

## CURRICULUM VITAE

Sujay S. Kaushal

Chesapeake Biological Laboratory  
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### I. Education

1997                      B.A. Cornell University (Biology)  
2003                      Ph.D. University of Colorado (Biology)

### II. Professional Background

2001 - 2003              Postdoctoral Scientist, Institute of Ecosystem Studies, Millbrook,  
NY  
  
2005 - 2007              Assistant Professor, University of Maryland Center for  
Environmental Science, Appalachian Laboratory, MD  
  
2007 - Present            Assistant Professor, University of Maryland Center for  
Environmental Science, Chesapeake Biological Laboratory, MD

### III. Research

#### A. Areas of Professional Expertise

Ecosystem ecology, biogeochemistry

#### B. Peer-reviewed Publications

##### 1. Papers in refereed journals

Kaushal, S. and M.W. Binford. 1999. Relationship between C:N ratios of lake sediments, organic matter sources, and historical deforestation in Lake Pleasant, Massachusetts. *Journal of Paleolimnology* 22: 439-442.

Wolfe, A.P., S.S. Kaushal, J.R. Fulton, and D.M. McKnight. 2002. Spectrofluorescence of sediment humic substances and historical changes of lacustrine organic matter provenance in response to atmospheric nutrient enrichment. *Environmental Science and Technology* 36: 3217-3223.

Kaushal, S.S. and J. Walsh. 2002. Comparison of nitrogen isotope ratios in feathers from seven species of Colorado breeding birds. *Western North American Naturalist* 62: 246-248.

Kaushal, S.S. and W.M. Lewis, Jr. 2003. Patterns in the chemical fractionation of organic

- nitrogen in Rocky Mountain streams. *Ecosystems* 6: 483-492.
- McDowell, W.H., A. Magill, J.A. Aitkenhead-Peterson, J.D. Aber, J. Merriam, and S.S. Kaushal. 2004. Effects of chronic nitrogen amendment on dissolved organic matter and inorganic nitrogen in soil solution. *Forest Ecology and Management* 196: 29-41.
- Kaushal, S.S. and W.M. Lewis, Jr. 2005. Fate and transport of dissolved organic nitrogen in minimally disturbed montane streams of Colorado. *Biogeochemistry* 74: 303-321.
- Lajtha, K., S. Crow, Y. Yano, S.S. Kaushal, E. Sulzman, J.D.H. Spears and P. Sollins. 2005. Detrital controls on dissolved organic matter in soils: a field experiment. *Biogeochemistry* 76: 261-281. **(UMCES Scientific Series No. 3920)**
- Kaushal, S.S., P.M. Groffman, G.E. Likens, K.T. Belt, W.P. Stack, V.R. Kelly, K.C. Weathers, L.E. Band, and G.T. Fisher. 2005. Increased salinization of fresh water in the northeastern U.S. *Proceedings of the National Academy of Sciences* 102: 13517-13520. **(UMCES Scientific Series No. 3922)**
- Kaushal, S.S., W.M. Lewis, Jr., and J.H. McCutchan, Jr. 2006. Land use change and nitrogen enrichment of a Rocky Mountain watershed. *Ecological Applications* 16: 299-312. **(UMCES Scientific Series No. 4010)**
- Tripler, C.E., S.S. Kaushal, G.E. Likens, and M.T. Walter. 2006. Patterns in potassium dynamics in forest ecosystems. *Ecology Letters* 9: 451-466. **(UMCES Scientific Series No. 4011)**
- Pellerin, B.A., S.S. Kaushal, and W.H. McDowell. 2006. Does anthropogenic nitrogen enrichment increase organic nitrogen concentrations in runoff from forested and human-dominated watersheds? *Ecosystems* 9: 852-864. **(UMCES Scientific Series No. 4013)**
- Elmore, A.J. and Kaushal, S.S. 2008. Disappearing headwaters: Patterns of stream burial due to urbanization. *Frontiers in Ecology and the Environment* 6, doi:10.1890/070101 **(UMCES Scientific Series No. 4015)**
- Craig, L.S., M.A. Palmer, D.C. Richardson, S. Filoso, E.S. Bernhardt, B.P. Bledsoe, M.W. Doyle, P.M. Groffman, B. Hassett, **S.S. Kaushal**, P.M. Mayer, S.M. Smith, and P.R. Wilcock. 2008. Stream restoration strategies for reducing river nitrogen loads. *Frontiers in Ecology and the Environment* DOI: 10.1890/070080
- Kaushal, S.S., P.M. Groffman, P.M. Mayer, E. Striz, E.J. Doheny, and A.J. Gold. Effects of stream restoration on denitrification at the riparian-stream interface of an urbanizing watershed of the mid-Atlantic U.S. *Ecological Applications* 18(3):

789-804.

## 2. Books or Chapters

Kaushal, S.S. Chloride and Salinization of Freshwater Resources. 2007. Encyclopedia of Inland Waters. Ed. G.E. Likens

## 3. Published Abstracts

Kaushal, S. and W.M. Lewis, Jr. 2000. Dynamics of organic carbon and nitrogen in montane streams draining undisturbed watersheds. North American Benthological Society, Keystone, CO.

Kaushal, S., and W.M. Lewis, Jr. 2001. Export of humic and non-humic dissolved organic nitrogen from undisturbed watersheds. Ecological Society of America, Madison, WI.

Kaushal S., and W.M. Lewis, Jr. 2001. Origins and bioavailability of dissolved organic nitrogen exported from undisturbed watersheds. American Geophysical Union, San Francisco, CA.

Kaushal, S.S., and W.M. Lewis, Jr. 2002. Ecological significance of dissolved organic nitrogen exported from minimally disturbed watersheds. Ecological Society of America, Tucson, AZ.

Kaushal, S.S., and W.M. Lewis, Jr. 2002. Chemical composition and metabolism of dissolved organic nitrogen and carbon in minimally disturbed Rocky Mountain Streams. American Society of Limnology and Oceanography, Vancouver, BC.

Kaushal, S.S., P.M. Groffman, S.E.G. Findlay, and D.T. Fischer. 2003. Land use and the changing reactivity of organic nitrogen and phosphorus exported from urban watersheds. Long-term Ecological Research All Scientists Meeting, Seattle WA.

Kaushal, S.S., P.M. Groffman, S.E.G. Findlay, and D.T. Fischer. 2004. Land use and the changing reactivity of dissolved organic matter exported from coastal watersheds. American Society of Limnology and Oceanography Meeting, Savannah GA.

Tripler, C.E., S.S. Kaushal, and G.E. Likens. 2004. Evaluating the evidence for potassium co-limitation in forested ecosystems. American Geophysical Union Meeting, Montreal Quebec.

Kaushal, S.S., P.M. Groffman, S.E.G. Findlay, and D.T. Fischer. 2004. Relationship between land use and amount and reactivity of dissolved organic carbon exported from coastal watersheds. American Geophysical Union Meeting, Montreal Quebec.

- Kaushal, S.S., and P.M. Groffman. 2004. Ecosystem restoration and denitrification in a coastal stream. American Geophysical Union, San Francisco CA (Invited Speaker).
- Lajtha, K., S. Crow, Y. Yano, S.S. Kaushal, E. Sulzman, J.D.H. Spears, and P. Sollins. 2004. Detrital Controls on Dissolved Organic Matter in Soils: A Field Experiment. American Geophysical Union, San Francisco CA.
- Kaushal, S.S., P.M. Groffman, and S.E.G. Findlay. 2004. Ecosystem restoration and denitrification in an urban stream. Ecological Society of America, Portland OR.
- Lajtha, K., S. Crow, Y. Yano, S.S. Kaushal, E. Sulzman, and J.D.H. Spears. 2004. Detrital controls on SOM dynamics and soil solution chemistry: an experimental approach. Ecological Society of America Meeting, Portland OR.
- Kaushal, S.S., and P.M. Groffman. 2005. Ecosystem restoration and denitrification in a coastal stream of the Chesapeake Bay watershed. American Society of Limnology and Oceanography. Santiago de Compostela, Spain.
- Kaushal, S.S., P.M. Groffman, and P.M. Mayer. 2005. Ecosystem restoration and denitrification in an urbanizing watershed of the mid-Atlantic U.S. Ecological Society of America. Portland, Oregon.
- Groffman, P.M., A.J. Gold, D.Q. Kellogg, S.S. Kaushal, N. Gurwick, P.M. Mayer, M.H. Stolt, and L.E. Band (Special Symposium). 2005. Riparian denitrification in forested and suburban/urban watersheds. Soil Science Society of America. Salt Lake City, UT.
- Kaushal, S.S., P.M. Groffman, Stuart E.G. Findlay, and David T. Fischer. 2005. The effects of land use on the dynamics of organic carbon, nitrogen, and phosphorus exported from coastal watersheds (Invited Speaker). American Geophysical Union. New Orleans, LA.
- Band, L.E., C. Tague, P.M. Groffman, S. Kaushal, and S. Kenworthy. 2005. Coupling of Hydrologic and Ecosystem Nutrient Cycling in Forest and Suburban Catchments. American Geophysical Union, San Francisco, CA. (Invited Speaker)
- Kaushal, S., K. Belt, W. Stack. R. Pouyat, P. Groffman, and S. Findlay. 2006. Variations in Heavy Metals Across Urban Streams. American Geophysical Union. Baltimore, MD. (Invited Speaker)
- Mayer, P., E. Doheny, S. Kaushal, P. Groffman, and E. Striz. 2006. Ground water is a chronic source of chloride to surface water of an urban stream exposed to road salt in a Chesapeake Bay watershed. American Geophysical Union. Baltimore, MD.

- Shields, C.A., L.E. Band, P.M. Groffman, G.T. Fisher, and S.S. Kaushal. 2006. Temporal distribution of nitrogen loading: an urban-rural gradient? American Geophysical Union. Baltimore, MD.
- Belt, K.T., C.M. Swan, R.V. Pouyat, S. Kaushal, P.M. Groffman, W.P. Stack, G.T. Fisher. 2006. Transport and breakdown of organic matter in urban and forested stream the effects of altered hydrology and landscape position. American Geophysical Union. Baltimore, MD.
- Groffman, P.M., L.E. Band, R.V. Pouyat, K.T. Belt, G.T. Fisher, M. Grove, S. Kaushal, P.M. Mayer. 2006. The Bio-Geo-Socio-Chemistry of urban watershed ecosystems. American Geophysical Union. Baltimore, MD.
- Kaushal, S., K. Belt, W. Stack, R. Pouyat, P. Groffman, and S. Findlay. 2006. Variations in heavy metals across urbanizing watersheds. Ecological Society of America Meeting. Memphis, TN.
- Hopsfenperger, K., K. Engelhardt, and S. Kaushal. 2006. Effects of functional plant groups on nitrogen cycling in a tidal freshwater marsh. Ecological Society of America Meeting. Memphis, TN.
- Belt, K.T., R. Pouyat, S. Kaushal, P. Groffman, and G. Fisher. 2006. Altered hydrology: effects on the transport and breakdown of organic matter in urban streams. LTER All Scientists Meeting. Estes Park, CO.
- Kaushal, S.S., P. Groffman, P. Mayer, E. Striz, E. Doheny, A. Gold. 2006. Successes and challenges in removing nitrogen from coastal streams of the Chesapeake Bay. LTER All Scientists Meeting. Estes Park, CO.
- Shields, C., L. Band, P. Groffman, S. Kaushal, and G. Fisher. 2006. Variations in nitrogen export characteristics from catchments along an urban-rural gradient. LTER All Scientists Meeting. Estes Park, CO.
- S.S. Kaushal, P.M. Groffman, L.E. Band, E.M. Elliott, and C. Kendall. 2006. Sources and transformation of nitrate in streams draining an urban landscape of the mid-Atlantic. U.S. BES LTER Annual Meeting. Baltimore, MD.
- C. Klocker, S. Kaushal, P. Groffman, and P. Mayer. 2006. Nitrogen uptake in degraded and restored streams. BES LTER Annual Meeting. Baltimore, MD.
- Lajtha, K., Y. Yano, S. Crow, and S. Kaushal. 2006. Transformations of DOM in forested catchments: the pathways of DOM from litter and soil to river export. American Geophysical Union. San Francisco, CA.
- Shields, C.A., L.E. Band, P.M. Groffman, and S.S. Kaushal. 2006. Impacts of land use

- and interannual climate variability on nitrogen export characteristics. American Geophysical Union. San Francisco, CA.
- Belt, K.T., S.S. Kaushal, C.M. Swan, R.V. Pouyat, P.M. Groffman, and I. Turcsanyi. 2007. Altered urban hydrology: effects on the transport of organic matter in streams. Ecological Society of America/Society for Restoration Ecology Meeting. San Jose, California. August 9, 2007.
- Klocker, C.A., S.S. Kaushal, P.M. Groffman, P.M. Mayer, R.P. Morgan. 2007. In-stream nitrogen processing in urban degraded and restored streams in Baltimore, MD. Ecological Society of America/Society for Restoration Ecology Meeting. San Jose, California. August 9, 2007.
- Bogush, P.D., S.S. Kaushal, and C.M. Swan. 2007. The interaction of road salt de-icer and dissolved organic carbon on microbial respiration in stream sediments. Ecological Society of America/Society for Restoration Ecology Meeting. San Jose, California. August 10, 2007.
- Elmore, A.J., and S.S. Kaushal. 2007. Missing streams in the mid-Atlantic U.S.: Insights from aerial-photography calibrated remote sensing. Ecological Society of America/Society for Restoration Ecology Meeting. San Jose, California. August 10, 2007.
- Mayer, P.M., E. Striz, E. Doheny, S.S. Kaushal, and P.M. Groffman. 2007. Chloride dynamics in the hyporheic zone of a flashy urban stream in the Chesapeake Bay watershed. Ecological Society of America/Society for Restoration Ecology Meeting. San Jose, California. August 6, 2007.
- Kaushal, S.S., P.M. Groffman, P.M. Mayer, E. Striz, E.J. Doheny, and A.J. Gold. 2007. Effects of stream restoration on denitrification at the riparian-stream interface of an urbanizing watershed of the mid-Atlantic U.S. Society for International Limnology. Montreal, Canada. August 18, 2007.
- Welty, A.J. Miller, R. J. Ryan, N. Crook, T. Kerchkof, P. Larson, J. Smith, M.L. Baeck, S. Kaushal, K. Belt, M. McGuire, T. Scanlon, J. Warner, R. Shedlock, L. Band, P. Groffman. 2007. Baltimore Waters Test Bed – An Update. American Geophysical Union. San Francisco, California. December, 2007.
- Mehta, A, D. Bain, K. Belt, P.M. Groffman, S.S. Kaushal, R.V. Pouyat. 2007. Cation Chemistry in Baltimore Streams: Another Component of the Urban Stream Syndrome. American Geophysical Union. San Francisco, California. 2007.
- Belt, K.T., S.S. Kaushal, R.V. Pouyat, C.M. Swan, and P.M. Groffman. 2008. Particulate and dissolved organic matter in urban streams: particulate and dissolved organic matter in urban streams: fluxes, spatial patterns and the effects of urban hydrology along the urban stream continuum. Sixth National Monitoring Conference. May

- 18-22. Atlantic City Convention Center and Sheraton Atlantic City. Atlantic City, New Jersey.
- Kaushal, S.S., P.M. Groffman, L.E. Band, C.A. Shields, R.P. Morgan, M.A. Palmer, and K.T. Belt. 2008. Interaction between land use and climate variability amplifies stream nitrate export. May 25-30. 56<sup>th</sup> Annual Meeting of the North American Benthological Society. Salt Lake City, Utah.
- Belt, K.T., S.S. Kaushal, C.M. Swan, R.V. Pouyat, and P.M. Groffman. 2008. Dissolved organic carbon in streams: fluxes, impervious surfaces, and hydrologic drivers along an urban stream continuum. May 25-30. 56<sup>th</sup> Annual Meeting of the North American Benthological Society. Salt Lake City, Utah.
- Bernhardt, E.S., C. Colbert, Siyi Wang, E.B. Sudduth, B.A. Hassett, and S.S. Kaushal. 2008. Effects of urbanization on carbon and nitrogen cycling in stream sediments. May 25-30. 56<sup>th</sup> Annual Meeting of the North American Benthological Society. Salt Lake City, Utah.
- Mayer, P.M., P.M. Groffman, S.S. Kaushal, and E.A. Striz. 2008. Hydrology and hyporheic nitrogen biogeochemistry in a geomorphically degraded urban stream. August 3-8. 93<sup>rd</sup> Annual Meeting of the Ecological Society of America.
- Elmore, A. and S. Kaushal. 2008. Patterns of stream burial due to urbanization in the mid-Atlantic U.S. April 6-10. U.S. International Associate for Landscape Ecology Symposium. Madison, Wisconsin.
- Belt, K.T., W.P. Stack, C. Welty, S.S. Kaushal, and P.M. Groffman. 2008. Urban stream water quality-a product of “urban karst”?
- Mayer, P.M., P.M. Groffman, S.S. Kaushal, and E.A. Striz. 2008. Hydrology and nitrogen biogeochemistry in the hyporheic zone of a geomorphically degraded urban stream. May 23-24.
- Kaushal, S.S., P.M. Groffman, S.E.G. Findlay, K.T. Belt, J.E. Baker, M.A. Palmer, and P.M. Mayer. 2008. Dissolved organic matter and emerging contaminants in urban stream ecosystems. 2<sup>nd</sup> Symposium on Urbanization and Stream Ecology. Salt Lake City, Utah.

#### 4. Papers In Press

- Shields, C.A., L.E. Band, P.M. Groffman, S.S. Kaushal, and G.T. Fisher. Export timing of nitrogen from catchments along an urban-rural gradient in the Chesapeake Bay watershed. *Water Resources Research* (In Press).
- Gift, D., P.M. Groffman, S.S. Kaushal, P.M. Mayer, E.A. Striz. Root biomass, organic

matter and denitrification potential in degraded and restored urban riparian zones. *Restoration Ecology* (In Press).

## 5. Papers In Review

Lookingbill, T.R., S.S. Kaushal, R.H. Gardner, A.J. Elmore, R.P. Morgan, R.H. Hilderbrand, K.N. Eshleman., W.R. Boynton, M.A. Palmer, and W.C. Dennison. 2007. Blurring boundaries in the Potomac River ecosystem. *Urban Ecosystems* (In Review)

Kaushal, S.S., P.M. Groffman, L.E. Band, C.A. Shields, R.P. Morgan, M.A. Palmer, K.N. Eshleman, K.T. Belt, G.T. Fisher, C.M. Swan, and S.E.G. Findlay. 2007. Interaction between urbanization and climate variability amplifies watershed nitrate export in Maryland, U.S.A. *Environmental Science & Technology* (In Review)

Findlay, S.E.G., W.H. McDowell, D.T. Fischer, J. Merriam, M. Daly, M.L. Pace, N. Caraco, S.S. Kaushal. 2007. Inorganic carbon interference with automated measurement of dissolved organic carbon. *Limnology and Oceanography: Methods* (In Review)

Hopfensperger, K.N., S.S. Kaushal, Findlay, S.E.G., and J.C. Cornwell. 2007. Influence of plant communities on denitrification in an urban tidal freshwater wetland of the Potomac River, U.S.A. *Journal of Environmental Quality* (In Review)

Mayer, P.M., P.M. Groffman, E.A. Striz, E.J. Doheny, and S.S. Kaushal. 2007. Nitrogen and carbon dynamics in an urban stream undergoing restoration. *Biogeochemistry* (Submitted)

## 6. Technical Reports

Lewis, W.M., Jr., Saunders J.F., and S. Kaushal. 2000. Use of nitrogen stable isotope signature for nitrate as an indication of contamination in well water subject to septic system influences in Summit County, Colorado. Summit County Water Quality Commission.

## C. Grants and Contracts

### 1. Active Awards

Quantifying the effects of ecosystem restoration on denitrification activity in riparian groundwater and the hyporheic zone of a mid-Atlantic piedmont stream. U.S. Environmental Protection Agency. 2005-2008.

Investigation of stream restoration as a means of reducing nitrogen pollution from rapidly urbanizing coastal watersheds. Sea Grant. 2007-2009.

Investigation of stream restoration as a means of reducing nitrogen pollution from rapidly urbanizing coastal watersheds. Sea Grant Graduate Fellowship. 2007-2009

Collaborative Research: The Effects of Watershed Urbanization on In-Stream Transformation of Organic Nutrients within Running Waters. National Science Foundation. 2007-2010.

Enhanced stormwater monitoring of toxic chemicals in the Chesapeake watershed. U.S. Environmental Protection Agency. 2008-2010

2. Pending

Collaborative Research: Microbial Observatory: The Baltimore Aquatic Microbial Observatory (BAMO): Effects of urbanization on stream denitrifier community composition and functional plasticity. National Science Foundation. 2008-2013

Investigating impacts of headwater stream burial due to land-use change on downstream nitrogen export to Chesapeake Bay. Maryland Sea Grant. 2008-2010.

A study of the effects of land-use gradients on trace metal mobility in urbanizing watersheds. Maryland Sea Grant. 2008-2010.

MRI: Acquisition of Stable Isotope and Inductively Coupled Plasma Mass Spectrometry Instrumentation at the University of Maryland Center for Environmental Sciences. 2008.

3. Expired in 2007

Investigation of the effects of increased salinization from deicer use on increased transport of nitrogen in streams. Maryland Water Research Center. 2006-2007.

Research supporting evaluation and restoration of Dyke Marsh. National Park Service, Dept. of the Interior. 2005-2007.

#### **D. Invited Seminars and Presentations**

Kaushal, S. 2001. Fate and transport of nitrogen in minimally disturbed montane streams of the Colorado Rockies. Institute of Ecosystem Studies, Millbrook, NY.

Kaushal, S.S. 2004. Sources and transformations of nutrients in aquatic systems. Department of Soil and Water Science, University of Florida, Gainesville, FL.

Kaushal, S.S. 2004. Sources and transformations of nitrogen in watersheds. University of

- Maryland Center for Environmental Science. Appalachian Laboratory, Frostburg, MD.
- Kaushal, S.S. 2004. Influence of land use on sources and transformations of nitrogen in streams. Environmental Biocomplexity and Biogeochemistry Seminar Series. Cornell University, Ithaca, NY.
- Kaushal, S.S. 2005. Ecosystem restoration and denitrification in a coastal Stream of the Chesapeake Bay watershed. American Geophysical Union, New Orleans, LA. (Invited).
- Kaushal, S.S. 2005. Influence of land use on sources and transformations of nitrogen in streams. Center for Urban Environmental Research and Education. University of Maryland, Baltimore County, Baltimore, MD.
- Kaushal, S.S. 2005. Successes and challenges in removing nitrogen from streams in the Chesapeake Bay watershed. Department of Civil and Environmental Engineering, Cornell University, Ithaca, NY.
- Kaushal, S.S., and Peter M. Groffman. 2005. Sources of nitrogen to Baltimore streams. Baltimore Ecosystem Study LTER, Spring Hydrology Meeting, Baltimore, MD.
- Mayer, P.M., E. Striz, P.M. Groffman, S.S. Kaushal, E. Doheny. 2005. Stream ecosystem restoration as a means of reducing nitrogen pollution entering Chesapeake Bay. EPA Chesapeake Bay Program Office, Annapolis, MD.
- Mayer, P.M., E. Striz, P.M. Groffman, S.S. Kaushal, E. Doheny. 2005. Stream ecosystem restoration as a means of reducing nitrogen pollution entering Chesapeake Bay. Baltimore County Department of Environmental Protection, Regulation, and Management, Baltimore, MD.
- Kaushal, S.S. and P.M. Groffman. 2005. Successes and challenges in removing nitrogen in coastal streams of the Chesapeake Bay watershed. Baltimore Ecosystem Study LTER Annual Meeting, Baltimore, MD.
- Band, L.E., C. Tague, P.M. Groffman, S. Kaushal, and S. Kenworthy. 2005. Coupling of Hydrologic and Ecosystem Nutrient Cycling in Forest and Suburban Catchments. American Geophysical Union, San Francisco, CA. (Invited)
- Kaushal, S.S. 2006. Successes and challenges in removing nitrogen from coastal streams of the Chesapeake Bay. Integrated Application Network Chesapeake Bay Seminar Series. [http://ian.umces.edu/mp3s/kaushal\\_cbss\\_feb\\_2006.mp3](http://ian.umces.edu/mp3s/kaushal_cbss_feb_2006.mp3). Annapolis, MD.
- Kaushal, S.S., K.T. Belt, W.P. Stack. R.V. Pouyat, P.M. Groffman, and S.E.G. Findlay.

2006. Variations in Heavy Metals Across Urban Streams. American Geophysical Union. Baltimore, MD. (Invited Speaker)
- Kaushal, S.S. 2006. Influence of land use on sources and transformations of nitrogen in streams. UMCES Chesapeake Biological Laboratory. Solomons, MD.
- Kaushal, S.S. 2006. Successes and Challenges in Removing Nitrogen from Coastal Streams of the Chesapeake Bay. Aquatic Ecology at UMBC (GES 699). Baltimore, MD.
- Kaushal, S.S. 2006. Influence of land use on sources and transformations of nitrogen in streams. Duke University Nicholas School for the Environment. Durham, NC.
- Kaushal, S.S. 2006. Influence of land use on sources and transformations of nitrogen in streams. U.S. Geological Survey National Center. Reston, VA.
- Kaushal, S.S. and S.T.A. Pickett. 2006. Baltimore Ecosystem Study: Diagnosing and treating problems in urban streams: examples from the Baltimore LTER site. Baltimore Eco Festival. Baltimore, MD
- Kaushal, S.S. 2006. Influence of land use on sources and transformations of nitrogen in streams. UMCES Horn Point Laboratory. Cambridge, MD.
- Kaushal, S.S. 2006. Influence of land use on sources and transformations of nitrogen in streams. West Virginia University Biology Department. Morgantown, WV.
- Kaushal, S.S. 2006. Increased salinization of fresh water in the northeastern U.S. The Freshwater Society. St. Cloud, MN.
- Kaushal, S.S. 2006. Successes and Challenges in Removing Nitrogen from Coastal Streams of the Chesapeake Bay. Washington DC Science Writers Association. Frostburg, MD.
- Kaushal, S.S. 2006. Successes and Challenges in Removing Nitrogen from Coastal Streams of the Chesapeake Bay. Stream Ecology (MEES 698Q). Frostburg, MD.
- Kaushal, S.S. 2006. Nutrient Spiraling. Stream Ecology (MEES 698Q). Frostburg, MD.
- Kaushal, S.S. 2006. P.M. Groffman, P.M. Mayer, E. Striz, E.J. Doheny, and and A.J. Gold. Effects of stream restoration on denitrification at the riparian-stream interface of an urbanizing watershed of the mid-Atlantic U.S. Mine bank Run Annual Investigators Meeting. Baltimore, MD.
- Kaushal, S.S. 2006. Successes and Challenges in Removing Nitrogen from Coastal Streams of the Chesapeake Bay. Water in the Urban Environment at UMBC (GEOG 302B). Baltimore, MD.

- Kaushal, S.S., P.M. Groffman, and L.E. Band. 2006. Land use, climate variability, and transport of inorganic and organic nitrogen across years. Baltimore Ecosystem Study LTER Quarterly Meeting. Baltimore, MD.
- Kaushal, S.S. 2006. Increased salinization of fresh water in the northeastern U.S. Maryland Science Center. Baltimore, MD.
- Kaushal, S.S. 2006. Increased salinization of fresh water in the northeastern U.S. NOAA/Sea Grant Research Experience for Teachers (RET) Program. Frostburg, MD.
- Kaushal, S.S. 2006. Using stream restoration to reduce nitrogen pollution from urbanizing Maryland watersheds. Maryland Department of Natural Resources (DNR) Restoration Fair. Annapolis, MD.
- Kaushal, S.S. 2006. P.M. Groffman, P.M. Mayer, E. Striz, E.J. Doheny, and A.J. Gold. Effects of stream restoration on denitrification at the riparian-stream interface of an urbanizing watershed of the mid-Atlantic U.S. Chesapeake Bay Scientific and Technical Advisory (STAC) Committee Responsive Workshop. Chesapeake Bay Program. Patuxent Wildlife Center, Laurel, MD.
- Kaushal, S.S. 2007. Influence of land use change on nitrogen dynamics in watersheds. Department of Environmental Science and Technology. University of Maryland. College Park, Maryland.
- Kaushal, S.S. 2007. Successes and Challenges in Removing Nitrogen from Coastal Streams of the Chesapeake Bay. Chesapeake Biological Laboratory Research Experience for Undergraduates program sponsored by Maryland Sea Grant. Solomons, MD.
- Kaushal, S.S. 2007. Influence of land use change on nitrogen dynamics in watersheds. Maryland Sea Grant. Maryland Sea Grant College. College Park, Maryland.
- Kaushal, S.S. 2007. Successes and Challenges in Removing Nitrogen from Urbanizing Watersheds of the Chesapeake Bay. Department of Biological and Environmental Engineering. Cornell University. Ithaca, New York.
- Kaushal, S.S. 2007. Influence of land use, climate variability, and stream restoration on nitrogen dynamics in watersheds. Department of Geosciences. University of Nebraska. Lincoln, Nebraska.
- Kaushal, S.S. 2007. Successes and Challenges in Removing Nitrogen from Urbanizing Watersheds of the Chesapeake Bay. Baltimore City Stream Restoration Workshop. U.S. Geological Survey. Baltimore, Maryland.

## **E. Symposia Organized/Chaired for Professional Meetings**

Mayer, P.M., Williams, J., Kaushal, S.S. and P.M. Groffman (Co-chairs). 2005. Linking the practice of stream restoration with the science of stream ecology. Organized Oral Session. Ecological Society of America. Portland, OR.

S.S. Kaushal (Co-panel member with P.M. Groffman, L.E. Band, P.M. Mayer, E. Striz). 2006. Chesapeake Bay Scientific and Technical Advisory Committee (STAC) Responsive Workshop: Role of stream restoration/protection and wetland enhancement in nutrient and sediment reduction.

## **F. Active Memberships in Professional Societies**

Ecological Society of America  
American Geophysical Union  
Society of International Limnology

## **G. Other Professional Recognition**

1. Editorships

2. Awards

Best Poster for Pure and Applied Research. 1999. North American Benthological Society.

Editor's Choice Award. Chin, G.H. 2005. Environmental Science. *Science* 309: 2139.

3. Peer Review Activities

a. Proposals Reviewed

2006: USDA National Research Initiative Hatch Proposal (1), NSF Division of Ecosystem Biology Proposals (2)

2007: NSF Division of Ecosystem Biology Proposals (1), Ohio Sea Grant (1)

b. Articles Reviewed:

*Biogeochemistry* (6),

*Water Resources Research* (2),

*Journal of Environmental Quality* (1),

*Aquatic Ecosystems: Interactivity of Dissolved Organic Matter*

(Eds. Findlay and Sinsabaugh) (1),

*Water, Air, and Soil Pollution* (1),

*Teaching Issues and Experiments in Ecology* (1),

*Ecological Applications* (2),

*Ecosystems* (1)  
*Organic Geochemistry* (1)  
*Aquatic Sciences* (1)  
*Limnology and Oceanography* (2)  
*Northeastern Naturalist* (1)  
*Wetlands* (1)  
 Annual Review of Conservation and the Environment (1)

2006: Biogeochemistry (2), Wetlands (1), Northeastern Naturalist (1),  
 Oecologia (1), Ecological Applications (1), Aquatic Sciences (1), U.S.  
 Geological Survey (1)

2007: Ecological Applications (1), Organic Geochemistry (1),  
 Biogeochemistry (2), Ecosystems (1), Annual Review of Conservation and the  
 Environment (1)

## V. Teaching and Training

### A. University System of Maryland Courses Taught

Course No.	Title	Campus	Semester
MEES698Q	APPLIED ENV CHEM (Team Taught Lab/Lecture Course, 3 Credits, 6 students)	UMCES AL	Spring 2006
MEES698Q	STREAM ECOLOGY (Guest Lecturer)	UMCES AL	Fall 2006
GES 699	AQUATIC ECOLOGY (Guest Lecturer)	UMBC	Fall 2006
GEOG 302B	WATER IN URBAN ENV (Guest Lecturer)	UMBC	Summer 2006

Courses taught outside the University System of Maryland

Course No.	Title	University	Semester
HORT 440	RESTORATION ECOL (Led field trip and Guest Lecturer)	CORNELL UNIV	Fall 2006
420.639.51	LANDSCAPE ECOLOGY (Field Trip and Guest Lecturer)	JOHNS HOPKINS	Fall 2007
BEE 371	PHYSICAL HYDROLOGY FOR ECOSYSTEMS (Guest Lecturer)	CORNELL UNIV	Spring 2007

### B. Graduate Students Supervised as Major Professor

1. Degrees Conferred (2007)

Carolyn Klocker	M.S.	MEES, UMCES AL
Kristy Hopsfenperger	Ph.D.	MEES, UMCES AL (Co-supervised)

2. Students Currently Supervised or Co-supervised

Tamara Newcomer	M.S.	MEES, UMCES CBL
Katie Delaney	M.S.	MEES, UMCES CBL
Gwendolyn Stanko	Ph.D.	MEES, UMBC
Michael Pennino	Ph.D.	MEES, UMBC

3. Current Graduate Student Committee Memberships

Ken Belt	Ph.D.	MEES, UMBC
Rebecca Fox	Ph.D.	MEES, UMCES HPL
Carrie DePalma	MS	MEES, UMBC
Peter Bogush	MS	MEES, UMBC
Robin Van Meter	Ph.D.	MEES, UMBC
Melanie Harrison	Ph.D.	MEES, UMBC