B.L. 2006. The roles of catchment size and landscape organization in runoff timing, flow sources, and age. Tohoku University, Sendai, Japan. **[INVITED]**



- McGlynn**, B.L. and J. Seibert. Hewlett's legacy: Remaining challenges and possible ways forward. American Geophysical Union. Fall, 2005. **[INVITED]**
- McGlynn**, B.L. Flowpaths integrating terrestrial and aquatic components of catchment ecosystems. Geological Society of America, October, 2005 **[INVITED]**
- McGlynn**, B.L., J. Seibert, and J.J. McDonnell. 2004. Scale effects on catchment runoff timing, flow source, and groundwater-streamflow relations. American Geophysical Union, Canadian Geophysical Union Joint Spring meeting. **[INVITED]**
- \*McGuire, K.J., J.J. McDonnell, M. Weiler, C. Kendall, B.L. **McGlynn**, J.M. Welker, and J. Seibert. 2004. Watershed residence time and the role of topography. American Geophysical Union, Canadian Geophysical Union Joint Spring meeting. **[INVITED]**
- McGlynn**, B.L., J. Seibert, and J.J. McDonnell. 2003. Incorporating hydrological processes knowledge into catchment modeling. European Geophysical Union-American Geophysical Union-European Union of Geosciences Joint Assembly. **[INVITED]**
- McDonnell, J.J., T. Uchida, \*I. Van Meerveld, B.L. **McGlynn**, and S. Uhlenbrook. 2003. A decision tree approach to dealing with hillslope processes within PUB (Prediction in Ungauged Basins Initiative). European Geophysical Union-American Geophysical Union-European Union of Geosciences Joint Assembly, April 2003 **[INVITED]**
- McDonnell, J.J., B.L. **McGlynn**, and M. Weiler. 2002. Scaling and non-linearity in runoff generation processes. Issues of scale and non-linearity in hydrology: Challenges and opportunities for scientific research and professional practice. Vancouver, Canada. **[INVITED]**
- McDonnell, J.J., B.L. **McGlynn**, and M. Weiler. 2002. Scaling and non-linearity in runoff generation processes. Issues of scale and non-linearity in hydrology: Challenges and opportunities for scientific research and professional practice. Vancouver, Canada. June 2-5, 2002. **[INVITED]**
- McGlynn**, B.L., J.J. McDonnell, R.P. Hooper, J.B. Shanley, and K.N. Hjerdt. 2001. Hillslope versus riparian zone runoff contributions in headwater catchments: A multi-watershed comparison. Eos Trans. AGU, 82(47), Fall Meet. Suppl., Abstract H41A-0264. **[INVITED]**
- \*Hjerdt, K.N., B.L. **McGlynn**, I. \*Tromp-van Meerveld, J.J. McDonnell, and R.P. Hooper. 2001. Thresholds in subsurface flow generation: An inter-comparison of three different headwater catchments. Eos Trans. AGU, 82(47), Fall Meet. Suppl., Abstract H41A-0266. **[INVITED]**
- McGlynn**, B.L., J.J. McDonnell, C. Kendall, and R.P. Hooper. 2001. The effects of catchment scale and landscape organization on streamflow generation processes. American Geophysical Union Chapman Conference on State-of-the-Art Hillslope Hydrology. **[INVITED]**
- Hooper, R.P., J.J. McDonnell, B.L. **McGlynn**, and \*K.N. Hjerdt. 2001. Towards an objective model of catchment hydrology. American Geophysical Union Chapman Conference on State-of-the-Art Hillslope Hydrology **[INVITED]**

### **Invited University and Agency Lectures (>25)**

- 2015 Virginia Tech
- 2014 University of Arizona
- 2014 Johns Hopkins University
- 2014 University of Pittsburgh
- 2013 East Carolina University
- 2013 University of Virginia
- 2013 Penn State University
- 2012 Idaho State University, Watershed Ecohydrology. February, 2012.
- 2011 United States Environmental Protection Agency, Washington DC. Hydrological and biogeochemical landscape connectivity to downstream waters. December 14, 2011.
- 2011 Coweeta Hydrological Laboratory, USFS (PhD student Fabian Nippgen presented), spring 2011
- 2011 Coweeta Hydrological Laboratory, USFS (Post-doc Kelsey Jencso presented), spring 2011
- 2011 Duke University, Nicholas School of the Environment, Invited Lecture spring 2011
- 2010 Oregon State University, Institute for Water and Watersheds, Spring 2010
- 2009 Appalachian State University Geology Department lecture series. Catchment structure controls on hillslope-riparian-stream hydrologic connectivity and riparian buffering: Implications for runoff generation and water quality, fall 2010
- 2009 Mountains and Minds Lecture Series, Big Sky Institute for Science and Natural History.
- 2009 Montana Watershed Coordination Council. Catchment structural controls on hillslope-riparian-stream groundwater connectivity and riparian buffering: Implications for runoff generation and water quality. Jencso and McGlynn.
- 2008 Montana State University, Ecology Department lecture series.
- 2008 University of Montana, Geosciences lecture series.
- 2008 University of Nebraska, Geoscience Department and the School of Natural Resources.
- 2007 University of Arizona, Department of Hydrology and Water Resources, Fall 2007
- 2007 Virginia Tech, Department of Biology.
- 2006 Tohoku University, Japan, Engineering Department.
- 2005 Mountains and Minds Lecture Series, Big Sky Institute for Science and Natural History, Kristin Gardner\* and Brian McGlynn.
- 2005 Penn State University, Civil Engineering Lecture Series.
- 2003 Flathead Lake Biological Station Summer Lecture Series.
- 2003 Freiburg University, Germany, Institute of Hydrology.
- 2002 Montana State University, Ecology Department.

2002 Montana State University, Department of Plant Sciences & Plant Pathology.

**Contributed Papers Presented / Published Abstracts (>233)**

(current / recent student authors - grad and postdoc denoted \* undergrad denoted \*\*)

- \*Ross, M., F. \*Nippgen, E.S. Bernhardt, and B.L. **McGlynn**. 2015. When everything changes: Watershed scale biogeochemical impacts of mountaintop mining. Ecological Society of America Annual Meeting.
- \*Zimmer M.A. and B.L. **McGlynn**. 2015. Flowpath and stream network activation threshold influences on Piedmont runoff generation and biogeochemistry. Gordon Research Seminar on Catchment Science, June 13-14, Andover, NH.
- \*Ross, M., F. \*Nippgen, B.L. **McGlynn**, and E. Bernhardt. 2015. When everything changes: Catchment scale biogeochemical impacts of mountaintop mining. Gordon Research Seminar on Catchment Science, June 14-19, Andover, NH.
- \*Kaiser, K.E., J.E. Dore, and B.L. **McGlynn**. 2015. Spatial and temporal variability of greenhouse gas fluxes across complex terrain. Gordon Research Conference on Catchment Science, June 14-19, Andover, NH.
- Smith, T., L. Marshall, and B.L. **McGlynn**. 2015. Evaluating the Scalability of a Process-Consistent Hydrologic Model. Eos Trans. AGU-CGU Joint Assembly. The Palais des congrès de Montréal. H11B-03.
- \*Zimmer, M.A. and B.L. **McGlynn**. 2014. The Roles of Groundwater Flowpaths and Stream Network Expansion in Landscape Connectivity and Resulting Runoff and Solute Dynamics in an Ephemeral Piedmont Catchment. Eos Trans. AGU, Fall Meet. Suppl., Abstract
- Jencso, K.G. and B.L. **McGlynn**. 2014. Shallow groundwater dynamics across complex terrain: Influences of landscape position and climate. Eos Trans. AGU, Fall Meet. Suppl., Abstract
- \*Kaiser, K.E., B.L. **McGlynn**, and J. Dore. 2014. Landscape analysis of methane flux across complex terrain. Eos Trans. AGU, Fall Meet. Suppl., Abstract
- Kumar, M., X. \*Chen, B.L. **McGlynn**. 2014. Understanding the Variations in Flood Responses to Tropical-Storms and Hurricanes. Eos Trans. AGU, Fall Meet. Suppl., Abstract
- \*Mallard, J.M., B.L. **McGlynn**, and D. Richter. 2014. The Calhoun Critical Zone Observatory: understanding the evolution of the critical zone after centuries of anthropogenic degradation. Eos Trans. AGU, Fall Meet. Suppl., Abstract
- \*Kaiser, K.E. and B.L. **McGlynn**. 2014. From process complexity to communication effectiveness: A challenge to those within and outside of the environmental sciences. Eos Trans. AGU, Fall Meet. Suppl., Abstract
- \*Seybold, E.C. and B.L. **McGlynn**. 2014. Carbon metabolism, uptake kinetics, and export: How watershed form influences carbon mobilization and instream transformation in headwater catchments. Eos Trans. AGU, Fall Meet. Suppl., Abstract **OUTSTANDING STUDENT PAPER AWARD**
- \*Bergstrom, A., K.G. Jencso, and B.L. **McGlynn**. 2014. Incorporating landscape heterogeneity to understand patterns of stream discharge across spatial and

- temporal scales in forested mountain watersheds. Eos Trans. AGU, Fall Meet. Suppl., Abstract OUTSTANDING STUDENT PAPER AWARD
- \*Singh, N., R.E. Emanuel, B.L. **McGlynn**. 2014. Space-time Variability of Baseflow in Headwater Streams of the Southern Appalachians. Eos Trans. AGU, Fall Meet. Suppl., Abstract
- \*Kelleher, C., B.L. **McGlynn**, and T. Wagener. 2014 Refining process representation in high-resolution models of headwater catchments using internal catchment diagnostics. Eos Trans. AGU, Fall Meet. Suppl., Abstract
- \*Nippgen, F., B.L. **McGlynn**, and R.E. Emanuel, 2014. Spatial patterns of catchment water redistribution: The intersection of topography and vegetation structure. Eos Trans. AGU, Fall Meet. Suppl., Abstract
- Smith, T.J. L.A. Marshall, B.L. **McGlynn**. 2014. Typecasting catchments: Universal donors and acceptors. Eos Trans. AGU, Fall Meet. Suppl., Abstract
- \*Payn, R.A., M.N. Gooseff, and B.L. **McGlynn**. 2014. Parsing the sources of gross gains in streamflow based on mass recovery of concurrent instantaneous and constant-rate tracer releases over multi-scaled reaches. Eos Trans. AGU, Fall Meet. Suppl., Abstract
- Emanuel, R.E., B.L. **McGlynn**, D. \*Riveros-Iregui,. 2014. A Template for an Intensive Ecohydrology Field Course. AGU, Fall Meet. Suppl., Abstract
- \*Hayes, K.D., T. Smith , L.A. Marshall, and B.L. **McGlynn**. 2014. Diagnosing the regional sensitivity of a process-based hydrologic model. Eos Trans. AGU, Fall Meet. Suppl., Abstract
- \*Mitchell, S. R., R.E. Emanuel, and B.L. **McGlynn**. 2014. Vapor Pressure Deficit, Soil Moisture, and Stream Flow Relationships to Land-Atmosphere Fluxes of Water and Carbon. Eos Trans. AGU, Fall Meet. Suppl., Abstract
- \*Nippgen, F., **McGlynn**, B.L., Emanuel, R.E., Vose, J.M., The effect of precipitation variability on rainfall-runoff response and storage in steep headwater catchments. Consortium of Universities for the Advancement of Hydrologic Sciences (CUAHSI) Biennial Colloquium, Sheperdstown, WV, July 28-30.
- \*Kaiser, K.E. and B.L. **McGlynn**, and J.E. Dore. 2014. Landscape analysis of methane efflux across complex terrain. Consortium of Universities for the Advancement of Hydrologic Sciences (CUAHSI) Biennial Colloquium, Sheperdstown, WV, July 28-30.
- \*Zimmer M.A. and B.L. **McGlynn**. 2014. The role of groundwater and stream network dynamics in baseflow and stormflow generation. Consortium of Universities for the Advancement of Hydrologic Sciences (CUAHSI) Biennial Colloquium, Sheperdstown, WV, July 28-30.
- \*Singh N.K., R.E. Emanuel, and B.L. **McGlynn**. 2014. Space-time Variability of Headwater Streamflow in the Southern Appalachians. Consortium of Universities for the Advancement of Hydrologic Sciences (CUAHSI) Biennial Colloquium, Sheperdstown, WV, July 28-30.
- \*Seybold E, and B.L. **McGlynn**. 2014. The role of hydrologic connectivity in mediating stream carbon dynamics in space and time (poster). Consortium of Universities

for the Advancement of Hydrologic Sciences (CUAHSI) Biennial Colloquium, Sheperdstown, WV, July 28-30.

- \*Mallard, J., B. **McGlynn**, D. Richter, D. Markewitz, Z. Brecheisen. 2014. Calhoun CZO: understanding critical zone evolution after a legacy of degradation. Consortium of Universities for the Advancement of Hydrologic Sciences (CUAHSI) Biennial Colloquium, Sheperdstown, WV, July 28-30.
- \*Seybold, E. and B.L. **McGlynn**. 2014. In-stream cycling and downstream flux of watershed carbon from channel heads to second order streams. Society of Freshwater Sciences. Portland, OR.
- Wagener, T., C. \*Kelleher, F. Pianosi, B.L. **McGlynn**. 2014. Understanding hydrologic partitioning: Combining bottom-up mechanistic modelling and top-down signature analysis to understand controls on hydrologic behaviour in headwater catchments. European Geophysical Union Annual Assembly, Vienna, Austria 2014.
- McGlynn**, B.L., K.E. \*Kaiser (PRESENTER), T.M. \*Lorenzo, J.E. Dore, L. Liang, D.A. Riveros-Iregui, R.E. Emanuel, E.C. \*Seybold. 2013. Watershed scale soil biogeochemistry and greenhouse gas fluxes: Space-time dynamics of CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O. Eos Trans. AGU, Fall Meet. Suppl., Abstract B12A-05.
- \*Lorenzo, T.M., D.A. Riveros-Iregui, L. Liang, R.E. Emanuel, B.L. **McGlynn**, K.E. \*Kaiser, E.C. \*Seybold, and J.E. Dore. 2013. Hydrologic and Geomorphic Effects on the Spatial and Temporal Variability of the  $\delta^{13}\text{C}$  of Soil CO<sub>2</sub> and CO<sub>2</sub> Efflux in Complex Terrain. Eos Trans. AGU, Fall Meet. Suppl., Abstract B11C-0384.
- \*Nippgen, F., B.L. **McGlynn**, R.E. Emanuel, J.M. Vose. 2013. The effects of climate variability on the rainfall runoff response of catchments from monthly to annual timescales. Eos Trans. AGU, Fall Meet. Suppl., Abstract H13N-01.
- \*Bergstrom, A., K.G. \*Jencso, B.L. **McGlynn**, K.D. \*Hayes. 2013. An assessment of factors controlling spatial and temporal patterns of stream discharge in forested mountain watersheds. Eos Trans. AGU, Fall Meet. Suppl., Abstract H21B-1029.
- \*Hoylman, Z.H., K.G. \*Jencso, J. Hu, B.L. **McGlynn**. 2013. Landscape heterogeneity modulates forest sensitivity to climate. Eos Trans. AGU, Fall Meet. Suppl., Abstract H21F-1134.
- \*Kaiser, K.E., B.L. **McGlynn**, R.E. Emanuel. 2013. Assessing Mountain Pine Beetle infestation patterns in space and time using high resolution QuickBird imagery and LiDAR. Eos Trans. AGU, Fall Meet. Suppl., Abstract H33H-1488.
- \*Hayes, K.D., T.J. \*Smith, K.G. \*Jencso, B.L. **McGlynn**, L.A. Marshall, A. Bergstrom. 2013. Are Hydrologic Model Parameters Scalable? An Investigation into the Catchment Connectivity Model. Eos Trans. AGU, Fall Meet. Suppl., Abstract H41C-1241.
- \*Kelleher, C., T. Wagener, B.L. **McGlynn**. 2013. Controls on hydrologic partitioning: A comparative hydrology study across sub-catchments in a mountain headwater basin. Eos Trans. AGU, Fall Meet. Suppl., Abstract H41C-1238.

- \*Covino, T.P., B.L. **McGlynn**, A. \*Kalinin. 2013. The influence of a lake-wetland complex on catchment nutrient flux and speciation. Eos Trans. AGU, Fall Meet. Suppl., Abstract H43K-07.
- Jones, R.T., Z. \*Du, D. Riveros-Iregui, J.E. Dore, R.E. Emanuel, B.L. **McGlynn**, T. McDermott, X. Li. 2013. Soil bacterial and archaeal communities of the Stringer Creek Watershed in relation to soil moisture, chemistry, and gas fluxes. Eos Trans. AGU, Fall Meet. Suppl., Abstract B51D-0312.
- \*Seybold, E.C., B.L. **McGlynn**, M.A. \*Zimmer, K.E. \*Kaiser. 2013. Utilizing high frequency in-situ sensor networks to understand carbon and nitrogen dynamics from reach to watershed scales. Eos Trans. AGU, Fall Meet. Suppl., Abstract H53H-1518.
- \*Kelleher, C., T. Wagener, B.L. **McGlynn**, F. Nippgen, and K. Jencso. 2013. Hydrologic sensitivity of headwater catchments to climate and landscape variability. Geophysical Research Abstracts Vol. XX, EGU2013-6069. EGU General Assembly (European Geophysical Union).
- \*Bergstrom, A., B.L. **McGlynn**, K.G. \*Jencso, and L.A. Marshall. 2012. Shallow groundwater dynamics across complex terrain: Influences of landscape position and climate. Section: Hydrology. Eos Trans. AGU, Fall Meet. Suppl., Abstract
- Gooseff, M.N., M.A. \*Briggs, K.E. Bencala, B.L. **McGlynn**, and D. Scott. 2012. Do transient storage parameters directly scale in longer, combined stream reaches? Reach length dependence of transient storage interpretations. Section: Hydrology. Eos Trans. AGU, Fall Meet. Suppl., Abstract
- Liang, L., D. Riveros-Iregui, R.E. Emanuel, and B.L. **McGlynn**. 2012. A Simple Framework To Estimate Distributed Soil Temperature From Discrete Air Temperature Measurements At High Temporal And Spatial Resolutions In Complex Terrain. Section: Hydrology. Eos Trans. AGU, Fall Meet. Suppl., Abstract
- \*Jencso, K.G., B.L. **McGlynn**, L.A. Marshall, S. \*\*Carlson. 2012. Space-time variability of stream discharge across a headwater catchment. Section: Hydrology. Eos Trans. AGU, Fall Meet. Suppl., Abstract
- \*Smith, T.J., L.A. Marshall, and B.L. **McGlynn**. 2012. Model Assessment and Optimization Using a Flow Time Transformation. Section: Hydrology. Eos Trans. AGU, Fall Meet. Suppl., Abstract
- \*Seybold, E.C., K. \*Kaiser, B.L. **McGlynn**, T.P. \*Covino, D. Riveros-Iregui, L. Liang, R.E. Emanuel, and J.E. Dore. 2012. Trace gas fluxes in complex terrain: The space-time dynamics of soil methane, carbon dioxide, and nitrous oxide. Section: Biogeosciences. Eos Trans. AGU, Fall Meet. Suppl., Abstract
- \*Kelleher, C. T. Wagener, M.N. Gooseff, B.L. **McGlynn**, A.S. Ward, and R.A. Payn. 2012. Stream characteristics determine the importance of transient storage processes. Section: Hydrology. Eos Trans. AGU, Fall Meet. Suppl., Abstract
- Mitchell, S.R., R.E. Emanuel, and B.L. **McGlynn**. 2012. Oscillating controls on carbon sequestration in a subalpine forest ecosystem. Section: Biogeosciences. Eos Trans. AGU, Fall Meet. Suppl., Abstract

- \*Broer, M., K.G. \*Jencso, B.L. **McGlynn**, J.M. \*Mallard, S. \*\*Carlson, and G. Bloeschl. 2012. Spatio-temporal controls on diurnal streamflow fluctuations. Section: Hydrology. Eos Trans. AGU, Fall Meet. Suppl., Abstract
- \*Singh, N.K., R.E. Emanuel, and B.L. **McGlynn**. 2012. Spatial and temporal variability of runoff and streamflow generation within and among headwater catchments: a combined hydrometric and stable isotope approach. Section: Hydrology. Eos Trans. AGU, Fall Meet. Suppl., Abstract
- Riveros-Iregui, D., L. Liang, R.E. Emanuel, B.L. **McGlynn**, K. \*Kaiser, E.C. \*Seybold, T.P. Covino, and J.E. Dore. 2012. Soil Carbon Transformation in Heterogeneous Landscapes. Section: Biogeosciences. Eos Trans. AGU, Fall Meet. Suppl., Abstract
- \*Nippgen, F., B.L. **McGlynn**, and R.E. Emanuel. 2012. The combined effects of topography and vegetation on catchment connectivity. Section: Hydrology. Eos Trans. AGU, Fall Meet. Suppl., Abstract
- \*Covino, T.P., W.B. Bowden, M.R. \*Herstand, M.N. Gooseff, A.N. \*Wlostowski, W.M. Wollheim, K.A. \*Whittinghill, and B.L. **McGlynn**. 2012. Deciphering relationships between in-stream travel times, nutrient concentrations, and uptake through analysis of hysteretic and non-hysteretic kinetic behavior. Section: Hydrology. Eos Trans. AGU, Fall Meet. Suppl., Abstract
- Dore, J.E., K. B.L. **McGlynn**, \*Kaiser, and E.C. \*Seybold,. 2012. Constraining Gas Diffusivity-Soil Water Content Relationships in Forest Soils Using Surface Chamber Fluxes and Depth Profiles of Multiple Trace Gases. Section: Biogeosciences. Eos Trans. AGU, Fall Meet. Suppl., Abstract
- \*Mallard, J.M., B.L. **McGlynn**, T.P. •Covino, and A. \*Bergstrom. 2012. Hydrologic and biologic influences on stream network nutrient concentrations: Interactions of hydrologic turnover and concentration-dependent nutrient uptake. Section: Biogeosciences. Eos Trans. AGU, Fall Meet. Suppl., Abstract
- \*\*Baker, S. B. **McGlynn**, and K. \*Jencso. 2012. Climate, landscape structure, and management controls on suspended sediment dynamics in six adjacent Rocky Mountain Catchments. Canadian Geophysical Union Annual Meeting, Banff, Canada.
- \*Jencso, K.J., B.L. **McGlynn**, and L. Marshall. 2012. One hillslope does not a watershed make: An analysis of throughflow thresholds across space and time. Canadian Geophysical Union Annual Meeting, Banff, Canada.
- \*Mallard, J., B.L. **McGlynn**, and T. \*Covino. 2012. Hydrologic and biologic controls on instream nutrient concentration: interactions of hydrologic turnover with concentration dependent nutrient uptake. Canadian Geophysical Union Annual Meeting, Banff, Canada.
- \*\*Bergstrom, A., J. \*Mallard. B.L. **McGlynn**, and T. \*Covino. 2012. Stream network travel times: The combined influences of watershed and stream network geometries. Canadian Geophysical Union Annual Meeting, Banff, Canada.
- \*\*Carlson, S. K. Jencso, B.L. **McGlynn**. 2012. Quantifying watershed storage dynamics using long duration, high frequency measurements of precipitation, runoff, and

- evapotranspiration. Geophysical Research Abstracts Vol. 14, EGU2012-13516. EGU General Assembly.
- \*Nippgen, F. B.L. **McGlynn**, and R.E. Emanuel. 2012. The combined effect of topography and vegetation on the temporal evolution of catchment connectivity. Geophysical Research Abstracts Vol. 14, EGU2012-12431. EGU General Assembly.
- \*Covino, T.P., B.L. **McGlynn**, R. \*McNamara. 2012. In-stream nutrient uptake kinetics along stream size and development gradients in a rapidly developing mountain resort watershed. Geophysical Research Abstracts Vol. 14, EGU2012-12979. EGU General Assembly.
- McGlynn**, B.L., K. Jencso, L. Marshall, and T. \*Smith. 2012. Moving from field observations of catchment hydrologic connectivity to new modeling conceptualizations. Geophysical Research Abstracts Vol. 14, EGU2012-13512. EGU General Assembly.
- \*Nippgen, F., B.L. **McGlynn**, L.A. Marshall, and R.E. Emanuel. 2012. Spatial and temporal similarity analysis: Linking landscape structure and climate to hydrologic response. Geophysical Research Abstracts Vol. 14, EGU2012-14056, 2012 EGU General Assembly.
- \*\*Kaiser, K., B.L. **McGlynn**, R.E. Emanuel. 2012. Mountain pine beetle infestation impacted by water availability Geophysical Research Abstracts Vol. 14, EGU2012-12851. EGU General Assembly.
- \*Nippgen, F., B.L. **McGlynn**, L.A. Marshall, and R.E. Emanuel. 2011. Landscape structure and climate influences on hydrologic response. Eos Trans. AGU, Fall Meet. Suppl., Abstract H24D-03.
- \*Mullen, R.S., L.A. Marshall, and B.L. **McGlynn**. 2011. Using beta regression to obtain interpretable parameters and estimates of error for environmental variable: A solar radiation case study. Eos Trans. AGU, Fall Meet. Suppl., Abstract B13B-0568.
- \*Smith, T., L. Marshall, A. Sharma, B.L. **McGlynn**, and K. Jencso. 2011. Predicting hydrologic response through a pooled watershed knowledgebase: A hierarchical Bayesian approach. Eos Trans. AGU, Fall Meet. Suppl., Abstract H31F-1231.
- \*Singh N.K., J.S. \*Rice, F. \*Nippgen, K.G. Jencso, B.L. **McGlynn**, and R.E. Emanuel. 2011. Catchment isotope ecohydrology: Unraveling the combined influences of vegetation and topography on runoff generation in headwater catchments. Eos Trans. AGU, Fall Meet. Suppl., Abstract B31E-0361.
- \*Kelleher, C., T. Wagener, B.L. **McGlynn**, L.A. Marshall, and K.G. Jencso. 2011. Spatio-temporal variability of controls on water balance components in western mountainous headwater basins. Eos Trans. AGU, Fall Meet. Suppl., Abstract H31A-1132.
- Emanuel, R.E., B.L. **McGlynn**, and F. \*Nippgen. 2011. Competing for water: Tension between biological and physical influences on runoff in vegetated watersheds. Eos Trans. AGU, Fall Meet. Suppl., Abstract B11B-0485.



- Jencso, K.G., B.L. **McGlynn**, and L.A. Marshall. 2011. Sensitivity of landscape hydrologic connectivity to climate variability across catchments of differing structure. Eos Trans. AGU, Fall Meet. Suppl., Abstract H23K-03.
- \*Ward, A.S., M.N. Gooseff, K.E. Bencala, B.L. **McGlynn**, R.A. Payn, and S.M. Wondzell. 2011. How does transient storage change along streams as a function of valley position and flow rate? Eos Trans. AGU, Fall Meet. Suppl., Abstract H44D-07.
- \*Covino, T., B.L. **McGlynn**, R. \*McNamara, and K.K. \*Gardner. 2011. Landuse and scale influences on nutrient retention from the reach to watershed scales. Eos Trans. AGU, Fall Meet. Suppl., Abstract B12D-04.
- \*\*Baker, S., K.G. \*Jencso, B.L. **McGlynn**, and W.W. McCaughey. 2011. Landscape structure, forest management, and climate influences on suspended sediment dynamics across six adjacent headwater catchments. Eos Trans. AGU, Fall Meet. Suppl., Abstract H31A-1129.
- \*Mallard, J., T.P. \*Covino, and B.L. **McGlynn**. 2011. Watershed structure, stream network geometry, and kinetic influences on instream nutrient retention. Eos Trans. AGU, Fall Meet. Suppl., Abstract B13G-0650.
- \*\*Bergstrom, A., B.L. **McGlynn**, J. \*Mallard, and T. \*Covino. 2011. Stream network travel times: Influence of watershed structure and network geometry. Eos Trans. AGU, Fall Meet. Suppl., Abstract H41E-1085..
- \*\*Kaiser, K., B.L. **McGlynn**, R. Emanuel, F. \*Nippgen, and J. \*Mallard. 2011. Ecohydrology of an outbreak: Impacts of vegetation pattern and landscape structure on mountain pine beetle disturbance. Eos Trans. AGU, Fall Meet. Suppl., Abstract B33B-0455.
- \*Raines, F.A., C.M. \*Welch, B.L. **McGlynn**, and P.C. Stoy. 2011. Biophysical controls of CO2 flux through snow in lodgepole pine and clearcut ecosystems. AGU, Fall Meet. Suppl., Abstract B33B-0438.
- \*Welch, C.M., P.C. Stoy, F.A. \*Raines, B.L. **McGlynn**, F. \*Nippgen, K. \*\*Kaiser. 2011. Snow hydrology effects of mountain pine beetle on snowpack characteristics. AGU, Fall Meet. Suppl., Abstract B33B-0459.
- \*Piper, L., B.L. **McGlynn**, and W. Cross. 2011. The stoichiometry of uptake: dual nutrient uptake kinetics from ambient to saturation. EPSCoR National Conference. **1st PRIZE STUDENT PRESENTATION "Water and the Environment" category**
- \*Mallard, J., T. \*Covino, and B.L. **McGlynn**. 2011. Instream nutrient concentrations: How groundwater/stream water exchange and nutrient uptake can interact in stream networks. Montana Chapter of the American Water Resources Association Annual Meeting. **2nd PLACE STUDENT ORAL PRESENTATION AWARD**
- \*Covino. T. J. \*Mallard, and B.L. **McGlynn**. 2011. Stream - groundwater exchange and hydrologic turnover at the network scale. Montana Chapter of the American Water Resources Association Annual Meeting. **1st PLACE STUDENT ORAL PRESENTATION AWARD**

- \*\* Kaiser, K., B.L. **McGlynn**, and R. Emanuel. 2011. Ecohydrology: Disturbance and the intersection of vegetation pattern and landscape structure. Montana Chapter of the American Water Resources Association Annual Meeting.
- Jencso, K., B.L. **McGlynn**, and L. Marshall. 2011. Hierarchical controls on catchment runoff generation: topographic hydrologic connectivity, vegetation, and geology. Montana Chapter of the American Water Resources Association Annual Meeting.
- \*Stoy, S., L. Marshall, and B.L. **McGlynn**. 2011. Hydrologic and landscape controls on nitrogen export from montane watersheds. Montana Chapter of the American Water Resources Association Annual Meeting. **3rd PLACE STUDENT POSTER PRESENTATION AWARD**
- \*\*Baker, S. K. Jencso, B. **McGlynn**, and L. Marshall. 2011. Landscape, management, and climate controls on suspended sediment dynamics in 6 adjacent headwater catchments. Montana Chapter of the American Water Resources Association Annual Meeting.
- \*Anderson, D. C. Marlow, and B.L. **McGlynn**. 2011. Effects of geology and landforms on riparian water availability. Montana Chapter of the American Water Resources Association Annual Meeting.
- \*Piper, L. B.L. **McGlynn**. and W. Cross. 2011. The stoichiometry of uptake: Dual nutrient uptake kinetics from ambient to saturation. Montana Chapter of the American Water Resources Association Annual Meeting. **3rd PLACE STUDENT ORAL PRESENTATION AWARD**
- \*\*Bergstrom, A. J. \*Mallard, B.L. **McGlynn**, and T. \*Covino. 2011. Watershed structure and stream network geometry: Implications for water and solute transport. Montana Chapter of the American Water Resources Association Annual Meeting.
- \*Nippgen, F, B.L. **McGlynn**, L. Marshall, and R. Emanuel. 2011. Landscape structure and climate influences on runoff in the northern Rocky Mountains. Montana Chapter of the American Water Resources Association Annual Meeting. **2nd PLACE STUDENT ORAL PRESENTATION AWARD**
- Marshall, L., B.L. **McGlynn**, et al. 2011. Hydrology Research in Montana. Idaho National Lab Mountain West Water Institute (MWWI) workshop in Salt Lake City, July 18th and 19th.
- \*Covino, T.P., B.L. **McGlynn**, and \*J. Mallard. 2011. Measuring and modeling nutrient uptake kinetics from ambient to saturation across a stream network: Implications for watershed scale nitrogen export. North American Benthological Society Annual Meeting. NABS 2011
- \*Piper, L.R., W.F. Cross, and B.L. **McGlynn**. 2011. The stoichiometry of uptake: dual nutrient uptake kinetics from ambient to saturation. North American Benthological Society Annual Meeting. NABS 2011
- Packman, A. and 15 others including B.L. **McGlynn**. 2011. Synthesis of observations and models to improve characterization of linkages between river flow, hyporheic exchange, and biogeochemical transformations. North American Benthological Society Annual Meeting. NABS 2011 abstract #7305.

- Jencso, K., and B. **McGlynn**. 2011. Hierarchical controls on runoff generation: Topographic hydrologic connectivity, vegetation and geology. Geophysical Research Abstracts Vol. 13, EGU2011-5205-1, 2011 EGU General Assembly.
- Riveros-Iregui, D., **McGlynn**, B., Emanuel, R. and Epstein, H. 2011. Spatial and Temporal Variability and Non-Monotonic Responses of Landscape-Scale Soil CO<sub>2</sub> Efflux. Geophysical Research Abstracts Vol. 13, EGU2011-11012, 2011 EGU General Assembly.
- \*\*Kaiser, K., B. **McGlynn**, R. Emanuel, \*F. Nippgen, and \*J. Mallard. 2011. Ecohydrology: Disturbance and the intersection of vegetation pattern and landscape structure. Geophysical Research Abstracts Vol. 13, EGU2011-9612, 2011 EGU General Assembly.
- \*\*George Hazen, A.R., R.E. Emanuel, K.G. Jencso, and B.L. **McGlynn**. 2010. Vegetation influences on hillslope-stream connectivity in a forested northern Rocky Mountain watershed. Geophysical Research Abstracts Vol. 13, EGU2011-9453, 2011 EGU General Assembly.
- \*\*Bergstrom, A. \*J. Mallard, B. **McGlynn**. 2011. Watershed and stream network geometry: Implications for water and solute fluxes from watersheds. European Geophysical Union Annual Meeting. Geophysical Research Abstracts Vol. 13, EGU2011-9635, 2011 EGU General Assembly.
- \*Covino, T.P., B.L. **McGlynn**, and \*J. Mallard. 2011. Hydrologic gains and losses, fractional turnover, and stream network controls on streamwater composition. European Geophysical Union Annual Meeting. Spring, 2011. Geophysical Research Abstracts. EGU General Assembly.
- \*\*Kalinin, A. T. Covino, and B. **McGlynn**. 2011. Spatial and Temporal Distribution of DON and DIN in a Linked Stream-Lake Ecosystem. Geophysical Research Abstracts Vol. 13, EGU2011-8898, 2011 EGU General Assembly.
- \*Mallard, J., \*T. Covino, B. **McGlynn** , and \*\*A. Bergstrom. 2011. Watershed and stream network structure influences on physical and biological nutrient retention and stream water sources. Geophysical Research Abstracts Vol. 13, EGU2011-12910, 2011 EGU General Assembly.
- \*\*George Hazen, A.R., R.E. Emanuel, \*K.G. Jencso, and B.L. McGlynn. 2010. Vegetation influences on hillslope-stream connectivity in a forested northern Rocky Mountain watershed. Eos Trans. AGU, Fall Meet. Suppl., Abstract H53B-1011.
- Emanuel, R.E., D. Riveros-Iregui, B.L. **McGlynn**, H.E. Epstein, and D.L. Welsch. 2010. A watershed context for interpreting the landscape-scale spatial heterogeneity of biosphere-atmosphere carbon exchange in complex terrain. Eos Trans. AGU, Fall Meet. Suppl., Abstract B11D-0404.
- Riveros-Iregui, D., V.J. Pacific; B.L. **McGlynn**, R.E. Emanuel, L.A. Marshall, H.E. Epstein, and D.L. Welsch. 2010. A Process-based assessment of soil-plant-atmosphere interactions in complex terrain. Eos Trans. AGU, Fall Meet. Suppl., Abstract B31E-0353.

- \*Jencso, K.G., B.L. **McGlynn**, and L.A. Marshall. 2010. Linking catchment structure to hydrologic function: Implications of catchment topography for patterns of landscape hydrologic connectivity and stream flow dynamics. Eos Trans. AGU, Fall Meet. Suppl., Abstract H14B-05.
- \*Mallard, J.M., \*T. Covino, and B.L. **McGlynn**. 2010. The role of stream network complexity in hydrologic turnover, nutrient retention, and watershed outlet signatures. Eos Trans. AGU, Fall Meet. Suppl., Abstract H21C-1060.
- \*Wlostowski, A.N., M.N. Gooseff, W. B. Bowden, W.M. Wollheim, \*M. Herstand, \*C.C. Treat, and B.L. **McGlynn**. 2010. Channel water balances in Arctic tundra streams. Eos Trans. AGU, Fall Meet. Suppl., Abstract H31D-1032.
- \*Covino, T., B.L. **McGlynn**, and \*J. Mallard. 2010. Implications of stream gains and losses for hydrologic turnover and solute retention / transport at the stream network scale. Eos Trans. AGU, Fall Meet. Suppl., Abstract H32C-02.
- Marshall, L.A., B.L. **McGlynn**, \*T.J. Smith, and \*K.G. Jencso. 2010. Mapping model structure to catchment structure: Complex observational data synthesis for model assessment. Eos Trans. AGU, Fall Meet. Suppl., Abstract H33G-1248.
- \*Patil, S., \*T. Covino, \*J.D. Drummond, A.I. Packman, \*R. Schumer, R.A. Payn, and B.L. **McGlynn**. 2010. Intra-stream variability in tracer breakthrough curves: Geomorphic controls on tailing behaviors. Eos Trans. AGU, Fall Meet. Suppl., Abstract H51E-0947.
- \*\*George Hazen, A.R., R.E. Emanuel, \*K.G. Jencso, and B.L. **McGlynn**. 2010. Vegetation influences on hillslope-stream connectivity in a forested northern Rocky Mountain watershed. Eos Trans. AGU, Fall Meet. Suppl., Abstract H53B-1011.
- Izurieta, C.G. Poole, B.L. **McGlynn**, W.F. Cross, L.A. Marshall, G.A. Jacobs, S. Cleveland, I. Judson, F.R. Hauer, B. Kucera. 2010. A Cyber-Infrastructure for a Virtual Observatory and Ecological Informatics System –VOEIS. Eos Trans. AGU, Fall Meet. Suppl., Abstract H53H-02.
- \*Mason, S.J.K., B.L. **McGlynn**, and G.C. Poole. 2009. Hydrologic behavior in restored streambeds: does function follow form? Montana Section American Water Resources Association Annual Conference (October 14-15, 2010). **2<sup>nd</sup> PLACE STUDENT PRESENTATION AWARD.**
- Piper, L.R., W.F. Cross, and B.L. **McGlynn**. 2010. The role of nutrient uptake by epilithon in controlling concentrations and ratios of dissolved nutrients in a developing mountain watershed. Montana Section AWRA Conference (October 14-15, 2010). **1<sup>st</sup> PLACE STUDENT PRESENTATION AWARD**
- \*McNamara, R, B.L. **McGlynn**, and \*T.Covino. 2010. Stream N uptake dynamics from ambient to saturation across development gradients, stream network position, and seasons. Joint meeting of the American Society of Limnology and Oceanography and the North American Benthological Society. Santa Fe, NM #S33
- \*Covino T., B.L. **McGlynn**, and \*R. McNamara. 2010. Quantifying stream nutrient uptake kinetics from ambient to saturation: Tracer additions for spiraling curve

- characterization. Joint meeting of the American Society of Limnology and Oceanography and the North American Benthological Society. Santa Fe, NM. #S20
- \*Piper, L., W. Cross, and B.L. **McGlynn**. 2010. Stream isotopic and stoichiometric response to spatially-variable nitrogen loading in a rapidly developing mountain watershed. Joint meeting of the American Society of Limnology and Oceanography and the North American Benthological Society. Santa Fe, NM #S33
- Wondzell, S.M., J.P. Zarnetske, R. Haggerty, R.A. Payn, M.N. Gooseff, and B.L. **McGlynn**. 2010. Limitations of the stream tracer approach for hyporheic investigations. Joint meeting of the American Society of Limnology and Oceanography and the North American Benthological Society. #S20
- \*Mason, S.J.K., B.L. **McGlynn**, and G.C Poole. 2010. Assessing hydrologic response to channel reconfiguration: Science to inform the stream restoration process, Silver Bow Creek Montana. Joint meeting of the American Society of Limnology and Oceanography and the North American Benthological Society. Santa Fe, NM. #T32
- \*Jencso, K.G. and B.L. **McGlynn**. 2010. Hillslope hydrologic connectivity controls riparian groundwater turnover: Implications of landscape structure for catchment source water composition. Joint meeting of the American Society of Limnology and Oceanography and the North American Benthological Society. Santa Fe, NM. #S28
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- \*\*George Hazen, A.R., R.E. Emanuel, B.L. **McGlynn**, and \*K.G Jencso. 2009. Joint topographic and vegetation controls on hillslope water table dynamics in a forested, northern Rocky Mountain watershed. Fall AGU, 2009. H33B-0867.
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- \*Smith, T.J, \*K.G. Jencso, L.A. Marshall, and B.L. **McGlynn**. 2009. A stream network based semi-distributed model for prediction of hydrologic connectivity and runoff generation Fall AGU, 2009. H33B-0868

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- \*Horsburgh, J.S., D.G. Tarboton, K. Schreuders, D.P. Ames, J.P. McNamara, L.A. Marshall, B.L. **McGlynn**, D.L. Kane, A. Tidwell, J. Boll, N. W. Hinman, M.E. Barber. 2009. INRA constellation of experimental watersheds: Cyberinfrastructure to support publication of water resources data. Fall AGU, 2009. H51H-0858
- Gooseff, M.N., R.A. Payn, B.L. **McGlynn**, and S.M. Wondzell. 2009. Solute load sensitivity to stream flow gains and losses in transport simulations in coupled stream-subsurface systems. Fall AGU 2009. H53D-0954.
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- \*Nippen, F., L. Marshall, and B.L. **McGlynn**. 2009. Relating hydrologic system response functions and metrics of catchment structure. Fall AGU 2009. H33B-0864.
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- \*Jencso, K., B.L. **McGlynn**, and L. Marshall. 2009. Hillslope hydrologic connectivity controls riparian groundwater turnover: Implications of catchment structure for riparian buffering and stream water sources. Montana American Water Resources Association. October 2009.
- Riveros-Iregui D.A., B.L. **McGlynn**, H.E. Epstein, D.L. Welsch, R.E. Emanuel, and D.J. Muth. 2009. Landscape structure controls soil CO<sub>2</sub> efflux variability in complex terrain: Scaling from point observations to watershed-scale fluxes. 2nd North American Carbon Program All-Investigators Meeting, February 17-20, San Diego CA.
- Marshall, L.A., \*T. Smith, \*K.G.Jencso, and B.L. **McGlynn**. 2009. Predictive modeling of snowmelt and runoff dynamics: Thresholds and the hydrologic regime of the Tenderfoot Creek Experimental Forest, Montana. American Water Resources Association Montana Section 26th Annual Meeting. October 2009.
- \*Grabs, T., K.G.Jencso, J. Seibert, and B.L. **McGlynn**. 2009. A network-based method to characterize riparian zones by hydrological terrain indices. GEOMORPHOMETRY 2009.
- Wagener, T., \*C. Kelleher, M. Gooseff, B.L. **McGlynn**, L.A. Marshall, T. Meixner, K. McGuire, P. Sharma, and S. Zappe. 2009. The Modular Curriculum for Hydrologic Advancement (MOCHA). European Geosciences Union. General

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- \*Riveros-Iregui, D.A., B.L. **McGlynn**, H.E. Epstein, and D.L. Welsch. 2008. Landscape structure controls soil CO<sub>2</sub> efflux variability in complex terrain: Scaling from point observations to watershed scale fluxes. American Geophysical Union Fall Meeting 2008.
- \*Payn, R.A., M.N. Gooseff, \*K. Jencso, and B.L. **McGlynn**. 2008. Variability in stream flow and specific discharge along three headwater streams in central Montana, USA. American Geophysical Union Fall Meeting 2008.
- Seibert, J., B.L. **McGlynn**, \*T. Grabs, and \*K. Jencso. 2008. Hydrological landscape analysis based on digital elevation data. American Geophysical Union Fall Meeting, 2008.
- \*Kelleher, C.A., T. Wagener, M. Gooseff, B.L. **McGlynn**, L.A., Marshall, T. Meixner, K. McGuire, P. Sharma, S. Zuppe, and C. Pfeiffer. 2008. Modular Curriculum for Hydrologic Advancement (MOCHA). American Geophysical Union Fall Meeting 2008.
- \*Kelleher, C.A., T. Wagener, M. Gooseff, B.L. **McGlynn**, L.A., Marshall, T. Meixner, K. McGuire, and P. Sharma. 2008. Controls on the hydrologic response to climate and land cover change of headwater streams. American Geophysical Union Fall Meeting 2008.
- \*Covino, T. and B.L. **McGlynn**. 2008. Scaling from stream reach observations of groundwater-surface water exchange to network scale behavior and effects. American Geophysical Union Fall Meeting, 2008.
- \*Jencso, K, B.L. **McGlynn**, M.N. Gooseff, S.M. Wondzell, K.E. Bencala, and \*R.A. Payn. 2007. Topographic controls on hillslope–riparian water table continuity in a set of nested catchments, Northern Rocky Mountains, Montana. Montana Section American Water Resources Association Fall, 2008. **1st PLACE STUDENT PAPER COMPETITION**
- \*Jencso, K, B.L. **McGlynn**, M.N. Gooseff, S.M. Wondzell, K.E. Bencala, and \*R.A. Payn. 2008. Topographic controls on hillslope–riparian water table continuity in a set of nested catchments, Northern Rocky Mountains, Montana. CUAHSI (Consortium of Universities for the Advancement of Hydrologic Sciences) Biennial Colloquium on Hydrologic Science and Engineering.
- Gooseff, M.N., S.M. Wondzell, and B.L. **McGlynn**. 2008. On the relationships among temporal patterns of evapotranspiration, stream flow and riparian water levels in headwater catchments during baseflow. IAH 2008 Congress in Toyama, Japan (10/26-11/1).
- Gooseff, M.N., K.E. Bencala, B.L. **McGlynn**, M. Briggs, and D.T. Scott. 2008.

- Limitations to spatial scaling of transient storage. North American Benthological Society 56th Annual Meeting (25-28 May, 2008).
- \*Covino, T. and B.L. **McGlynn**. 2008. In-stream hydrologic and biogeochemical dynamics and their relationship to landscape position and stream gains and losses. North American Benthological Society 56th Annual Meeting (25-28 May, 2008).
- \*Gardner, K. K. and B.L. **McGlynn**. 2008. Seasonality in spatial patterns of stream network nitrate concentrations in a developing mountain watershed in the rocky mountain west. North American Benthological Society 56th Annual Meeting (25-28 May, 2008).
- \*McNamara, R. B.L. **McGlynn**, and \*K.K. Gardner. 2008. In-stream nitrate immobilization across development gradients, ambient nitrate concentrations, and stream network position in a rapidly developing mountain watershed. North American Benthological Society 56th Annual Meeting (25-28 May, 2008).
- \*Payn, R.A., M.N. Gooseff, B.L. **McGlynn**, and S.A. Thomas. 2008. The influence of stream water balance on the measurement of stream solute dynamics. North American Benthological Society 56th Annual Meeting (25-28 May, 2008).
- Gooseff, M.N., R.A. Payn, and B.L. **McGlynn**. 2008. Impact of stream flow gains and losses on interpretation of solute transport modeling in coupled groundwater-surface water systems. World Environmental & Water Resources Congress, ASCE, Honolulu, HI.
- Grabs, T., J. Seibert, K. Jencso, and B.L. **McGlynn**. 2008. Distributed assessment of contributing area and riparian buffering along stream networks: a new approach to separate contributions from different sides. Geophysical Research Abstracts, Vol. 10, EGU2008-A-00000, 2008 EGU General Assembly.
- Tetzlaff, D., J. Seibert, K.J. McGuire, H. Laudon, S.M. Dunn, D. Burns, B.L. **McGlynn**, and C. Soulsby. 2008. Comparing the influence of catchment architecture on catchment residence times in different geomorphic provinces. Geophysical Research Abstracts, Vol. 10, EGU2008-A-00000, 2008 EGU General Assembly.
- Gooseff, M., B.L. **McGlynn**, and R. Payn. 2008. Impact of stream flow gains and losses on interpretation of solute transport modeling in coupled groundwater-surface water systems. World Environmental & Water Resources Congress.
- \*McNamara, R., B.L. **McGlynn**, \*K. Gardner, and \*P. Jenkins. 2007. In-stream nitrate immobilization across development gradients and stream network position in a rapidly developing mountain watershed, West Fork of the Gallatin River, Big Sky, Montana. American Geophysical Union Fall Meeting, 2007.
- \*Gardner, K. and B.L. **McGlynn**. 2007. Spatio-temporal controls of stream water nitrogen export in a rapidly developing watershed in the Northern Rockies. American Geophysical Union Fall Meeting, 2007.
- \*Jencso, K, B.L. **McGlynn**, M.N. Gooseff, S.M. Wondzell, K.E. Bencala, and \*R.A. Payn. 2007. Topographic controls on hillslope-riparian water table continuity in a set of nested catchments, Northern Rocky Mountains, Montana. American Geophysical Union Fall Meeting. Fall, 2007. **AGU HYDROLOGY SECTION STUDENT**



## PAPER AWARD.

- Muth, D.J., H. Epstein, R. Emanuel, B.L. **McGlynn**, and D. Welsch. 2007. Net ecosystem exchange in a forested montane watershed: Trends and trials in complex terrain. *Eos Trans. AGU*, 88(52), Fall Meet. Suppl., Abstract B21D-06.
- Riveros-Iregui, D.A., **B.L. McGlynn**, V.J. \*Pacific, H.E. Epstein, and D.L. Welsch. 2007. Soil CO<sub>2</sub> efflux variability in complex terrain: Towards estimation of watershed-level rates. American Geophysical Union Fall Meeting.
- McGlynn**, B.L., \*D.A. Riveros-Iregui, \*R.E. Emanuel, \*D.J. Muth, H.E. Epstein, D.L. Welsch, \*V.J. Pacific, and J.M. Wraith. 2007. Diurnal hysteresis between soil CO<sub>2</sub> and soil temperature is controlled by soil water content. American Geophysical Union Fall Meeting.
- \*Pacific, V.J., \*D.A. Riveros-Iregui, B.L. **McGlynn**, D.L. Welsch, and H.E. Epstein. 2007. Comparison of soil CO<sub>2</sub> concentrations and surface CO<sub>2</sub> efflux across riparian-hillslope transitions: wet versus dry growing seasons. American Geophysical Union Fall Meeting.
- \*Payn, R.A., M.N. Gooseff, B.L. **McGlynn**, K.E. Bencala, S.M. Wondzell, \*K.G. Jencso. 2007. Relationships between stream – ground water exchange and topography of the channel, valley, and watershed. American Geophysical Union Fall Meeting.
- \*Riveros-Iregui, D.A., B.L. **McGlynn**, H.E. Epstein, D.L. Welsch, \*V.J. Pacific, \*D.J. Muth, \*R.E. Emanuel, \*K.G. Jencso, J.M. Wraith. 2007. Tenderfoot Creek Experimental Forest, Montana: Measuring and modeling carbon and water fluxes from point to watershed scales (Part I). AmeriFlux Annual Meeting, October 17-19, Boulder, CO.
- \*Riveros-Iregui, D.A., B.L. **McGlynn**, H.E. Epstein, D.L. Welsch, \*V.J. Pacific, \*D.J. Muth, \*R.E. Emanuel, \*K.G. Jencso, and J.M. Wraith. 2007. Tenderfoot Creek Experimental Forest, Montana: Measuring and modeling carbon and water fluxes from point to watershed scales (Part II). AmeriFlux Annual Meeting, October 17-19, Boulder, CO.
- \*Payn, R., M. Gooseff, B.L. **McGlynn**, K.E. Bencala, and S.M. Wondzell. 2007. Multiple spatial scales of surface water - groundwater exchange in a headwater stream in Montana, USA. 2007 Geological Society of America Annual Meeting, Denver.
- \*Riveros-Iregui, D.A., B.L. **McGlynn**, \*V.J. Pacific, H.E. Epstein, D.L. Welsch, and \*K.G. Jencso. 2007. Soil CO<sub>2</sub> efflux from a subalpine catchment. National Center for Atmospheric Research "Regional Biogeochemistry: Needs and Methodologies." June 2007, Boulder, CO.
- \*Payn, R., M. Gooseff, B.L. **McGlynn**, and S. Thomas. 2007. Sensitivity of whole-stream metabolism estimates to fully characterized stream-groundwater exchange. North American Benthological Society Annual Meeting. #497.
- \*\*Conde, K., \*V. Pacific, B.L. **McGlynn**, and D. Welsch. 2007. Relationship between soil CO<sub>2</sub> concentrations and soil water alkalinity. Posters on the Hill, Council for Undergraduate Research and the American Chemical Society. Conference on Capitol Hill, Washington DC.
- \*\*Conde, K., \*V. Pacific, \*D. Riveros, B.L. **McGlynn**, and D. Welsch. 2007. Relationship

- between soil CO<sub>2</sub> concentrations and soil water alkalinity. Undergraduate Scholars Research Conference, Montana State University, Bozeman, Montana.
- \*Jencso, K., B.L. **McGlynn**, M. Gooseff, S. Wondzell, and K. Bencala. 2006. Landscape controls on hillslope-riparian-stream hydrologic connections in a set of nested catchments, Northern Rocky Mountains. American Geophysical Union Fall Meeting.
- Wagener, T., B.L. **McGlynn**, M. Weiler, M. McHale, T. Meixner, L. Marshall, M. Gooseff, and K. McGuire. 2006. Taking the Pulse of Hydrology Education. American Geophysical Union Fall Meeting.
- \*Gardner, K. and B.L. **McGlynn**. 2006. Effects of mountain resort development on streamwater nitrogen export: Importance of spatial location of land Use / land cover change. American Geophysical Union Fall Meeting.
- \*Muth, D., H. Epstein, B.L. **McGlynn**, and D. Welsch. 2006. Estimating net ecosystem exchange in complex terrain: A case study from a subalpine, montane forest system. American Geophysical Union Fall Meeting.
- McGlynn**, B.L., H. Epstein, D. Welsch, M. Gooseff, \*D. Riveros, \*V. Pacific, \*D. Muth, \*R. Emanuel, \*K. Jencso, \*R. Payn, J. Wraith, L. Marshall, M. Skidmore, and W. McCaughey. 2006. Tenderfoot Creek Experimental Forest, Montana: Measuring and modeling carbon and water fluxes from point to watershed scales. American Geophysical Union Fall Meeting.
- \*Payn, R., M. Gooseff, B.L. **McGlynn**, K.E. Bencala, and S.M. Wondzell. 2006. Tracer observations of spatial and temporal variations in water exchange across the stream-catchment interface. American Geophysical Union Fall Meeting.
- \*Buchier, A., M.N. Gooseff, \*R.A. Payn, and B.L. **McGlynn**. 2006. Comparison of stream reach scale transport of rhodamine WT and NaCl in a coupled mountain stream-hyporheic system. American Geophysical Union Fall Meeting.
- \*Briggs, M., M. Gooseff, and B.L. **McGlynn**. 2006. Scaling of transient storage parameter estimates with increasing reach length in a mountain headwater stream. American Geophysical Union Fall Meeting.
- \*Riveros-Iregui, D., \*V. Pacific, B.L. **McGlynn**, \*D. Muth, D. Welsch, H. Epstein, L. Marshall, and J. Wraith. 2006. Watershed-scale heterogeneity of the biophysical controls on soil respiration. American Geophysical Union Fall Meeting.
- \*Pacific, V., \*D. Riveros-Iregui, B.L. **McGlynn**, D. Welsch, and H.E. Epstein. 2006. Soil CO<sub>2</sub> concentrations and surface CO<sub>2</sub> efflux across riparian/hillslope transitions. American Geophysical Union Fall Meeting.
- \*Schmitz, D., B.L. **McGlynn**, and D. Patten. 2006. Spring characterization in Bighorn Canyon NRA. Montana American Water Resources Association Fall Meeting.
- \*Jencso, K., B.L. **McGlynn**, M. Gooseff, and \*R. Payn. 2006. Landscape controls on hillslope-riparian-stream hydrologic connections in a set of nested catchments, Northern Rocky Mountains. Montana American Water Resources Association Fall Meeting.
- \*Gardner, K.K. and B.L. **McGlynn**. 2006. Effects of mountain resort development on streamwater nitrogen export: Importance of spatial location of land use/land cover

- change. Biannual EPA Graduate Fellowship Conference, Washington D.C.
- \*Pacific, V., \*D. Riveros, B.L. **McGlynn**, D. Welsch, and H. Epstein. 2006. Soil CO<sub>2</sub> concentration and surface CO<sub>2</sub> efflux across riparian/hillslope transitions, Environmental and Subsurface Symposium, Moscow, ID, September 25-27, 2006.
- McGlynn**, B.L., J. Seibert, R. Gresswell, and D. Bateman. 2006. Landscape analysis of stream-upland connections: Implications for runoff generation, biogeochemistry, and in-stream habitat. North American Benthological Society Annual Meeting, Anchorage, Alaska.
- \*Gardner, K.K., \*K. Segal, J. Harder, and \*L. Shoutis. 2006. Big Sky Institute GK12 Fellows Program: Bringing scientific research into rural classrooms. National Science Foundation (NSF) GK12 Annual Meeting, Washington D.C.
- \*Pacific, V., \*D. Riveros, B.L. **McGlynn**, D. Welsch, H. Epstein. 2005. CO<sub>2</sub> production and efflux across riparian / hillslope transitions in the Tenderfoot Creek Experimental Forest, Montana. American Geophysical Union Fall Meeting.
- \*Riveros-Iregui, D., \*V. Pacific, B.L. **McGlynn**, D. Welsch, and H. Epstein. 2005. On the heterogeneity of CO<sub>2</sub> production and efflux at the watershed scale, Tenderfoot Creek Experimental Forest, Montana. American Geophysical Union Fall Meeting.
- \*Gardner, K., B.L. **McGlynn**, D. Patten, and J. Shanley. 2005. Effects of mountain resort development on streamwater nitrogen export: Importance of spatial location of land use / land cover change. American Geophysical Union Fall Meeting.
- \*Payn, R., M. Gooseff, B.L. **McGlynn**, K. Bencala, S. Wondzell, and \*K. Jencso. 2005. Water balance and residence time in stream functional units of differing scales. American Geophysical Union Fall Meeting.
- \*Covino, T., B.L. **McGlynn**, and R. Sojda. 2005. Groundwater – stream interactions in a mountain – valley transition: Impacts on catchment hydrologic response and stream water chemistry. American Geophysical Union Fall Meeting. **AGU HYDROLOGY SECTION STUDENT PAPER AWARD.**
- \*Gardner, K., B.L. **McGlynn**, D. Patten, L. Graumlich, and J. Shanley. 2005. Effects of mountain resort development on streamwater nitrogen export: Importance of spatial location of land use / land cover change. Montana Chapter of the American Water Resources Association Annual Meeting. Fall, 2005.
- Wondzell, S.M., M.N. Gooseff, and B.L. **McGlynn**. 2005. On the role of hyporheic exchange and stream flow velocity in driving diurnal fluctuations in discharge during baseflow recession. American Geophysical Union Fall Meeting.
- \*Schmitz, D., B.L. **McGlynn**, and D.T. Patten. 2005. The development of a monitoring protocol for springs in Bighorn Canyon NRA, WY. Society for Wetland Scientists-Rocky Mountain Chapter, October 2005. Denver, CO.
- \*Covino, T., B.L. **McGlynn**, and R. Sojda. 2005. Montana Chapter of the American Water Resources Association Annual Meeting. **THIRD PLACE IN STUDENT TALK COMPETITION.**
- \*Cook, S., **B.L. McGlynn**, M. Marks, G. Furniss, and J. Gurreri. 2005. Montana Chapter

- of the American Water Resources Association Annual Meeting. Fall, 2005.  
**SECOND PLACE IN STUDENT PAPER COMPETITION.**
- \*Pacific, V., \*D. Riveros-Iregui, B.L. **McGlynn**, D. Welsch, and H. Epstein. 2005. Montana Chapter of the American Water Resources Association Annual Meeting. **THIRD PLACE IN STUDENT PAPER COMPETITION.**
- \*Riveros-Iregui, D., \*Pacific, V., B.L. **McGlynn**, D. Welsch, and H. Epstein. 2005. Montana Chapter of the American Water Resources Association Annual Meeting.
- \*Covino, T., B.L. **McGlynn**, R. Sojda, and \*\*B. Edwards. 2004. Mountain front groundwater recharge: Groundwater–surface water exchange across an alpine–valley transition. American Geophysical Union Fall Meeting.
- McGlynn**, B.L. and M.N. Gooseff. 2004. A stream tracer technique employing ionic tracers and specific conductance data, Eos Trans. AGU, 85(47), Fall Meet. Suppl., Abstract H21B-1011. American Geophysical Union Fall Meeting.
- \*Gardner, K.K., B.L. **McGlynn**, D.T. Patten, and D. Schmitz. 2004. Impact of land use change on streamwater quality, Big Sky Resort community, Montana. Montana Chapter of the American Water Resources Association Annual Meeting.  
**SECOND PLACE IN STUDENT PAPER COMPETITION.**
- \*Covino, T., B.L. **McGlynn**, R. Sojda, and \*\*B. Edwards. 2004. Groundwater–surface water exchange across an alpine–valley transition. Montana Chapter of the American Water Resources Association Annual Meeting. **FIRST PLACE IN STUDENT PAPER COMPETITION.**
- \*\*Schultz, K., B.L. **McGlynn**, and H. Elsenbeer. 2004. Impacts of landuse and cover change on soil hydraulic properties, Rondonia, Brazil. Montana Chapter of the American Water Resources Association Annual Meeting.
- McGlynn**, B.L. and M. Weiler. 2004. Watershed comparison beyond rainfall-runoff comparison. American Geophysical Union, Canadian Geophysical Union Joint Spring meeting.
- \*\*Schultz, K., B.L. **McGlynn**, and H. Elsenbeer. 2004. Impacts of landuse and cover change on soil hydraulic properties, Rondonia, Brazil. American Geophysical Union, Canadian Geophysical Union Joint Spring meeting.
- Shanley, J.B., J.C. Denner, S.F. Clark, A. Chalmers, \*S.D. Sebestyen, B.L. **McGlynn**, K.N. Hjerdt, and J.J. McDonnell. 2004. Catchment science on a shoestring -- Luddites, labor, and high-tech gizmos. American Geophysical Union, Canadian Geophysical Union Joint Spring meeting.
- McGlynn**, B.L., Gooseff, M.N., \*\*Hugenschmidt, C., and \*R.S. McGlynn. 2003. Stream-upland connections and the effects of discharge on transient storage processes. Eos Trans. AGU, American Geophysical Union Fall Meeting.
- McGlynn**, B.L. and J. Seibert. 2003. Spatial assessment of riparian buffering of upslope runoff. Geological Society Of America, Fall Meeting.
- Gooseff, M.N., B.L. **McGlynn**, and R.S. McGlynn. 2003. Transient storage processes and stream flow recession in a headwater stream, Maimai, New Zealand. North American Benthological Society (NABS) Annual Meeting.

- Seibert, J. and B.L. **McGlynn**. 2003. Hydrological modeling based on DEM-based analysis of landscape organization – towards upscaling of experimental knowledge. *Hydrology: Science and Practice*. British Hydrological Society
- \*McGuire, K.J., M. Weiler, B.L. **McGlynn**, and J.J. McDonnell. 2003. A new transfer function based hydrograph separation model. In "Isotope Tracers in Water Cycle Models." International Association of Hydrological Sciences. The 23rd IUGG General Assembly Meeting, Sapporo, Japan.
- McGlynn**, B.L., and J. Seibert. 2003. Analysis of landscape organization and spatial assessment riparian to upslope area ratios. International Workshop on Mountain Hydrology, Einsiedeln, Switzerland.
- McGlynn**, B.L. and J. Seibert. 2003. DEM-Based analysis of landscape organization: 1) riparian to hillslope area ratios. European Geophysical Union-American Geophysical Union-European Union of Geosciences Joint Assembly.
- Seibert, J. and B.L. **McGlynn**. 2003. DEM-Based analysis of landscape organization: 2) Application to catchment comparison. European Geophysical Union-American Geophysical Union-European Union of Geosciences Joint Assembly.
- Weiler, M., K.J. McGuire, B.L. **McGlynn**, and J.J. McDonnell. 2003. TRANSEP model application. European Geophysical Union-American Geophysical Union-European Union of Geosciences Joint Assembly.
- McGlynn**, B.L., J.J. McDonnell, J. Seibert, C. Kendall, and R.P. Hooper. 2002. The effects of catchment scale and landscape organization on streamflow generation processes. *Small Stream Channels and Riparian Zones: Their Form, Function and Ecological Importance in a Watershed Context*, The University of British Columbia.
- McGlynn**, B.L., J.J. McDonnell, R.P. Hooper, and C. Kendall. 2001. Effects of catchment scale on stormflow timing and composition: A landscape discretization approach *Eos Trans. AGU*, 82(47), Fall Meet. Suppl., Abstract H41A-0265.
- Hooper, R.P., J.J. McDonnell, K.N. Hjerdt, and B.L. **McGlynn**. 2001. Towards an objective model of catchment hydrology. *Eos Trans. AGU*, 82(47), Fall Meet. Suppl., Abstract H21E-08.
- Hooper, R.P., B.L. **McGlynn**, K.N. Hjerdt, and J.J. McDonnell. 2001. A multivariate approach for comparing and classifying streamwater quality. *Eos Trans. AGU*, 82(47), Fall Meet. Suppl., Abstract H31A-03
- McGlynn**, B.L., J.J. McDonnell, R.P. Hooper, and C. Kendall. 2001. On the relative roles of hillslopes versus riparian zones in headwater catchment runoff volume, timing, and composition. American Geophysical Union Chapman Conference on State-of-the-Art Hillslope Hydrology.
- Hooper, R.P., B.L. **McGlynn**, K.N. Hjerdt, and J.J. McDonnell. 2001. A multi-variate approach for comparing and classifying watershed stream water quality. Gordon Conference on Catchment Science and Public Policy: Are We Up to the Task?
- Inamdar, S., M. Mitchell, J.J. McDonnell, B.L. **McGlynn**, and J.B. Shanley. 2001. Spatial connectivity and temporal response of variable source areas (VSAs):

- Implications for catchment scale water and solute mixing. Eos Trans. AGU, Spring Meet. Suppl., Abstract H42A-06
- McGlynn**, B.L., J.J. McDonnell, and W.B. Bowden. 2000. Dissolved organic carbon dynamics at multiple catchment scales: The role of hydrogeomorphic units. Eos Trans. AGU, 81 (48), Fall Meet. Suppl., Abstract H21H-09.
- Shanley, J.B., J.J. McDonnell, K.A. Kendall, and B.L. **McGlynn**. 1999. Evaluating soil penetrability as a spatial predictor of the physical, chemical, and isotopic dynamics of groundwater Eos Trans. AGU, Fall Meet. Suppl., Abstract H11E-02.
- McGlynn**, B.L., J.J. McDonnell, and J.B. Shanley. 1998. Micro-temporal variable source area dynamics. Eos Trans. AGU, Fall Meet. Suppl., Abstract H41H-09.
- McGlynn**, B.L., J.J. McDonnell, J.B. Shanley, C. Kendall. 1998. Riparian flowpath dynamics in a small headwater catchment. State University of New York Spotlight on Research Symposium.
- McDonnell, J.J., B.L. **McGlynn**, K.A. Kendall, J.B. Shanley, and C. Kendall. 1998. The role of near-stream riparian zones in the hydrology of steep upland catchments. International Association of Hydrological Sciences.
- Shanley, J.B., J.J. McDonnell, C. Kendall, K.A. Kendall, and B.L. **McGlynn**. 1998. Hillslope water entering the riparian zone -- is its chemical signal reset, or never received at all? Eos Trans. AGU, Fall Meet. Suppl., Abstract H42A-16.
- McGlynn**, B.L., J.J. McDonnell, J.B. Shanley, and C. Kendall. 1997. The combined use of chemical and isotopic tracers to determine riparian zone flowpaths Eos Trans. AGU, Fall Meet. Suppl., Abstract H212A-22.
- McGlynn**, B.L., J.J. McDonnell, J.B. Shanley, and C. Kendall. 1996. Flowpaths in the riparian zone: Reconciling hydrometric, chemical and isotopic evidence. Eos Trans. AGU, Fall Meet. Suppl., Abstract H72B-05.

### **Awards Attained by my Students** (incomplete)

Fabian Nippgen (PhD current)

Horton Research Award, American Geophysical Union (1 of 2 international recipients for PhD research) (2013)

Student Presentation Award, Montana American Water Resources Association (1st place 2011)

Journal article selected as an AGU EOS and *Water Resources Research* feature article 2011

Kendra Kaiser (PhD current)

2011 European Geophysical Union Student Paper Award

2012-2015 National Science Foundation Graduate Research Fellowship Program (GRFP) 3 year PhD Fellowship

Erin Seybold (PhD current)

2014 AGU Outstanding student paper award (oral presentation)

2013-2016 National Science Foundation Graduate Research Fellowship Program

(GRFP) 3 year PhD Fellowship  
2011-2012 Fulbright Fellow

Margaret Zimmer (PhD current)  
2013-2016 National Science Foundation Graduate Research Fellowship Program  
(GRFP) 3 year PhD Fellowship

Leslie Piper (MS - MSU)  
1st prize student presentation in the "Water and the Environment" category. 2011  
EPSCoR National Conference.  
Student Presentation Award, Montana American Water Resources Association  
(1st place 2011)  
Student Presentation Award, Montana American Water Resources Association  
Annual meeting (1st place 2010)

Leslie Jones (PhD 2012)  
NSF GRFP PhD Fellowship – University of Montana

John Mallard (MS 2012, PhD current)  
IGERT PhD Fellowship -- Graduate Training in Wireless Intelligent Sensor  
Networks (WISeNet), Duke University  
Student Oral Presentation Award Montana AWRA (2nd place in 2011)  
Student Paper Award, American Geophysical Union, Hydrology Section (2010)  
National Center for Airborne Laser Swath Mapping Seed grant for LiDAR data  
flights in the Sawtooths in Idaho - This proposal was written together with  
Tim Covino of MSU (~\$27,000)

Kristin Gardner (PhD 2010):  
EPA (Environmental Protection Agency) STAR fellowship (2007-2010)  
NSF Graduate Teaching Fellowship in K-12 Education (2005 and 2006)  
Nominated for 2005-2006 *P.E.O.* (philanthropic educational organization) Scholar  
award. *P.E.O.* is a philanthropic organization for the advancement of  
women  
NSF EpSCoR Infrastructure via science and technology enhanced partnerships  
(InSTEP) fellowship (2004)  
Student Presentation Awards Montana AWRA (2<sup>nd</sup> place in 2004)

Vince Pacific (MS 2006, PhD 2009):  
NSF Graduate Teaching Fellowship in K-12 Education (2007)  
DOE Graduate research fellowship (2007)  
Student Research Fellowship Montana Water Center (2006)  
Student Presentation Award Montana AWRA (3<sup>rd</sup> place 2005)

Diego Riveros-Iregui (PhD 2009):  
Horton Research Award, American Geophysical Union (1 of 2 international  
recipients for PhD research) (2009)  
Graduate Achievement Award for Outstanding Performance in a Doctoral

Program Montana State University (singular MSU recipient) (2009)  
 National Science Foundation Division of Environmental Biology, Ecosystem  
 Science Cluster, Doctoral Dissertation Improvement Grant (2008-2009)  
 Montana State University graduate student diversity fellowship (2005-2007)  
 Montana Water Center Student research fellowship (2006)

Tim Covino (MS 2006, PhD 2012)  
 NSF Post doctoral fellowship (2 years)  
 Student Oral Presentation Award Montana American Water Resources  
 Association (1st place in 2011)  
 Environmental Protection Agency Science To Achieve Results Fellowship  
 Conference highlight and cover story distinguished fellow. (2011)  
 Highlight and cover story featured graduate student in Montana State University  
 Graduate Studies recruitment brochure for outstanding  
 achievement: <http://www.montana.edu/wwwdg/> (2010)  
 National Center for Airborne Laser Swath Mapping Seed grant for LiDAR data  
 flights in the Sawtooths in Idaho - This proposal was written together with  
 lab-mate John Mallard of MSU (~\$27,000)  
 EPA STAR fellowship, (Environmental Protection Agency) (2009-2011)  
 Student Research Fellowship Montana Water Center (2006)  
 Student Paper Award, American Geophysical Union, Hydrology Section (2005)  
 Student Presentation Awards Montana AWRA (3<sup>rd</sup> place 2005)  
 Student Presentation Awards Montana AWRA (1<sup>st</sup> place in 2004)

Kelsey Jencso (PhD 2010)  
 Student Paper Award, American Geophysical Union, Hydrology Section (2010)  
 Student Paper Award, American Geophysical Union, Hydrology Section (2008)  
 Student Presentation Award Montana AWRA (1st place 2008)  
 Student Paper Award, American Geophysical Union, Hydrology Section (2007)  
 Graduate Research Fellowship, Department of Energy (2007)

Rebecca McNamara (MS 2010)  
 US Forest Service Co-op Program - competitive selection (2008-2009)

Padraich Stoy (MS)  
 Student Presentation Award, Montana American Water Resources Association  
 (3rd place 2011)

Seth Kurt-Mason (MS 2010)  
 Student Presentation Award, Montana American Water Resources Association  
 Annual meeting (2<sup>nd</sup> place 2010)  
 Student Presentation Award, Montana American Water Resources Association  
 Annual meeting (1<sup>st</sup> place 2009)

Steve Cook (MS 2007)  
 Student Presentation Award, Montana American Water Resources Association



Annual meeting (1<sup>st</sup> place 2009)

### **Undergraduates**

Sam Carlson (B.S.)

Montana State University Undergraduate Scholars Program (2011-2012)

Alexey Kalinin (B.S.)

National Sci. Foundation Research Exp. for Undergraduates (2008, 09, 10)

Montana State University Undergraduate Scholars Program (2008)

Anna Bergstrom (B.S.)

Montana State University Undergraduate Scholars Program (2010-2011)

National Science Foundation Graduate Research Fellowship Program (GRFP) 3 year PhD Fellowship – University of Montana

Kendra Kaiser (B.S.)

National Science Foundation Graduate Research Fellowship Program (GRFP) 3 year PhD Fellowship -Montana State University Undergraduate Scholars Program (2010-2011)

Outstanding Student Poster Award from the European Geophysical Union for her work focused on the ecohydrology of Mt Pine Beetle disturbance. She was an undergraduate!

Malcolm Herstand (B.S.)

National Science Foundation Research Experience for Undergraduates (2008)

Montana State University Undergraduate Scholars Program (2008)

Ellie Davis (B.S.)

Montana State University Undergraduate Scholars Program (2008, 2009)

Nathan Park

Montana State University Undergraduate Scholars Program (2007)

Kelley Conde (B.S.)

"Undergraduate Research Posters on the Hill" participant. Sixty competitively selected student posters are displayed in the U.S. Capitol. (2007)

Montana State University Undergraduate Scholars program fellowship (2006)

Austin Allen (B.S.)

Montana State University Undergraduate Scholars program fellowship (2005)

Brian Edwards (B.S.)

Montana State University Undergraduate Scholars program fellowship (2004-5)

Katie Schultz (B.S.)

Montana State University Undergraduate Scholars program fellowship (2004)

Presented her work at the 2004 Spring AGU meeting

### **Research Activities Grants and Contracts Awarded and Pending**

Year   Dollars   Title

2015 \$4,204,011 National Science Foundation Macrosystems Biology: COLLABORATIVE RESEARCH: Defining stream biomes to better understand and forecast stream ecosystem change. **PIs** Bernhardt (Duke), Heffernan (Duke), **McGlynn** (Duke) and collaborating universities \$1,787,630 to Duke **Recommended**

2014 \$578,934 National Science Foundation Geosciences Directorate – Hydrologic Sciences Program: Mountain top mining on watershed hydrology and biogeochemistry: Learning from manipulation of the critical zone **PIs McGlynn** (Duke), Bernhardt (Duke) 3 years

2014 \$5,000,000 National Science Foundation Critical Zone Observatories: COLLABORATIVE RESEARCH: Human and Natural Forcings of Critical Zone Dynamics and Evolution at the Calhoun Critical Zone Observatory. **PIs** Richter (Duke), Porporato (Duke), **McGlynn** (Duke), Kumar (Duke) and collaborating universities. Duke. Partial award to Duke

2013 \$57,580 National Science Foundation Geosciences Directorate – Hydrologic Sciences Program: US-Japan Joint Seminar on Responses of Catchment Hydrology and Forest Biogeochemistry to Climatic and Environmental Change. **PIs** McGuire (VT), Green (PSU), Elliott (UP), Sebestyen (USFS), **McGlynn** (Duke)

2012 \$30,000 US Forest Service: *Watershed Hydro-Climatology: Understanding Climate and Catchment Structure Influences on Streamflow*. **PIs McGlynn** (Duke) and Emanuel (NCSU)

2012 \$500,000 USDA NIFA Program in Air, Soil, and Water Resources: Soil carbon transformation in heterogeneous landscapes: Implications for soil, water, and air. **PIs** RIVEROS-Iregui (UNL), **McGlynn** (Duke), and Emanuel (NCSU) (3yrs). Duke portion \$128,000

2011 \$339,325 National Science Foundation Geosciences Directorate – Hydrologic Sciences Program: *Hydrologic influences on soil trace gas fluxes across complex terrain*. **PIs** Dore (MSU) and **McGlynn** (DUKE) (3yrs)

2011. \$20,000,000+ National Science Foundation EPSCoR Track I: COLLABORATIVE RESEARCH: Team leader for Focus 2: *Linking changes in landscape pattern to ecosystem process* and co-author with 15+ others (5 yrs)

2010 \$400,000 National Science Foundation Geosciences Directorate – Hydrologic Sciences Program: *Seeing the forest for the trees: Interpreting and quantifying emergent catchment hydrology behavior*, **PIs McGlynn** (DUKE) and Marshall (MSU/UNSW) (3yrs)

2010 \$8,360 USGS 104b: *Assessing hydrologic response to channel reconfiguration: Science to inform the restoration process*, Silver

		<i>Bow Creek, Montana</i> <b>PIs</b> Poole and <b>McGlynn</b> (2yrs)
2009	\$330,000	National Science Foundation Geosciences Directorate – <u>Hydrologic Sciences Program</u> : Collaborative Research: <i>The intersection of vegetation organization and watershed topology: Ecohydrologic imprints in runoff generation and stream discharge</i> , <b>PIs: McGlynn</b> and Emanuel, \$166,000 to MSU out of \$380,000 total. (3 yrs)
2009	\$10,680	National Science Foundation Biological Sciences Directorate – <u>Ecosystems Program</u> : <i>Research Experience for Undergraduates (REU) Collaborative Research: Landscape limnology of mountain watersheds: nutrient retention and ecosystem stability in complex aquatic ecosystems</i> <b>PI McGlynn</b>
2009	\$6,000,000	National Science Foundation <u>EPSCoR Track II: COLLABORATIVE RESEARCH: Cyberinfrastructure for a Virtual Observatory and Ecological Informatics System (VOEIS)</u> co-PI and author with 12+ others (3 yrs)
2009	\$35,000	Montana Natural Resources <u>Damage Program</u> : <i>Stream restoration functional assessment, Silverbow Creek, Montana</i> <b>PIs</b> Poole and <b>McGlynn</b> (2 yrs)
2009	\$15,000	Big Sky Institute - MSU Foundation: <i>Tracing human derived nitrogen through aquatic food webs, Big Sky Montana</i> <b>PIs McGlynn</b> and Cross (3 yrs)
2009	\$74,376	Montana Natural Resources Conservation Service: <u>Quantifying spatial and temporal solar radiation potential across Montana</u> . <b>PIs</b> Marshall and <b>McGlynn</b>
2009	\$51,000	Department of Energy, Inland Northwest Research Alliance: <u>Cyberinfrastructure for the ICEWATER Constellation of experimental watersheds</u> <b>PIs McGlynn</b> and Marshall (2 yrs)
2009	\$15,000	<u>USGS 104b: Human subsidization of aquatic food webs, Big Sky Montana</u> <b>PIs</b> Cross and <b>McGlynn</b> (2yrs)
2008	\$7,500	National Science Foundation Biological Sciences Directorate – <u>Ecosystems Program</u> : <i>Research Experience for Undergraduates (REU) Collaborative Research: Landscape limnology of mountain watersheds: nutrient retention and ecosystem stability in complex aquatic ecosystems</i> <b>PI McGlynn</b>
2008	\$65,000	Department of Energy, Inland Northwest Research Alliance (INRA) <u>Watershed structure and snowmelt runoff dynamics: Integration of process understanding and new watershed modeling conceptualizations</u> . <b>PIs McGlynn</b> and Marshall (2 yrs)
2008	\$500,000	State of Montana Research Infrastructure Improvement Program: <u>Soil and Water Analytical Lab Equipment Grant and Renovation</u> (\$500,000: \$250,000+\$250,000 university match). <b>PI McGlynn</b>

2008	\$7,000	National Science Foundation Biological Sciences Directorate – <u>Ecosystems Program: <i>Research Experience for Undergraduates (REU) Collaborative Research: Landscape limnology of mountain watersheds: nutrient retention and ecosystem stability in complex aquatic ecosystems</i></u> <b>PI McGlynn</b>
2008	\$12,000	National Science Foundation <u>Division of Environmental Biology, <i>Hydrologic-carbon cycle linkages in a subalpine catchment.</i></u> Doctoral Dissertation Improvement Grant to Diego Riveros-Iregui. <b>PI McGlynn</b> (2yrs)
2007	\$15,000	<u>USDA Forest Service: <i>Data acquisition support for Tenderfoot Creek Experimental Forest.</i></u> <b>PI McGlynn</b> (2 yrs)
2007	\$15,000	Department of Energy, Inland Northwest Research Alliance (INRA): <u><i>Groundwater monitoring infrastructure for Tenderfoot creek Experimental Forest.</i></u> <b>PIs McGlynn</b> and Marshall (2 yrs)
2007	\$17,000	<u>USGS 104b: <i>Predictive Modeling of Snowmelt Dynamics: Thresholds and the Hydrologic Regime of the Tenderfoot Creek Experimental Forest, Montana</i></u> <b>PIs:</b> Marshall and <b>McGlynn</b> , \$17,000 to MSU. (2 yrs)
2007	\$149,205	National Science Foundation Education Directorate– <u>Course Curriculum and Laboratory Improvement Program: <i>Modular Curriculum for Hydrological Advancement - Toward an Online Faculty Learning Community for Hydrology Education</i></u> <b>PIs:</b> Wagener, <b>McGlynn</b> , Gooseff, Marshall, Sharma. (3 yrs)
2006	\$62,500	<u>Department of Energy Inland Northwest Research Alliance (INRA) <i>Linkages Between Climate, Watershed Structure, Land Cover, and Snow Runoff Dynamics: Initiation of the ICEWATER Regional Experimental Watershed Constellation,</i></u> <b>PIs McGlynn</b> , Marshall, and Wraith, \$62,500 to MSU. (2 yrs)
2006	\$65,000	<u>Montana Department of Environmental Quality (DEQ) Research to Support TMDL Development for the West Fork of the Gallatin River, Big Sky Montana (PI) addition to grant awarded in 2005.</u> <b>PIs McGlynn</b> and Gardner \$60,000 to MSU. (2 Yrs)
2006	\$275,000	<u>Swedish Research Council: <i>Water quality modeling based on landscape analysis: importance of riparian hydrology.</i></u> <b>PIs:</b> Seibert, Laudon, and <b>McGlynn</b> . (3 yrs)
2005	\$60,000	<u>Montana Department of Environmental Quality (DEQ): <i>Research to Support TMDL Development for the West Fork of the Gallatin River, Big Sky Montana,</i></u> <b>PIs McGlynn</b> and Gardner \$60,000 to MSU. (2 yrs plus extension)
2005	\$37,000	National Science Foundation Social Behavioral and Economic Sciences Directorate– <u>Geography and Regional Science Program:</u>

*Effects of mountain resort development on water quality: Importance of spatial location of landuse / land cover change, PIs McGlynn and Gardner, \$37,000 to MSU – Seed funding for ALSM topography data acquisition was awarded out of \$350,000 requested. (1 yr)*

- 2005 \$1,400,000 National Science Foundation Biological Sciences Directorate – Ecosystems Program: *COLLABORATIVE RESEARCH: Landscape Limnology of Mountain Watersheds: Nutrient Retention and Ecosystem Stability in Complex Aquatic Ecosystems. PIs: Wurtsbaugh, Baker, and McGlynn, \$1,200,000 with \$323,234 to MSU. (4 yrs)*
- 2005 \$299,000 US EPA STAR Program: *Land Use/Land Cover Change Governing Nitrogen Thresholds and Transport in Mountain Watersheds, PIs: McGlynn, Patten, Gardner, and Shanley, \$299,000. (2 yrs plus extension)*
- 2004 \$17,000 USGS 104b: *Geographic analysis of land use/land cover change and its relation to nitrogen export in a developing mountain landscape. PIs: McGlynn and Gardner. \$17,000. (2 yrs)*
- 2004 \$639,771 National Science Foundation – Biological Sciences Directorate – Integrated Carbon Cycle Sciences Program: *Collaborative Research: Watershed carbon distribution and flux across environmental gradients, PIs: McGlynn, Welsch, and Epstein, \$639,771 with \$330,000 to MSU. (4 yrs plus extensions)*
- 2004 \$57,500 National Park Service – Greater Yellowstone Network: *Seeps and springs monitoring plan for Bighorn Canyon National Recreation Area, PIs McGlynn and Patten, \$57,500 to MSU. (2.5 yrs)*
- 2004 \$42,888 USDA-NRI: *Improved Gas Analytical Facilities for Research in Land Resources and Environmental Sciences, PIs: Engel, Inskeep, and McGlynn, \$42,888 to MSU (plus match). (1 yr)*
- 2004 \$373,000 National Science Foundation Geosciences Directorate – Hydrologic Sciences Program: *Collaborative Research: Hydrological linkages between landscapes and streams: Transferring reach and plot scale understanding to the network and catchment scales, PIs McGlynn and Gooseff, \$230,000 to MSU. (3 yrs plus extension)*
- 2003 \$2,000 Montana State University International Programs Office: *Land-Use and Land-Cover Change in the Amazon Basin: The Impact on Soil and Small Watershed Hydrology, PI McGlynn, \$2,000. (1 yr)*
- 2003 \$14,576 USGS 104b: *Topography, groundwater dynamics, and soil frost: First-order controls on snowmelt runoff dynamics and plant species distributions across an upland–wetland transition, PIs McGlynn and Sojda, \$14,576 (2 yrs).*

- 2001 \$10,000 *American Geophysical Union, Horton PhD Research Award. Characterizing Hillslope-Riparian-Stream Interactions: A Scaling Perspective, Maimai, New Zealand. PI McGlynn (1 yr)*
- 1999 \$68,000 *National Science Foundation – International Programs Division: Hillslope-Riparian Zone Reservoir Mixing: A Multi- Catchment Test of a New Methodology for Predicting Stream Chemistry. PIs McGlynn (PhD student author) and McDonnell (Advisor). (3 yrs)*

**Teaching Activities:**

<u>Number</u>	<u>Title</u>	<u>Years taught</u>	<u>Enrollment</u>
<i>Duke University</i>			
EOS 590	Advanced Ecohydrology	1	18
EOS 329/723	Landscape Hydrology	3	8, 38, 43
EOS 515	Field Mountain Ecohydrology	1	7
<i>Montana State University</i>			
LRES 444	Watershed Hydrology	10	36, 27, 34, 36, 41, 34, 34, 35, 41, 40
LRES 470	Field Mountain Ecohydrology	2	14, 14
LRES 570			
LRES 580	Advanced environmental science and ecology data acquisition and analysis	1	21
LRES 580	Advanced stream tracing techniques for hydrology and biogeochemistry	1	7
LRES 580	Advanced topics in spatial analysis for hydrology, biogeochemistry, and ecology	1	14
LRES 580	Integrating process and modeling in hydrology and biogeochemistry,	1	6
LRES 580	Soil hydrology field course, Rondonia Brazil: Land-use and land-cover impacts of landuse on soil physical and hydrologic properties and rates of	2	11, 12

recovery following abandonment

LRES 580	Advanced topics in hydrology, biogeochemistry, and quantitative Analysis	3	6, 9, 7
LRES 580	Terrain analysis for hydrology, soils, and geomorphology	1	8
<i>Syracuse University</i>			
FOR 640	Snow hydrology	1	9

**Graduate Student Committee Membership (major professor in bold)**

<u>Date Graduated</u>	<u>Name</u>	<u>Degree</u>
<b>Montana State University</b>		
2004 (COMPLETED)	Susan McIlroy	M.S.
2004 (COMPLETED)	Greg Pederson	M.S.
2005 (COMPLETED)	Keri Garver	M.S.
<b>2005 (COMPLETED)</b>	<b>Karri Meador</b>	<b>M.S.</b>
<b>2005 (COMPLETED)</b>	<b>Tim Covino</b>	<b>M.S.</b>
2006 (COMPLETED)	Joel Moore	M.S.
2006 (COMPLETED)	Mellissa Borino	M.S.
<b>2007 (COMPLETED)</b>	<b>Vince Pacific</b>	<b>M.S.</b>
<b>2007 (COMPLETED)</b>	<b>Steve Cook</b>	<b>M.S.</b>
2007 (COMPLETED)	Trish Jenkins	M.S.
2007 (COMPLETED)	Levia Jones	M.S.
<b>2008 (COMPLETED)</b>	<b>Diego Riveros</b>	<b>Ph.D.</b>
2008 (COMPLETED)	Tyler Smith	M.S.
2009 (COMPLETED)	Monica Bruckner	M.S.
2009 (COMPLETED)	Markus Dieser	Ph.D.
2009 (COMPLETED)	Sunni Knapton	M.S.
<b>2009 (COMPLETED)</b>	<b>Vince Pacific</b>	<b>Ph.D.</b>
<b>2010 (COMPLETED)</b>	<b>Kristin Gardner</b>	<b>Ph.D.</b>
<b>2010 (COMPLETED)</b>	<b>Rebecca McNamara</b>	<b>M.S.</b>
<b>2010 (COMPLETED)</b>	<b>Kelsey Jencso</b>	<b>Ph.D.</b>
<b>2010 (COMPLETED)</b>	<b>Seth Kurt-Mason</b>	<b>M.S.</b>
2011 (COMPLETED)	Mark Schaffer	M.S.
2012 (expected)	Mike Zambon	M.S.
2012 (COMPLETED)	Karen Williams	Ph.D.
2012 (expected)	Margaret Eggers	Ph.D.
<b>2012 (COMPLETED)</b>	<b>Tyler Smith</b>	<b>Ph.D.</b>
<b>2012 (COMPLETED)</b>	<b>John Mallard</b>	<b>M.S.</b>
<b>2012 (COMPLETED)</b>	<b>Tim Covino</b>	<b>Ph.D.</b>
<b>2012 (COMPLETED)</b>	<b>Randy Mullen</b>	<b>Ph.D.</b>
<b>2012 (COMPLETED)</b>	<b>Leslie Jones</b>	<b>M.S.</b>
2013 (COMPLETED)	Aaron Raines	M.S.

2012 (COMPLETED)	Padraich Stoy	M.S.
2013 (COMPLETED)	Chris Welch	M.S.
<b>2014 (expected)</b>	<b>Leslie Piper</b>	<b>M.S.</b>
<b>Duke University</b>		
2013 (COMPLETED)	Kayleigh Somers	Ph.D.
2014 (expected)	Jing Tao	Ph.D.
<b>2014 (COMPLETED)</b>	<b>Fabian Nippgen (MSU)</b>	<b>Ph.D.</b>
2015 (expected)	Matt Ross	Ph.D.
2017 (expected)	Megan Fork	Ph.D.
<b>2016 (expected)</b>	<b>Kendra Kaiser</b>	<b>Ph.D.</b>
<b>2016 (expected)</b>	<b>Erin Seybold</b>	<b>Ph.D.</b>
<b>2016 (expected)</b>	<b>Margaret Zimmer</b>	<b>Ph.D.</b>
<b>2017 (expected)</b>	<b>John Mallard</b>	<b>Ph.D.</b>

**Other Universities**

2009 (COMPLETED)	Christa Kelleher Penn State	M.S.
2009 (COMPLETED)	Rob Payne Colorado School of Mines and Geology	Ph.D.
2016 (expected)	Nittin Singh North Carolina State University	Ph.D.

**Duke Masters of Environmental Management Student projects Advised**

<b>2014 (COMPLETED)</b>	<b>Amanda Santoni</b>	<b>(MEM)</b>
<b>2014 (COMPLETED)</b>	<b>Rachael Bishop</b>	<b>(MEM)</b>
<b>2014 (COMPLETED)</b>	<b>Szu-Ying Chen</b>	<b>(MEM)</b>
<b>2014 (COMPLETED)</b>	<b>Mark Panny</b>	<b>(MEM)</b>
<b>2015 (COMPLETED)</b>	<b>John Paul Miller</b>	<b>(MEM)</b>
<b>2015 (COMPLETED)</b>	<b>Chris Campbell</b>	<b>(MEM)</b>
<b>2015 (COMPLETED)</b>	<b>Alexandria Hunt</b>	<b>(MEM)</b>
<b>2015 (In progress)</b>	<b>Meagan Knowlton</b>	<b>(MEM)</b>

**Montana State University Undergraduate Scholars Program (USP) and NSF Research Experience for Undergraduates (REU) Students Advised and Projects Supervised**

Sam Carlson Undergraduate Scholars Program (USP) (2011-2012): Quantifying Watershed Storage Dynamics using long duration high frequency measurements of Precipitation, Runoff, and Evapotranspiration.

Stuart Baker Undergraduate researcher (2011): Landscape structure, forest management, and climate influences on suspended sediment dynamics across six adjacent headwater catchments.

Anna Bergstrom USP Student (2010-2011): Terrain analysis to quantify mountain watershed stream network geometry and drainage complexity

Kendra Kaiser USP Student (2010-2011): Quantifying spatial and temporal patterns of Mountain Pine Beetle relationships to landscape hydrology and vegetation and terrain structure



Alexey Kalinin (2008, 2009, 2010, 2011) (USP and NSF REU student): Alpine lake hydrology and biogeochemistry

Malcolm Herstead (2008) (USP and NSF REU student in 2008): Alpine watershed network complexity and terrain analysis

Ellie Davis (2008-2009) (USP student): Nutrient retention stoichiometry in alpine Streams

Nathan Parke (2007) (USP student): Nitrogen rock weathering across the Big Sky watershed, MT

Rebecca McNamara (2006): CO<sub>2</sub> efflux across alpine riparian wetlands

Kelley Conde (2006-2007) (USP student): CO<sub>2</sub>-alkalinity relationships across hillslope-riparian transitions. Presented her research at the Counsel for Undergraduate Research Conference on Capitol Hill, Washington DC.

Brian Iacona (2006): Nitrogen retention and fluxes across oligotrophic alpine watersheds.

Austin Allen (2005) (USP student): Stoichiometry of C and N across hillslope-riparian transitions in a mountain watershed. Katherine Schulz (2003-2004) (USP student): Impacts of landuse and cover change on soil hydraulic properties, Rondônia, Brazil. (presented research at the Spring American Geophysical Union Meeting and at the Montana American Water Resources Association annual meeting).

Kristina Vezane:

Jake Meadows:

Brian Edwards (2004) (USP student): Groundwater-surface water interactions and mountain front recharge along a mountain-valley transition.

Katie Schultz:

## **Professional and Public Service Activities**

### **National**

Science Chair, Consortium of Universities for the Advancement of Hydrologic Science Biennial Science Meeting, 2014

Board of Directors for the Consortium of Universities for the Advancement of Hydrologic Science, Inc. (CUAHSI) (2 terms)

American Geophysical Union Surface Water Technical Committee member

American Geophysical Union Ecohydrology Technical Committee member

NSF Water Sustainability and Climate review panel, 2010 and 2014

American Association for the Advancement of Science (AAAS) program review (3 members) for the Wyoming NSF EPSCoR program and the Wyoming Center for Environmental Hydrology and Geophysics (WyCEHG)

NSF EPSCoR Program Review Panel Member December 2011.

Award Committee member and co-initiator of the new Hydrology Early Career Award, American Geophysical Union (initiated it and saw it through the process from the proposal stage to the young scientist award for the AGU hydrology section) 2009, 2010, 2011

NSF Center for Hydrologic Synthesis Water Cycle Dynamics in a Changing Environment working group member 2009-2011  
NSF Cross Directorate Water, Sustainability, and Climate Review Panel Member Spring (2010)  
NSF Hydrologic Sciences Program Review Panel Member Spring (2004)  
NASA LBA (Large-Scale Biosphere Atmosphere experiment in Amazonia) Review Panel Member, Summer 2005  
Board of Directors (elected), CUAHSI (Consortium of Universities for the Advancement of Hydrologic Science, Inc) 2011-2013  
CUAHSI (Consortium of Universities for the Advancement of Hydrologic Sciences, Inc.) Standing Education and Outreach Committee member 2006-  
CUAHSI (Consortium of Universities for the Advancement of Hydrologic Sciences, Inc.) committee member for the Hydrological Measurement Facility – Biogeochemistry (2006)  
Participant USDA AES - Characterizing Mass and Energy Transport at Different Vadose Zone Scales (from W1188) 2007-  
Mountain Climate Sciences Symposium Invitee (Anticipating Challenges to Western Mountain Ecosystems and Resources) 2004  
American Geophysical Union Hydrology Section Surface Water Committee 2001-  
American Geophysical Union Hydrology Section Ecohydrology Committee 2010-  
PUB (predication in ungauged basins) diagnostics working group workshop, Tucson, AZ May 2007  
Universities Council on Water Resources (UCOWR) MSU delegate 2003-

#### Regional

Department of Energy-INRA (Inland Northwest Research Alliance) Research Steering Committee, Integrated Water Research Consortium 2006-2010  
INRA (Inland Northwest Research Alliance) Cyber-infrastructure committee and working group 2008-2010

#### University

Duke Forest Advisory Committee 2014-  
CUAHSI (Consortium of University for the Advancement of Hydrologic Sciences, Inc.) Duke representative 2012-  
Steering committee member for the inaugural Montana State University Institute on Ecosystems  
Universities Council on Water Resources (UCOWR) MSU delegate 2003-  
CUAHSI (Consortium of University for the Advancement of Hydrologic Sciences, Inc.) MSU representative 2004-  
Department of Energy-INRA (Inland Northwest Research Alliance) MSU representative, 2006-2010  
Steering committee member Montana State University EPSCoR Track I proposal development and research application 2008-  
Steering committee member Montana State University EPSCoR Track II proposal development 2009-  
Steering committee member selected by the VPR and Provost for vision development related to a MSU center focused on environmental sciences

and engineering 2009-  
MSU National Ecological Observatory planning committee 2007-  
Graduate School representative 2006-  
MSU Limnologist faculty search committee member, 2007  
MSU Limnologist faculty search committee member, 2005-2006  
Advisory Committee for the MSU Water Resources Minor 2004-  
Big Sky Institute Research Sub-committee 2002-  
Big Sky Institute Building Committee 2003-  
SUNY Environmental Science and Forestry Watershed Hydrology Faculty Search  
Committee 1999  
SUNY Environmental Science and Forestry Hydrologic Modeling Faculty Search  
Committee 1999

#### Division / Department

Chair, Division of Earth and Ocean Sciences, 2014-2016  
Energy faculty search committee member, 2012-2013 Duke  
Faculty of excellence search committee member, 2013 Duke  
Undergraduate Curriculum Committee Member, 2002-2012 (MSU)  
Graduate Curriculum Committee Member, 2002-2009 (MSU)  
Land-atmosphere interactions faculty search committee chair, 2008-2009  
Environmental soil physics faculty search committee chair, 2008-2009  
Biogeochemistry faculty search committee chair, 2008-2009  
Land Reclamation faculty search committee, 2006-2007  
Soil Physics research scientist search committee, 2007  
Student awards and scholarship committee 2007-  
Watershed Analysis faculty search committee chair, 2005  
Soil and Water Analytical Laboratory Renovation Lead for the Montana  
Agricultural Experiment Station and the LRES department 2007-  
Undergraduate recruitment committee 2008-  
Promotion and tenure committee 2008-  
Representative to the MSU library committee (2003-2008)  
Graduate programs committee 2006-2010  
Student scholarship and award committee 2006-  
Faculty affairs – criteria and processes for research faculty appointment, review,  
and promotion committee 2006-  
Peer mentoring committee (various) 2005-  
Graduate programs committee, 2006-

#### Community

Gallatin Water Resources Task Force

#### **Review Panels**

National Science Foundation Water Sustainability and Climate Review Panel  
2014  
National Science Foundation EPSCoR Program Review Panel Member  
December 2011.  
National Science Foundation Cross Directorate Water, Sustainability, and Climate  
Review Panel Member Spring 2010

National Science Foundation Hydrologic Sciences Program Review Panel Spring 2004

NASA LBA (Large-Scale Biosphere Atmosphere experiment in Amazonia) Review Panel Summer 2005

### **Ad hoc Proposal Reviews**

National Science Foundation research proposals 2000-

Ecosystems,

Hydrologic Sciences,

Water Sustainability and Climate,

Geography and Regional Science,

Office of Polar Programs,

Division of Earth Sciences Instrumentation and Facilities Program

Natural Environment Research Council (NERC) UK

University colleague research program reviews (2002-)

NASA

USGS colleague reviews

USGS 104b reviews (North Carolina, Oregon, Utah, Montana)

Utah State Agricultural Experiment Station research program reviews

Montana State University Agricultural Experiment Station research program reviews

### **Journal reviewer**

*Advances in Water Resources* (2004-)

*Climate Change Letters* (2013-)

*Earth Surface Processes and Landforms* (2004-)

*Ecology* (2008-)

*Environmental Management* (2002-)

*Geophysical Research Letters* (2005-

*HESS Editorial Board – Hydrology and Earth Systems Sciences* (European Geophysical Union Journal) (2010-)

*Hydrological Processes* (2001-)

*Hydrological Processes Today* (2002-)

*Hydrology and Earth Systems Science* (2009-)

*International Journal of Engineering Education* (2004-)

*Journal of Hydraulic Engineering* (2003-)

*Journal of Hydrology* (1999-)

*Journal of the North American Benthological Society* (2007-)

*International Journal of Engineering Education* (2004-)

*Journal of Geophysical Research – Biogeosciences* (2008-)

*Water Resources Research* (2003-)

### **Books and book chapters**

International Association of Hydrological Sciences (IAHS Redbooks) (2000-)

Isotope Tracers in Catchment Hydrology–book chapters (Elsevier) (1998)

Wiley book proposal reviews (2003-)

### **Conference session chair (convener) and organizer**

American Geophysical Union (AGU): From Catchment Hydrological Structure to Catchment Biogeochemical Response Convener(s): Markus Hrachowitz

(Delft University of Technology), James Kirchner (ETH Zurich), Chantal Gascuel-odoux (INRA) and Brian McGlynn (Duke University) H44B, H44D

European Geophysical Union (EGU): *Catchment organization and similarity*. 2013. Conveners: Stacey Archfield, Attilio Castellarin, Thorsten Wagener, Brian McGlynn, Ulrike Scherer, Uwe Ehret, Ida Westerberg, and Loes van Schaik

American Geophysical Union (AGU): *New Measurement Technologies Enhance our Understanding of Water Quality and Hydrologic Processes*. 2012. Conveners: Mike Gooseff (PSU), Brian McGlynn (Duke)

European Geophysical Union (EGU): *Hydrologic Similarity at the Catchment Scale*. April 2012.

American Geophysical Union (AGU): *Spatial Analysis of High-Resolution Remote Sensing for Hydrology, Ecology and Biogeochemistry*. December 2011.

American Geophysical Union (AGU): *Ecohydrology of Forest Die-off*. December 2011.

CUAHSI (Consortium of Universities for the Advancement of Hydrologic Sciences) Biennial Colloquium on Hydrologic Science and Engineering: *Catchment classification: Mapping form to function*. 2008 [INVITED CONVENER]

American Geophysical Union (AGU): *Advances in ecohydrology: Landscape-scale patterns and processes*. Fall 2007.

Geological Society of America (GSA): *Advances in understanding and detection of groundwater–stream water interactions across temporal and spatial scales*. Fall 2007.

American Geophysical Union (AGU): *Towards defining a quantitative carbon mass balance for watersheds*. Biogeosciences and Hydrology. Fall 2006.

American Geophysical Union (AGU): *Towards reduced uncertainty in hydrologic and environmental predictions: Bringing experimentalists and modelers together*. Hydrology. Fall 2005.

American Geophysical Union (AGU): *Hydrological and biogeochemical connections between catchments and streams*. Fall 2004.

Combined Canadian Geophysical Union - American Geophysical Union: *Tracers in hydrology*. Hydrology and Biogeosciences (co-sponsored). Spring 2004

European Geophysical Union: *Spatial analysis and landscape discretization for catchment modeling*. Spring 2004.

American Geophysical Union Meeting: *The effects of best management practices on water quality, runoff Processes, and sediment transport*. Hydrology and Biogeosciences (co-sponsored). Fall 2003.

Geological Society of America (GSA): *Wetland science: Intersection of hydrogeology, geomorphology, ecology, and computer modeling*. November 2003.

Combined American Geophysical Union (AGU)-European Geophysical Society (EGS): *Spatial analysis, landscape discretization and catchment classification for hydrological modeling*. Spring 2003.

American Geophysical Union (AGU): *Landscape discretization from a field and modeling perspective*, Fall 2002.

**Short course participant**

Isotope hydrology and biogeochemistry (twice) (USGS): Carol Kendall, Instructor  
Principles and applications of age dating young groundwater (USGS): Neil Plummer, Ed Busenburg, J.K. Bohlke, Instructors  
End-Member Mixing Analysis (twice) (USGS): Richard Hooper, Instructor

**Board member**

Consortium of Universities for the Advancement of Hydrologic Science, Inc. (CUAHSI) (two two-year terms) 2012-2016  
Oswego County, NY Water Quality Coordinating Committee, 1994-1997  
Lake Ontario Dune Coalition, 1994-1997

**Outreach**

Big Sky Mountains and Minds Lecture series Watershed hydrology and water quality in developing mountain watersheds. Summer 2009  
Jencso, K.G. and B.L. McGlynn. Catchment structural controls on hillslope-riparian-stream groundwater connectivity and riparian buffering: Implications for runoff generation and water quality. Montana Watershed Coordination Council. April 2009 [Invited].  
Big Sky Mountains and Minds Lecture series. Landuse change – water quality. Winter 2005.  
Red Rock Lake National Wildlife Refuge, Montana – Biological Assessment panel 2006.  
Montana Water Center, Montana Watercourse, and the Gallatin Local Water Quality District community presentation on watershed hydrology and water quality. 2004.  
Participant/presenter Oswego County, NY Enviro-days (youth water cycle and water quality education outreach), 1997  
Organized a community meeting, open forum, and expert panel on Panther Lake, NY water quality concerns (>100 participants), 1997  
Annual Oswego County, NY county fair outreach effort for the Oswego County Environmental Management Council, 1994-1997  
Organized Boy Scout storm drain stenciling project: Lake Neatawanta, NY, 1995

**International exchange and mentoring**

Swiss Science Foundation Postdoctoral Fellow Supervisor for Michael Rinderer (1.5 years)  
PhD Dissertation Internship Host – Martine Broer, Technical University of Vienna (2012)  
PhD Dissertation External Examiner – Sonja Germer, Geoecology Institute, Potsdam University, Germany (2008)  
PhD Dissertation External Examiner, SLU – Swedish Agricultural University (2006)  
Visiting Scientist Tohoku University, Sendai Japan (8 days, 2006)  
Visiting Scientist, Stockholm University, Sweden, (~70 days, 2006)  
Hosted visiting scientists from Sweden (2005), Germany, (2003), Canada (2003), Japan (2004), Czech Republic (2004)  
International student scholar exchange with Freiburg University, Institute of Hydrology, undergraduate student thesis mentor.

Field hydrology and soils course in Rondonia, Brazil: Land-Use and Land-Cover Change in the Amazon Basin: The Impact on Soil and Small Watershed Hydrology. Co-taught twice with Helmut Elsenbeer and students - Potsdam University Germany.

NSF sponsored Joint US-Japan hydrology seminar, Honolulu Hawaii: 1 of 3 United States NSF sponsored student participants (authored the proposal that funded student involvement), National Science Foundation, 2000.

## **Other**

Powell Center Working Group member: 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. 2013-2015

"Risk posed by China mountain removal" BBC article includes comments from McGlynn

The original BBC article/interview above comments were picked up and extended by others, including:

"China Flattens Hundreds of Mountains for New Cities" Discovery article

"China To Flatten Hundreds Of Mountains To Expand Cities But At Great Cost To Environment" International Business Times article

"Risk posed by China mountain removal" National Headlines article

"Moving mountains wrecking havoc on environment in China" article by Digital Journal

"China flattens mountains for suburban development: Suburbs will be developed on land that was formerly mountainous terrain. United Press International

"China Flattens Mountains for Expansion; Environmental Concerns Grow" Accuweather News

"La titánica y peligrosa tarea de mover montañas en China" BBC Mundo

"China's Plans to Bulldoze Mountains Could Cause Environmental Problems" Auto World News

"China To Flatten Hundreds Of Mountains To Expand Cities But At Great Cost To Environment" International Business Times

"Moving mountains wrecking havoc on environment in China: Digital Journal

"China pune la pământ munți întregi, iar cercetătorii sunt îngrijorați: „Este un experiment fără precedent în istoria omenirii!” Descopera RO

## **Professional and Honor Societies**

American Geophysical Union: Hydrology and Biogeosciences Sections, American Institute of Hydrology (AIH), American Society of Limnology and Oceanography, American Water Resources Association, Geological Society of America, North American Benthological Society, European Geophysical Union