

MICHAEL N. GOOSEFF*Curriculum Vitae*

Associate Professor

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- Ph.D., 2001 Civil Engineering, University of Colorado, Boulder, CO
Dissertation: *Modeling Hyporheic Exchange Influences on Biogeochemical Processes in Dry Valley Streams, Antarctica*, Advisor: Dr. Diane McKnight
- M.S., 1998 Civil Engineering, University of Colorado, Boulder, CO
Thesis: *The Effects of Climate Change on Water Temperature of Alpine Rivers*
Advisor: Dr. Kenneth Strzepek
- B.C.E., 1996 Civil Engineering, Georgia Institute of Technology, Atlanta, GA

PROFESSIONAL EXPERIENCE

- 2015-present Associate Professor, INSTAAR, Civil, Env. & Arch. Engineering, Univ. of Colorado
- 2013-2015 Associate Professor, Civil & Environmental Engineering, Colorado State Univ.
- 2011-2013 Associate Professor, Civil & Environmental Engineering, Pennsylvania State Univ.
- 2007-2011 Assistant Professor, Civil & Environmental Engineering, Pennsylvania State Univ.
- 2004-2007 Assistant Professor, Geology & Geological Engineering, Colorado School of Mines
- 2002-2004 Assistant Professor, Aquatic, Watershed, and Earth Resources, Utah State University
- 2001-2002 Postdoctoral Researcher, Department of Geosciences, Oregon State University
- 1996-1998 Assistant Environmental Planner, Hydrosphere Resource Consultants, Boulder, CO
- 1994 Assistant Project Engineer, GEDCO Group, Inc., Smyrna, GA

LICENSURE

Engineer In Training Certification (aka Fundamentals of Engineering) #18279, State of GA, 1996

TEACHING*CLASSES TAUGHT*

- Physical Hydrology (CU Fa2015, Fa2016)
- Surface Water Quality Modeling (PSU, Fa2008, Sp2011; CSU Fa2013; CU Sp2017)
- Sustaining River Hydroecosystems (CSU, Fa2014)
- Introduction to Civil Engineering (CSU Fa2013, Fa2014)
- Surface Water-Groundwater Interactions (CSU, Sp2015)
- Groundwater Hydrology (CSU Fa2014)
- Fluid Mechanics (PSU, Sp2008, Sp2009, Fa2009, Fa2011)
- Open Channel Hydraulics (PSU, Sp2009, Sp2010, Sp2011, Sp2012)
- Ecological Engineering (Fa2009)
- Initiating Your Academic Career (PSU, Fa2008, Fa2009, Fa2010, Fa2011, Fa2012)
- Ecology, Ecohydraulics, and Environmental Hydrology of Streams: Field Methods & Theory (PSU, Sp2008)
- Small Watershed Hydrology (USU - Sp2003, Fa2003)
- Snow Hydrology (USU - Sp2004, CSM - Sp2006)
- Surface Water Hydrology (CSM - Fa2005, Fa2006)

CLASS DEVELOPMENT

Ecological Engineering: 3 credits; This class is aimed at upper-level undergraduates and graduate students to enable them to understand the fundamental principles of ecology and apply that knowledge to engineering challenges in natural settings. This course provides a framework for engineering solutions through restoration of ecosystem function. Students complete a term project focused on application of ecological engineering principles. (Fa2009)

Initiating Your Academic Career: 1 credit; This graduate course provides students with an overview of the responsibilities of an academic, the process of academic recruiting, generation of application materials, interviewing process, and position negotiation. I have consistently had >12 students from throughout the College of Engineering in this class. (Fa2008, Fa2009, Fa2010, Fa2011)

AWARDS AND HONORS

- Lead Principal Investigator of the McMurdo Dry Valleys Long-Term Ecological Research Project, 2015 - present
- Outstanding Teaching Award, 2011 (Penn State Engineering Alumni Society [PSEAS])
- Harry West Teaching Award, 2011-2012 (Department of Civil & Environmental Engineering, Penn State University)
- National Academy of Engineering Frontiers in Engineering Education Symposium, 2011 (one of 65 selected participants from Engineering programs across the US)
- UCOWR Award for Education and Public Service to the MOCHA team, 2011
- Hartz Family Development Professorship at Penn State, 2007-2010
- Outstanding Faculty Mentor, 2004 (Utah State University)
- Awards received by advisees:
 - Adam Wlostowski (PhD, CU)
 - Horton Research Award, American Geophysical Union, Hydrology Section, 2015;
 - Outstanding Student Presentation Award, American Geophysical Union, Fall Meeting 2014.
 - Adam Ward (PhD, PSU)
 - Penn State Graduate School & Office of the V.P. and Dean for Undergraduate Education, the Harold F. Martin Graduate Assistant Outstanding Teaching Award, 2010.
 - Best Presentation Emphasizing Methodology, North American Benthological Society Annual Meeting, 2010.
 - Outstanding Student Paper Award in Hydrology. American Geophysical Union, Fall Meeting, 2009.
 - Consortium of Universities for the Advancement of Hydrologic Science, Inc., First Place in the Hydrograf(x) competition for Visualization in the Hydrologic Sciences, 2009.
 - Best Presentation Emphasizing Methodology, North American Benthological Society Annual Meeting, 2009.
 - Penn State Graduate Exhibition, First Place Presentation, Engineering Division, 2009.
 - Robert Payn (PhD, CSM) Outstanding Student Paper Award in Hydrology. American Geophysical Union, Fall Meeting, 2008.
 - Christa Kelleher (MS, PSU) Penn State Office of Graduate Studies, Research and Outreach (OGSRO) Research Assistantship (1 semester), 2008

FUNDED PROPOSALS

\$17.0M+ in total collaborative research projects since 2003; most significant grants included; full listing is available at my web page. Lead PI is noted in **bold font**.

1. *Continuous Metabolism and Nutrient Uptake Across the River Continuum*
Principal Investigators: **Matt Cohen** (Univ. of Florida), Michael Gooseff (CU)
Funding Source: NSF, Ecosystems Cluster
Total Award: \$877k (\$393k to Gooseff), Award Period: Aug 2016 – Jul 2019
2. *Arctic Oases - How does the delayed release of winter discharge from aufeis affect the ecosystem structure and function of rivers*
Principal Investigators: **Alex Huryn** (Univ. of Alabama), Linda Deegan (MBL), Ken Tape (Univ. of Alaska Fairbanks), Michael Gooseff (CU)
Funding Source: NSF, Arctic Natural Sciences
Total Award: \$300k (\$75k to Gooseff), Award Period: Mar 2016 – Feb 2018
3. *Increased Connectivity in a Polar Desert Resulting from Climate Warming: McMurdo Dry Valley LTER Program*
Web: <http://www.mcmlter.org>
Principal Investigators: **Michael Gooseff** (Univ. of Colorado, as of 2015) and 11 others
Funding Source: NSF, Antarctic Integrated System Sciences [Grant #1115245]
Total Award: \$5,880,000, Award Period: Apr 2011 – Mar 2017
4. *The McMurdo Dry Valleys – A Landscape on the Threshold of Change*
Principal Investigators: **Andrew Fountain** (Portland State Univ.), Joe Levy (Univ. of Texas), Dave Van Horn (Univ. of New Mexico), Michael Gooseff (CU)
Funding Source: NSF, Antarctic Integrated System Sciences
Total Award: \$1.4M (\$110k to Gooseff), Award Period: Sep 2013 – Aug 2016
5. *Effects of climate dynamics on coupled hydrology and biogeochemistry of arctic hillslopes*
Principal Investigators: **Tamara Harms**, Jay Jones (Univ. of Alaska Fairbanks), Sarah Godsey (PSU, moving to Idaho State Univ. in Jan. 2012), Michael Gooseff (PSU)
Funding Source: NSF, Arctic Natural Sciences [Grant #1107440]
Total Award: \$246,088 to PSU (\$0 to Gooseff), Award Period: Aug 2011 – Aug 2014
6. *EAGER: Are the Dry Valleys Getting Wetter? A Preliminary Assessment of Wetness Across the McMurdo Dry Valleys Landscape*
Principal Investigators: **Michael Gooseff**, Derrick Lampkin (PSU)
Funding Source: NSF, Antarctic Earth Sciences [Grant #1045215]
Total Award: \$171,400, Award Period: Oct. 2010 – Sep. 2012
7. *How does changing seasonality affect the capacity of arctic stream networks to influence nutrient fluxes from the landscape to the ocean?*
Principal Investigators: **W. Breck Bowden** (Univ of Vermont), Michael Gooseff (PSU), and Wilfred Wollheim (Univ of New Hampshire)
Funding Source: NSF, Arctic System Sciences [Grant #0902029]
Total Award: \$1,263,769 (\$373,268 to Gooseff), Award Period: Sep. 2009 – Aug. 2012
8. *What are the seasonal controls on stream-riparian groundwater exchange during baseflow recession in headwater catchments?*
Principal Investigators: **Michael Gooseff**, and Kamini Singha (PSU)
Funding Source: NSF, Hydrologic Sciences [Grant #0911435]
Total Award: \$455,887, Award Period: Jul. 2009 – Jun. 2013

9. *The role of snow patches on distribution of soil microbial communities and biogeochemical cycling in the Antarctic Dry Valleys*
Principal investigators: **Jeb Barrett** (Virginia Tech), Michael Gooseff (PSU), and Cristina Vesbach (Univ of New Mexico)
Funding Source: NSF, Antarctic Organisms and Ecosystems [Grant #0838850]
Total Award: \$802,114 (\$275,306 to Gooseff), Award Period: Aug. 2009 – Jul. 2012
10. *Spatial and Temporal Influences of Thermokarst Failures on Surface Processes in the Arctic*
Web: <http://thermokarst.psu.edu>
Principal Investigators: **W Breck Bowden** (Univ. of Vermont), plus 12 others
Funding Source: NSF Arctic System Science [Grant #0806341]
Total Award: \$4.53M (\$415,605 to Gooseff), Award Period: Sep. 2008 - Aug. 2012
11. *MODular Curriculum for Hydrological Advancement (MOCHA) - Toward an Online Faculty Learning Community for Hydrology Education*
Principal Investigators: **Thorsten Wagener**, Priya Sharma, Michael Gooseff (PSU), Brian McGlynn and Lucy Marshall (Montana State Univ)
Funding Source: NSF, Course, Curriculum and Laboratory Improvement Program: Phase 1 [Grant #0633556]
Total Award: \$149,205 total (\$0 to Gooseff), Award Period: Jan. 2007 - Dec. 2008
12. *Collaborative Research: Understanding the Scaling of N Cycle Controls Throughout a River Network*
Principal Investigators: **Wil Wollheim** (Univ. New Hampshire), Bruce Peterson and Charles Hopkinson (Marine Biological Laboratory), Michael Gooseff (PSU)
Funding Source: NSF, Division of Environmental Biology, Ecosystem Science (Grant #0614350)
Total Award: \$867,000 (\$119,724 to Gooseff), Award Period: Sep. 2006 – Aug. 2009
13. *Will climate change affect hyporheic processes in arctic streams? An assessment of interactions among geomorphology, hydrology, and biogeochemistry in Arctic stream networks.*
Principal Investigators: **W. Breck Bowden** (Univ. Vermont), Michael Gooseff (PSU), James McNamara (Idaho State Univ.)
Funding Source: NSF, Office of Polar Programs – Arctic Natural Sciences (Grant #0327440)
Total Award: \$608,708 (\$173,304 to Gooseff), Award Period: Aug 2003 – Jul 2006
14. *Hydrologic controls over biogeochemistry and microbial community structure and function across terrestrial/aquatic interfaces in a polar desert*
Principal Investigators: **Michael Gooseff**, Jeb Barrett (Dartmouth), and Cristina Takacs-Vesbach (Univ. New Mexico)
Funding Source: NSF, Office of Polar Programs–Antarctic Biology & Medicine (Grant# 0338267)
Total Award: \$421,447, Award Period: (Jun 2004 – Jun 2007)
15. *Hydrological linkages between landscapes and streams: Transferring reach and plot scale understanding to the network and catchment scales.*
Principal Investigators: **Brian McGlynn** (Montana State Univ.), Michael Gooseff (PSU)
Funding Source: NSF, Division of Earth Sciences – Hydrological Sciences (Grant #0337781)
Total Award: \$372,060, Award Period: Apr 2004 – Mar 2007

ADVISING STUDENTS AND POSTDOCS:

Current Graduate Students and Postdocs (titles/themes listed):

A Bergstrom (PhD) – *The influence of sediment on hydrologic and biogeochemical fluxes from glaciers in the McMurdo Dry Valleys, Antarctica*

P Hendrickson (MS) – *Stream-groundwater interactions and metabolism in rivers affected by aufeis*

M Spangler (MS) – *Testing the River Continuum Concept in modern river networks*
C Torrens (PhD) – *Aquatic ecosystem response to permafrost degradation in the McMurdo Dry Valleys, Antarctica*
C Wilson (MS) – *Stream temperature responses to extreme precipitation events*
A Wlostowski (PhD) – *Ecosystem modeling of the McMurdo Dry Valleys, Antarctica*

Completed:

2016

R Webb (PhD) - *Fate of Snowmelt in Complex Subalpine Terrain*

2015

E Smull (MS) – *Physical and biological removal of nitrate along a Colorado montane headwater stream: Understanding the role of bidirectional hydrologic exchange at the reach to catchment scale.*

Z Sudman (MS) – *The Impacts of Thermokarst Activity on a Stream in the Dry Valleys, Antarctica*

2014

W Kang (MS) – *Reactive Transport Modeling of Nutrients in Arctic Tundra Streams*

2013

Z Langford (MS) – *Are the McMurdo Dry Valleys getting wetter? Analysis using high spatiotemporal remote sensing*

2012

C Bakey (MS; now a pipeline engineer in PA) – *Determining advection in hyporheic zones of tundra streams using heat as a tracer*

E Bernzott (MS; now an engineering consultant in Harrisburg, PA) – *Modeling nitrate concentrations in an Antarctic glacial meltwater stream under fluctuating hydrologic conditions and nitrate inputs*

J Eveland (MS; now an engineering consultant in PA) – *Snow dynamics in a polar desert, the McMurdo Dry Valleys, Antarctica.*

K Gerech (MS; now a PhD student at Colorado School of Mines) – *Anomalous stream temperature response to storms in a forested headwater stream in central Pennsylvania*

S Godsey (postdoc; now an assistant professor at Idaho State Univ.) – *Hydrothermal responses of active layer to thermokarst erosion*

A Wlostowski (MS; now a PhD student in my group working in Antarctica) – *Solute transport dynamics in Alaskan Arctic tundra streams*

2011

S Gregg (MS; now a consultant in eastern PA) – *Comparing transient storage in streams restored with in-stream structures and streams restored with floodplain modification*

P Kerr (MS; now a PhD student at Notre Dame) – *The significance of model structure in one-dimensional stream solute transport models with multiple transient storage zones*

T Voltz (MS; now a research technician in Germany working on bank filtration) – *Riparian water table dynamics in mountain headwater streams.*

A Ward (PhD; now an Assistant Professor at Univ. of Iowa) - *How do controls on hyporheic dynamics affect the potential for restoration of hyporheic exchange?*

2010

M Weaver (MS, now working for Penn State/Univ of Colorado) *Hydrologic controls on nutrient fluxes in glacial meltwater streams in inter-annual, seasonal, and daily timescales in the McMurdo Dry Valleys, Antarctica.*

M Taptich (BS CE, Schreyer's Honors College scholar, senior thesis; now a graduate student at UC Berkeley) *The classification of the hyporheic zone under the Clean Water Act – Post Rapanos Decision.*

2009

C Kelleher (MS; now a PhD student at PSU) *Understanding and predicting headwater sensitivity to climate change.*

2008

R Payn (PhD; now at Montana State Univ., postdoc) *Stream hydrologic characterizations across time and space.*

M Briggs (MS; now a PhD student at Syracuse Univ.) *Partitioning surface and hyporheic transient storage throughout a coastal stream network.*

A Bouchier (MS; now at a consulting firm in Colorado) *Response to permafrost failures on hillslopes in the Brooks Range, Alaska.*

2007

S Ikard (MEng.; now a PhD student at CSM) *Spatial and Temporal Active Layer Thermal Dynamics from Temperature Time Series Analysis: Case Studies from Lake Fryxell, McMurdo Dry Valleys, Antarctica.*

M Northcott (MS; now at Exxon-Mobil) *Wetted margin hydrology of the Dry Valleys of Antarctica.*

R Goetz (MS; now at Otis Bay consulting) *A post-project assessment of the Provo River Restoration Project: Channel design, reconfiguration, and the re-establishment of critical physical processes.*

2006

J Zarnetske (MS; now a postdoc at Yale Univ) *Headwater hyporheic zones in a warming Arctic climate: An assessment of hyporheic dynamics across distinct geomorphic and permafrost conditions.*

B Shakespeare (MS; now at Bureau of Land Management, OR) *Linking quantified lateral flow gains to catchment attributes in a paired watershed study.*

Past/Current Committee Member for 25 more graduate students at several universities.

PEER-REVIEWED PUBLICATIONS

(over 100 published to date, several in review and in press; H-Index = 29 as of Dec. 2016)

* indicates student lead; ** indicates advisee lead

Gooseff, MN, A Wlostowski, DM McKnight, and C Jaros. 2017. Hydrologic connectivity and implications for ecosystem processes - Lessons from naked watersheds. *Geomorphology*, 277: 63-71.

Fountain, AG, G Saba, B Adams, P Doran, W Fraser, M Gooseff, M Obryk, JC Priscu, S Stammerjohn, and R Virginia. 2016. The impact of a large-scale climate event on Antarctic Ecosystem Processes. *Bioscience*, 66(10): 848-863.

Obryk, MK, PT Doran, AS Friedlaender, MN Gooseff, W Li, RM Morgan-Kiss, JC Priscu, O Schofield, SE Stammerjohn, DK Steinberg, and HW Ducklow. 2016. Responses of Antarctic marine and freshwater ecosystems to changing ice conditions. *Bioscience*, 66(10): 864-879.

- Castendyk, DN, MK Obryk, SZ Leidman, MN Gooseff, and I Hawes. 2016. Lake Vanda: A sentinel for climate change in the McMurdo Sound Region of Antarctica. *Global and Planetary Change*, 144: 213-227.
- **Wlostowski, AN, MN Gooseff, DM McKnight, C Jaros, and WB Lyons. 2016. Patterns of hydrological connectivity in the McMurdo Dry Valleys, Antarctica: A synthesis of 20 years of hydrologic data. *Hydrological Processes*, 30(17): 2958-2975.
- Herbei R, AL Rytel, WB Lyons, DM McKnight, C Jaros, MN Gooseff, and JC Priscu. 2016. Hydrological controls on ecosystem dynamics in Lake Fryxell, Antarctica. *PLoS ONE*, 11(7): e0159038. doi:10.1371/journal.pone.0159038
- *Buelow, HN, AS Winter, DJ Van Horn, JE Barrett, MN Gooseff, E Schwartz, and CD Takacs-Vesbach. 2016. Microbial community responses to increased water and organic matter in the arid soils of the McMurdo Dry Valleys, Antarctica. *Frontiers in Microbiology*, 7:1040. doi:10.3389/fmicb.2016.01040.
- Wohl, E, BP Bledsoe, KD Fausch, N Kramer, KR Bestgen and MN Gooseff. 2016. Management of large wood in Streams: An overview and proposed framework for hazard evaluation. *Journal of the American Water Resources Association*, 52(2): 315–335.
- Gooseff, MN, D Van Horn, Z Sudman, DM McKnight, KA Welch, and WB Lyons. 2016. Stream biogeochemical and suspended sediment responses to permafrost degradation in stream banks in Taylor Valley, Antarctica. *Biogeosciences*, 13, 1723-1732, doi:10.5194/bg-13-1723-2016.
- Harvey, J, and M Gooseff, 2015. River corridor science: Hydrologic exchange and ecological consequences from bedforms to basins. *Water Resources Research*, 51(9): 6893-6922.
- McKnight, DM, K Cozzetto, JDS Cullis, MN Gooseff, C Jaros, JC Koch, WB Lyons, R Neupauer, and A Wlostowski. 2015. Potential for real-time understanding of coupled hydrologic and biogeochemical processes in stream ecosystems: Future integration of telemetered data with process models for glacial meltwater systems. *Water Resources Research*, 51(8): 7625-6738.
- **Webb, R, S Fassnacht, and MN Gooseff 2015. Wetting and drying variability of the shallow subsurface beneath a snowpack in California's southern Sierra Nevada. *Vadose Zone Journal*, 14(8): doi:10.2136/vzj2014.12.0182.
- Kohler, TJ, E Chatfield, MN Gooseff, JE Barrett, and DM McKnight. 2015. Recovery of Antarctic stream epilithon from simulated scouring events. *Antarctic Science*, 27(4): 341-354.
- *Okie, JG, DJ Van Horn, D Storch, JE Barrett, MN Gooseff, L Kopsova, CD Takacs-Vesbach. 2015. Niche and metabolic principles explain patterns of diversity and distribution: theory and a case study with soil bacterial communities. *Proceedings of the Royal Society - B*, 282: 20142630.
- **Langford, ZL, MN Gooseff, and DJ Lampkin. 2015. Spatiotemporal dynamics of wetted soils across a polar desert landscape. *Antarctic Science*, 27(2): 197-209.
- González-Pinzón, R, AS Ward, CE Hatch, AN Wlostowski, K Singha, MN Gooseff, R Haggerty, JW Harvey, OA Cirpka, and JT Brock. 2015. A field comparison of multiple techniques to quantify groundwater–surface-water interactions. *Freshwater Science*, 34(1): 139-160.
- Fountain, AG, JS Levy, MN Gooseff, and D Van Horn. 2014. The McMurdo Dry Valleys: A landscape on the threshold of change. *Geomorphology*, 225: 25-35.
- Wollheim, WM, TK Harms, BJ Peterson, K Morkeski, CS Copkinson, RJ Stewart, MN Gooseff, and MA Briggs. 2014. Nitrate uptake dynamics of surface transient storage in stream channels and fluvial wetland. *Biogeochemistry*, 120: 239-257.

- *Geyer, KM, AE Altrichter, CD Takacs-Vesbach, DJ Van Horn, MN Gooseff, and JE Barrett. 2014. Bacterial community composition of divergent soil habitats in a polar desert. *FEMS Ecology*, 89(2):490-494.
- Schwartz, E, DJ Van Horn, HN Buelow, JG Okie, MN Gooseff, JE Barrett, and CD Takacs-Vesbach. 2014. Characterization of growing bacterial populations in McMurdo Dry Valley soils through stable isotope probing with ¹⁸O-water. *FEMS Ecology*, 89(2): 415–425.
- Ward, AS, MN Gooseff, M Fitzgerald, TJ Voltz, and K Singha. 2014. Spatially distributed characterization of hyporheic solute transport during baseflow recession in a headwater mountain stream using electrical geophysical imaging. *Journal of Hydrology*, 517: 362-377.
- Van Horn, DJ, JG Okie, HN Buelow, MN Gooseff, JE Barrett, and CD Takacs-Vesbach. 2014. Soil microbial responses to increased moisture and organic resources along a salinity gradient in a polar desert. *Applied and Environmental Microbiology*, 80(10), 3034-3043.
- Levy, JS, AG Fountain, MN Gooseff, JE Barrett, R Vantreese, KA Welch, WB Lyons, UN Nielsen, and DH Wall. 2014. Water track modification of soil ecosystems in the Lake Hoare basin, Taylor Valley, Antarctica. *Antarctic Science*, 26(2), 153-162.
- *Geyer, KM, AE Altrichter, DJ Van Horn, CD Takacs-Vesbach, MN Gooseff, and JE Barrett. 2013. Environmental controls over bacterial communities in polar desert soils. *Ecosphere*, 4:art127. <http://dx.doi.org/10.1890/ES13-00048.1>.
- *Kelleher, C, T Wagener, B McGlynn, AS Ward, MN Gooseff and R Payn. 2013. Identifiability of transient storage model parameters along a mountain stream. *Water Resources Research*, 49(9): 5290-5306.
- **Ward, AS, MN Gooseff, TJ Voltz, M Fitzgerald, K Singha, and JP Zarnetske. 2013. How does rapidly changing discharge during storm events affect transient storage and channel water balance in a headwater mountain stream? *Water Resources Research*, 49(9): 5473-5486.
- *Cozzetto, KD, KE Bencala, MN Gooseff, and DM McKnight. 2013. The influence of stream thermal regimes and preferential flow paths on hyporheic exchange in a glacial meltwater stream. *Water Resources Research*, 49(9): 5552-5569.
- *Larson, LN, M Fitzgerald, K Singha, MN Gooseff, JL Macalady, and W Burgos. 2013. Hydrogeochemical niches associated with hyporheic exchange beneath an acid mine drainage-contaminated stream. *Journal of Hydrology*, 501: 163-174.
- **Eveland, JW, MN Gooseff, DJ Lampkin, JE Barrett, and CD Takacs-Vesbach. 2013. Spatial and temporal patterns of snow accumulation and aerial ablation across the McMurdo Dry Valleys, Antarctica. *Hydrological Processes*, 22:2864-2875.
- **Ward, AS, *RA Payn, MN Gooseff, BL McGlynn, KE Bencala, CA Kelleher, SM 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*, 49(6): 3359-3374.
- Wondzell, SM, and MN Gooseff 2013. Geomorphic controls on hyporheic exchange across scales: Watersheds to particles. In: Shroder, J. (Editor in Chief), Wohl, E. (Ed.), Treatise on Geomorphology. Academic Press, San Diego, CA, vol.9, Fluvial Geomorphology: 203–218.
- **Voltz, TJ, MN Gooseff, *AS Ward, K Singha, M Fitzgerald, and T Wagener. 2013. Riparian hydraulic gradient and stream-groundwater exchange dynamics in steep headwater valleys, *Journal of Geophysical Research*, 118, 953-969, doi:10.1002/jgrf.20074

- **Kerr, PC, MN Gooseff, and D Bolster. 2013. The significance of model structure in one-dimensional stream solute transport models with multiple transient storage zones – competing vs. nested arrangements. *Journal of Hydrology*, 497: 133-144.
- **Eveland, JW, MN Gooseff, DJ Lampkin, JE Barrett, and CD Takacs-Vesbach. 2013. Seasonal controls on snow distribution and aerial ablation at the snow-patch and landscape scales, McMurdo Dry Valleys, Antarctica. *The Cryosphere*, 7:917-931.
- Van Horn, DJ, ML Van Horn, JE Barrett, MN Gooseff, AE Altrichter, KM Geyer, LH Zeglin, CD Takacs-Vesbach. 2013. Factors controlling soil microbial biomass and bacterial diversity and community composition in a cold desert ecosystem: Role of geographic scale. *PLoS-ONE*, 8(6): e66103.
- Wlostowski, AN, MN Gooseff, and T Wagener. 2013. Influence of constant rate versus slug injection experiment type on parameter identifiability in a 1-D transient storage model for stream solute transport. *Water Resources Research*, 49(2): 1184-1188.
- Gooseff, MN, MA Briggs, KE Bencala, BL McGlynn, and DT Scott. 2013. Do transient storage parameters directly scale in longer, combined stream reaches? Reach length dependence of transient storage interpretations, *Journal of Hydrology*, 483: 16-25.
- Gooseff, MN, JE Barrett, and JS Levy. 2013. Shallow Groundwater Systems in a Polar Desert, McMurdo Dry Valleys, Antarctica. *Hydrogeology Journal*, Special Issue on High Latitude Groundwater Systems, 21(1):171-183.
- **Ward, AS, MN Gooseff, and K Singha. 2013. How does subsurface characterization affect simulations of hyporheic exchange? *Ground Water*, 51(1): 14-28.
- Wagener, T, C Kelleher, M Weiler, B McGlynn, M Gooseff, L Marshall, T Meixner, K McGuire, S Gregg, P Sharma, and S Zappe. 2012. It takes a community to raise a hydrologist: The Modular Curriculum for Hydrologic Advancement (MOCHA), *Hydrology and Earth System Sciences*, 16: 3405-3418
- **Payn, RA, MN Gooseff, BL McGlynn, KE Bencala, and SM Wondzell. 2012. Exploring changes in the spatial distribution of stream baseflow generation during a seasonal recession. *Water Resources Research*, 48, W04519, doi:10.1029/2011WR011552
- **Ward, AS, M Fitzgerald, MN Gooseff, TJ Voltz, AM Binley, and K Singha. 2012. Hydrologic and geomorphic controls on hyporheic exchange during base flow recession in a headwater mountain stream. *Water Resources Research*, 48, W04513, doi:10.1029/2011WR011461
- **Kelleher, C, T Wagener, M Gooseff, B McGlynn, K McGuire, and L Marshall. 2012. Investigating controls on the thermal sensitivity of Pennsylvania streams. *Hydrological Processes*, 26: 771-785.
- Nielsen, UN, DH Wall, BJ Adams, RA Virginia, BA Ball, MN Gooseff, and DM McKnight. 2012. The ecology of pulse events: insights from an extreme climatic event in a polar desert ecosystem. *Ecosphere*, 3(2):art17, doi:http://dx.doi.org/10.1890/ES11-00325.1
- Ball, BA, JE Barrett, MN Gooseff, RA Virginia, and DH Wall. 2011. Implications of meltwater pulse events for soil biology and biogeochemical cycling in a polar desert. *Polar Research*, 30, 14555, doi: 10.3402/polar.v30i0.14555
- *Westhoff, MC, MN Gooseff, TA Bogaard, and HHG Savenije. 2011. Quantifying hyporheic exchange at high spatial resolution using natural temperature variations along a first-order stream. *Water Resources Research*, 47, W10508, doi:10.1029/2010WR009767.

- Levy, JS, AG Fountain, MN Gooseff, KA Welch and WB Lyons. 2011. Water tracks and permafrost in Taylor Valley, Antarctica: Extensive and shallow groundwater connectivity in a cold desert ecosystem. *Geological Society of America Bulletin*, 123(11-12):2295-2311.
- Gooseff, MN, DM McKnight, P Doran, AG Fountain, and WB Lyons. 2011. Hydrological connectivity of the landscape of the McMurdo Dry Valleys, Antarctica. *Geography Compass*, 5(9):666-681
- *Stewart, RJ, WM Wollheim, MN Gooseff, MA Briggs, JM Jacobs, BJ Peterson, and CS Hopkinson. Separation of river network scale nitrogen removal among main channel and two transient storage compartments. *Water Resources Research*, 47, W00J10, doi:10.1029/2010WR009896.
- Hester, E, and MN Gooseff. Hyporheic restoration in streams and rivers, in Stream Restoration in Dynamic Systems: Scientific Approaches, Analyses, and Tools, edited by A Simon and S Bennett. AGU monograph, 167-187.
- **Ward, AS, MN Gooseff, and PA Johnson. 2011. How can subsurface modifications to hydraulic conductivity be designed as stream restoration structures? Analysis of Vaux's conceptual models to enhance hyporheic exchange, *Water Resources Research*, 47, W08512, doi:10.1029/2010WR010028.
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NON-REFEREED PUBLICATIONS

- 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? IAHS Newsletter 87, p. 10.
- Bernhardt, E, J Bradford, WB Bowden, J Duncan, M Gooseff, J Jones, C Kendall, B 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.
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CONFERENCE PRESENTATIONS

Last 3 years included here; full listing available at my web page.

(* indicates student lead author, † denotes invited presentation)

2016 (17):

- †Gooseff, M. 2016. Hydrologic connectivity and implications for ecosystem processes- Lessons from naked watersheds. Binghamton Geomorphology Symposium, Colorado State University.
- *Bergstrom, A, and MN Gooseff. 2016. The seasonal evolution of albedo within and across land cover types, Taylor Valley, Antarctica. Geological Society of America Annual Meeting, Denver, CO.
- †Gooseff, MN, SE Godsey, and T Lewkowicz. 2016. Recent permafrost degradation in response to a changing Arctic climate – Lessons from the North Slope of Alaska. Geological Society of America Annual Meeting, Denver, CO.
- *Singley, JG, A Bergstrom, P Hendrickson, C Jaros, E Sokol, CL Torrens, CE Wilson, AN Wlostowski, and MN Gooseff. 2016. Long-term, high-frequency observations reveal shifts in hyporheic weathering solute concentration-discharge dynamics in McMurdo Dry Valley streams, Antarctica. Geological Society of America Annual Meeting, Denver, CO.
- Gooseff, MN, MK Obryk, JC Priscu, PT Doran, and A Chiuchiolo. 2016. Decadal changes in heat content, ice thickness, and heat exchange of ice-covered lakes of Taylor Valley Antarctica. Geological Society of America Annual Meeting, Denver, CO.
- Castendyk, D, MK Obryk, S Leidman, MN Gooseff, I Hawes. 2016. The impact of climate change on Lake Vanda, McMurdo Dry Valleys, Antarctica. Geological Society of America Annual Meeting, Denver, CO.
- †Gonzalez-Pinzon, R, AS Ward, CE Hatch, AN Wlostowski, K Singha, MN Gooseff, R Haggerty, JW Harvey, JT Brock, and OA Cirpka. 2016. A field comparison of multiple techniques to quantify surface water-groundwater interactions. Geological Society of America Annual Meeting, Denver, CO.
- †Fountain, A, J Levy, MK Obryk, D Van Horn, C Glennie, JF Diaz, and WB Lyons. 2016. Dramatic topographic changes in the McMurdo Dry Valleys, Antarctica. Geological Society of America Annual Meeting, Denver, CO.
- *Wlostowski, A, MN Gooseff, DM McKnight, and WB Lyons. 2016. Hyporheic exchange explains chemostasis in glacial meltwater streams, Antarctica. Geological Society of America Annual Meeting, Denver, CO.
- Gooseff, M, B Adams, JE Barrett, P Doran, A Fountain, WB Lyons, DM McKnight, JC Priscu, C Takacs-Vesbach, R Virginia, D Wall. 2015. Long-term response to climate variability in aquatic and terrestrial ecosystems. ILTER meeting, Skukuza, South Africa.
- *Bergstrom, A, and MN Gooseff. 2016. A comparison of the seasonal change of albedo across glaciers and ice-covered lakes of the Taylor Valley, Antarctica. American Geophysical Union, Fall Meeting.
- †Gooseff, MN, WB Lyons, D McKnight, C Jaros, K Welch, and AN Wlostowski. 2016. Permanently Intermittent Streams of the McMurdo Dry Valleys, Antarctica - Extreme Stream Ecosystems Responding to Annual and Intra-seasonal Intermittency. American Geophysical Union, Fall Meeting.
- Torrens, C, MN Gooseff. 2016. Temporal signatures of hyporheic exchange and stream metabolism in glacial meltwater streams, Antarctica. American Geophysical Union, Fall Meeting.
- Ward, A, N Schmadel, SM Wondzell, MN Gooseff, K Singha. 2016. An inductive model of hyporheic flowpath geometry and dynamics during baseflow recession. American Geophysical Union, Fall Meeting.
- Wilson, C, MN Gooseff. 2016. Increased stream temperature in response to extreme precipitation events. American Geophysical Union, Fall Meeting.

Webb, R, S Fassnacht, MN Gooseff, and S Webb. 2016. The Presence of Hydraulic Barriers in Layered Snowpacks: Simulations using TOUGH2 and Diversion Length Estimates. American Geophysical Union, Fall Meeting.

*Wlostowski, AN, MN Gooseff, DM McKnight, WB Lyons, and E Saelens. 2016. Unsteady Flows Control Hydrologic Turnover Rates in Antarctic Hyporheic Zones. American Geophysical Union, Fall Meeting.

2015 (9):

Gooseff, M, JE Barrett, A Truhlar, B Adams, P Doran, A Fountain, WB Lyons, DM McKnight, JC Priscu, C Takacs-Vesbach, R Virginia, D Wall. 2015. Antarctic terrestrial ecosystems abide: Changes in soils, lakes and streams of the McMurdo Dry Valleys as the cooling trend ends. Ecological Society of America, Baltimore, MD.

Gooseff, M. 2015. Untangling the Invisible Connections Between Hydrology and Ecosystem Processes. Hydrologic Sciences Seminar Series, University of Colorado.

Gooseff, M. 2015. Two Decades of Research on the McMurdo Dry Valleys Ecosystem. McMurdo Station Sunday Science Lecture, Antarctica.

Gooseff, M, JE Barrett, B Adams, P Doran, A Fountain, WB Lyons, DM McKnight, JC Priscu, C Takacs-Vesbach, R Virginia, D Wall. The Past as a Window to the Future of Antarctic Ecosystems - What does 20+ Years of Scientific Research in the McMurdo Dry Valleys, Antarctica Tell Us About the Trajectory of Polar Ecosystems? American Geophysical Union Fall Meeting.

Gomora, J, and M Gooseff. 2015. Assessing Stream-Groundwater Exchange in a Headwater Montane Catchment in Colorado. American Geophysical Union Fall Meeting.

Smull, E., and M Gooseff. 2015. Nitrate removal along a Colorado montane headwater stream: The role of bidirectional hydrologic exchange at reach to catchment scales. American Geophysical Union Fall Meeting.

Sudman, ZW, and M Gooseff. 2015. Impacts of Permafrost Degradation on Stream Geomorphology and Sediment Transport in Taylor Valley, Antarctica. American Geophysical Union Fall Meeting.

Wlostowski, AN, and MN Gooseff. 2015. Climate sensitivity of the abiotic soil environment in the McMurdo Dry Valleys, Antarctica. American Geophysical Union Fall Meeting.

Gooseff, M, A Wlostowski, D McKnight, and WB Lyons. 2015. Physical, chemical, and biological connectivity of water bodies in a watershed context – Lessons from naked watersheds. American Geophysical Union Joint Meeting, Montreal Canada.

2014 (13):

Gooseff M, Wlostowski A, Singha K, Ward A, McGlynn B & Burgos W. 2014. Quantifying Stream-Groundwater Interactions and Biogeochemical Cycling at Several Spatial and Temporal Scales. Keynote presentation at the Goldschmidt Conference, Sacramento, CA.

Gooseff, MN, D VanHorn, D McKnight, K Welch, and WB Lyons. 2014. Implications to Aquatic Ecosystems from Thermokarst on Previously Stable Streambanks in Taylor Valley, Antarctica. THAW 2014 - THERMOKARST Aquatic ecosystems Workshop: Freshwater ecosystems in changing permafrost landscapes, Quebec City, Canada (March).

Harms, T. K.; Jones, J. B.; Cook, C. L.; Wlostowski, A. N.; Gooseff, M. N. 2014. Nutrient uptake and transient storage in zero-order Arctic channels. Joint Aquatic Sciences Meeting, Portland, OR.

Gooseff, M. N. 2014. A framework for characterizing the connectivity of water bodies within a watershed context – Lessons from a naked watershed. Joint Aquatic Sciences Meeting, Portland, OR.

Gooseff, MN, JE Barrett, A Truhlar, B Adams, PT Doran, A Fountain, WB Lyons, DM McKnight, J Priscu, C Takacs-Vesbach, RA Virginia, and DH Wall. 2014. End of the trend: Two decades of

- cold desert ecosystem response to climate variability in the McMurdo Dry Valleys. Open Science Conference of the Scientific Committee on Antarctic Research, Auckland, New Zealand.
- González-Pinzón, R, AS Ward, CE Hatch, AN Wlostowski, K Singha, MN Gooseff, R Haggerty, JW Harvey, OA Cirpka, J Brock. A field comparison of techniques to quantify surface water-groundwater interactions. American Geophysical Union Fall Meeting, San Francisco, CA.
- Bowden, WB, MN Gooseff, J Stuckey, R Fulweber, and J Larouche. 2014. Rapid Recovery of a Gully Thermokarst: 10 Years of Observation of the Toolik River Thermokarst, North Slope, Alaska. American Geophysical Union Fall Meeting, San Francisco, CA.
- **Wlostowski, A, MN Gooseff, and DM McKnight. 2014. How do Hyporheic Zones Mediate Stream Solute Loads? Using Antarctic Glacial Melt Streams to Simplify the Problem. American Geophysical Union Fall Meeting, San Francisco, CA.
- Gooseff, M, J Priscu, P Doran, A Chiuchiolo, and M Obryk. 2014. Heating the Ice-Covered Lakes of the McMurdo Dry Valleys, Antarctica – Decadal Trends in Heat Content, Ice Thickness, and Heat Exchange. American Geophysical Union Fall Meeting, San Francisco, CA.
- **Smull, E, AN Wlostowski, and MN Gooseff. 2014. Groundwater Contributions to Intermittent Streamflow in a Headwater Catchment: How do Geoclimatic Controls Influence Downstream Water Quality? American Geophysical Union Fall Meeting, San Francisco, CA.
- McKnight, DM, WB Lyons, AG Fountain, MN Gooseff, P Doran, D Wall, R Virginia, J Priscu, B Adams, C Vesbach-Takacs, J Barrett, and A Howkins. 2014. The McMurdo Dry Valleys, Antarctica: Terrestrial and aquatic ecosystems responding to climatic events that enhance hydrologic transport across the landscape. American Geophysical Union Fall Meeting, San Francisco, CA
- ¹McKnight, DM, WB Lyons, MN Gooseff, J Koch, R Neupauer, K Cozzetto, K Bencala, and J Cullis. 2014. Quantifying the dynamic coupling of hydrologic and biogeochemical processes in stream ecosystems: examples from streams in the McMurdo Dry Valleys, Antarctica. American Geophysical Union Fall Meeting, San Francisco, CA
- Payn, RA, MN Gooseff, BL McGlynn. 2014. Parsing the sources of gross gains in stream flow based on mass recovery of concurrent instantaneous and constant-rate releases over multi-scaled reaches. American Geophysical Union Fall Meeting, San Francisco, CA

SERVICE, PROFESSIONAL, AND OUTREACH ACTIVITIES

Editorships:

- *Water Resources Research*, Associate Editor (2011-2015);
- *Hydrology and Earth System Sciences*, Associate Editor (2009-2015);
- *Eos, Transactions of the American Geophysical Union*, Hydrology Section representative to the Editorial Board (2009-present)
- *WIRES Water*, Associate Editor (2012-present);
- Guest co-editor, *Freshwater Science* Special Issue on Stream-Groundwater Interactions
- Guest co-editor, *Hydrology and Earth Systems Science* Special Issue, *Restored River Corridor Dynamics*, http://www.hydrol-earth-syst-sci.net/special_issue137.html

Peer Reviewer for (in the past 10 years): *Advances in Water Resources*, *Aquatic Sciences*, *Arctic*, *Antarctic*, and *Alpine Research*, *Biogeochemistry*, *Cold Regions Science & Technology*, *Ecological Applications*, *Ecosystems*, *Environmental Science & Technology*, *Freshwater Biology*, *Geochimica et Cosmochimica Acta*, *Geophysical Research Letters*, *Hydrological Processes*, *Hydrological Sciences Journal (U.K.)*, *Journal of the American Water Resources Association*, *Journal of Applied Meteorology*, *Journal of Environmental Management*, *Journal of Geophysical Research-Biogeosciences*, *Journal of Geophysical Research-Earth Surface*, *Journal of Hydrology*, *Limnology & Oceanography*, *Oecologia*, *Permafrost and Periglacial Processes*, *Water Resources Research*, *Wetlands*

Member of (presently or recently):

American Geophysical Union
American Society of Limnology & Oceanography
Society of Freshwater Sciences

American Society of Civil Engineers
Ecological Society of America
Geological Society of America

2016:

- Member, *Board of Directors*, Consortium of Universities for the Advancement of Hydrologic Science, Inc. (CUHASI)
- Chair of the Water Quality Technical Committee, AGU
- Convener for AGU Fall Meeting 2016 session: *Advances in Water Quality*
- Member, *Executive Board of the LTER Network*
- Education Committee Chair, CWEST (University of Colorado)

2015:

- Member, *Board of Directors*, Consortium of Universities for the Advancement of Hydrologic Science, Inc. (CUHASI)
- Chair of the Water Quality Technical Committee, AGU
- Member, Hydrologic Sciences Award Committee, AGU
- Convener for AGU Fall Meeting 2015 session: *The Land-Water-Energy Nexus: Hydrologic and Carbon Implications of Conventional, Unconventional, and Biofuel-Based Energy Development* (poster and oral session)

2014:

- Member, *Board of Directors*, Consortium of Universities for the Advancement of Hydrologic Science, Inc. (CUHASI)
- Member, Department of Soil & Crop Sciences Search Committee (CSU)
- Deputy Chair of the Water Quality Technical Committee, AGU
- Member, Hydrologic Sciences Award Committee, AGU
- Convener for AGU Fall Meeting 2014 session: *Water Quality Systems Poster Session*
- Invited Speaker:
 - Colorado State University – Geosciences Colloquium
 - Colorado State University – Spring Water Seminar Series
 - North Dakota State University – Geosciences Dept. Seminar
 - University of North Dakota – Geological Sciences and Engineering Seminar

2013:

- Member, Board of Directors, Consortium of Universities for the Advancement of Hydrologic Science, Inc. (CUHASI)
- Chair, Penn State University Water Task Force
- Member, *Scientific Advisory Board on Connectivity of Waters* for US EPA
- Member, Department of Geosciences Faculty Search Committee (PSU)
- Panelist, National Science Foundation
- Co-Chair of the Water Quality Technical Committee, AGU
- Member, Hydrologic Sciences Award Committee, AGU
- Convener for AGU Fall Meeting 2013 session: *Taking the Pulse of Streams and Watersheds*
- Invited Speaker:
 - Colorado State University – NREL fall seminar series
 - Idaho State University – Geosciences Department Seminar
 - Swedish University of Agricultural Sciences
 - ModCARE conference Helmholtz University (Germany)

Colorado School of Mines – Civil & Environmental Engineering Dept. Seminar

2012:

- Chair, Penn State University Water Task Force
- Member, Department of Geosciences Faculty Search Committee
- Member, Department of Agricultural and Biological Engineering Search Committee
- Convener for AGU Fall Meeting 2012 session: *Deciphering Hydrological and Biogeochemical Processes in Catchment Studies With a Focus on New Measurement Technologies and Hysteresis Analysis* (H11L)
- Member of the Water Quality Technical Committee, American Geophysical Union

2011:

- Member, Civil and Environmental Engineering Faculty Search Committee
- Member, Civil and Environmental Engineering Promotion & Tenure Committee
- Panelist, National Science Foundation
- Chair, Review Committee for National Science Foundation Office of Polar Programs
- Member of the Water Quality Technical Committee, American Geophysical Union
- Invited Speaker:
 - Michigan Tech, Department of Civil Engineering
 - National Science Teachers Association Annual Meeting, Polar Symposium

2010:

- National Science Teachers Association webinar presentation on the McMurdo Dry Valleys
- Panelist, National Science Foundation
- Secretary, Hydrology Section of the American Geophysical Union
- Faculty Advisor, *American Society of Civil Engineers* Student Chapter, Penn State University
- Member of the Water Quality Technical Committee, American Geophysical Union
- Member, Graduate Committee of Department of Civil & Environmental Engineering
- Invited Speaker:
 - Penn State Frontiers of Science Public Lecture
 - Syracuse University, Department of Earth Sciences
 - Penn State Water Conference, Inaugural Meeting

2009:

- Secretary, Hydrology Section of the American Geophysical Union
- Convener for AGU Fall Meeting 2009 session: *Response of the Arctic Landscape to a Warming Climate* (U41C, U44A)
- Hydrology Editorial Board member, *Eos, Transactions of the American Geophysical Union*
- Member of the Water Quality Technical Committee, American Geophysical Union
- Invited Speaker:
 - TU Delft, Civil Engineering Department (Delft, Netherlands)
 - University of Delaware, Department of Geography

2008:

- Convener for AGU Fall Meeting 2008 session: *Deciphering the Role of Surface and Subsurface Processes on Solute Dynamics at the Catchment Scale* (H11B, H13I, H14B)
- Secretary, Hydrology Section of the American Geophysical Union
- Panelist, National Science Foundation
- Hydrology Editorial Board member, *Eos, Transactions of the American Geophysical Union*
- Member of the Water Quality Technical Committee, American Geophysical Union
- Contributor for Pennsylvania Groundwater for Teachers Symposium, Oct.

- Invited Speaker:
 - University of California, Berkeley, Catchment Science Symposium;
 - Pennsylvania Groundwater Institute for High School Teachers;
 - University of Minnesota, St. Anthony Falls Laboratory;
 - Temple University, Department of Civil & Environmental Engineering;
 - University of Nevada, Reno, Hydrologic Sciences Colloquium;
 - Cary Institute of Ecosystem Studies
 - Penn State University, Earth Talks Seminar series
 - Penn State University, Department of Civil & Environmental Engineering

2007:

- Convener for AGU Fall Meeting 2007 session: *Water Quality in Hydrologic Systems* (H51B)
- Convener for AGU Fall Meeting 2007 session: *Polar Biogeochemistry* (B42A)
- Convener for GSA Annual Meeting 2007 session: *T45.Advances in Understanding and Detection of Groundwater–Stream Water Interactions across Temporal and Spatial Scales*
- Convener for GSA Annual Meeting 2007 session: *T31. Innovations and Advances for Measuring and Characterizing Groundwater–Surface Water Interaction (Posters)*
- LTER Site Review Panelist, National Science Foundation
- Member of the Water Quality Technical Committee, American Geophysical Union
- Invited Speaker:
 - MIT, Department of Civil & Environmental Engineering;
 - Stroud Water Research Center;
 - University of Illinois, Chicago, Department of Earth & Environmental Sciences;
 - Colorado State University, Geosciences Department;
 - University of Colorado, Institute of Arctic and Alpine Research;
 - University of Alaska Southeast, public lecture;
 - Oregon State University, Hydrology Seminar Series;
 - US Forest Service Rocky Mountain Research Station, Ft. Collins, CO

2006:

- Member of the Water Quality Technical Committee, American Geophysical Union
- Panelist, National Science Foundation
- Convener for AGU Fall Meeting 2006 session: *Advances in Process Understanding and Implications of Exchanges Across the Sediment-Water Interface* (oral: B22C, posters: B23A)
- Convener for AGU Fall Meeting 2006 session: *Toward Defining a Quantitative Carbon Mass Balance for Watersheds* (oral: B52B, posters: B53A)
- Participant in CUAHSI panel on biogeochemical measurement technology, resulting in the following white paper: Bernhardt, E., J. Bradford, WB Bowden, J Duncan, M Gooseff, J Jones, C Kendall, B 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.

2005:

- Member of the Water Quality Technical Committee, American Geophysical Union
- Convener for AGU Fall Meeting 2005 session: *Water Quality of Hydrologic Systems Posters* (H31B)
- Convener for ASLO Aquatic Sciences Meeting 2005 session: *Feedbacks Among Physical and Biogeochemical Processes in Flowing Waters* (TS38).
- Convener for Joint Assembly of NABS Annual Meeting and AGU Spring Meeting 2005 session: *Nitrogen Cycling in Freshwaters* (Orals: NB21D, NB22E, NB23E, NB24F, NB31D, Poster: NB33F)
- Invited Speaker: University of Nebraska, Geosciences Department

2004:

- Member of the Water Quality Technical Committee, American Geophysical Union
- Convener for AGU Fall Meeting 2004, *Hydrological and Biogeochemical Connections Between Catchments and Streams: Implications for Water Quality* (Orals: H31F, H44B, Poster: H51B)

2003:

- Member of the Water Quality Technical Committee, American Geophysical Union
- Convener for AGU Fall Meeting 2003, *Water Quality of Hydrologic Systems Posters* (H51C)

2002:

- Convener for AGU Fall Meeting 2002, Hydrology session, *Linking Hydrology and Biogeochemistry* (Orals: H51D, Posters: H52D)

Pre-2002:

- LTER Graduate Student Representative for the McMurdo Dry Valleys LTER site (1999 - 2001)
- Graduate Student Representative to the INSTAAR directorate (2000 - 2001)
- Assistance with a University of Colorado Community Outreach project, studying watershed processes for a local community water supply (August 2001)