

Sheila F. Christopher
Email: sheila.christopher@nd.edu
574-217-0155 (w)

Research Interests

Watershed Hydrology, Biogeochemistry, and Soil Science; Linkages between terrestrial soil solute cycling, hydrologic solute transport through watersheds, and stream chemistry; Climate and land use change effects on biogeochemical and hydrological processes

Professional Preparation:

B.S.	Allegheny College, Meadville, PA	Biology	1996
Ph.D.	SUNY-Environmental Science and Forestry, Syracuse, NY	Env. And Forest Biology	2004
Post-Doc.	Hokkaido University, Nayoro, Japan	Field Science Center Northern Biosphere	2004-05
Post-Doc.	The Ohio State University, Columbus, OH	Env. & Natural Resources	2005-06

Appointments:

2012-present Research Assistant Professor, University of Notre Dame
2009-2012 Research Scientist, Virginia Tech
2006-2009: Research Scientist, Buffalo State College,
2005-2006 Postdoctoral Researcher, The Ohio State University
2004-2005 Postdoctoral Fellow, Hokkaido University,
Japanese Society for the Promotion of Science

Products- 5 most relevant:

Inamdar, S.P., **S.F. Christopher**, and M.J. Mitchell. 2004. Export of dissolved organic carbon and nitrate during storm events in a glaciated forested catchment in New York, USA. *Hydrological Processes* 18: 2651-2661.

Christopher, S.F., M.J. Mitchell, M.R. McHale, E.W. Boyer, D.A. Burns, and C. Kendall. 2008. Factors controlling nitrogen release from two forested catchments with contrasting hydrochemical responses. *Hydrological Processes* 22: 46-62.

Christopher, S.F., and R. Lal. 2007. Nitrogen Management Effects Carbon Sequestration in North American Cropland Soils. *Critical Reviews in Plant Sciences* 26: 45-64.

Christopher, S.F., R. Lal, and U. Mishra. 2009. Long-term no-till effects on carbon sequestration in the Midwestern U.S. *Soil Science Society of America Journal* 73: 207-216.

Kroger, R., J.M. Prince Czarnecki, J.L. Tank, **S.F. Christopher**, J.D. Witter. 2015. Implementing innovative drainage management practices in the Mississippi River Basin to enhance nutrient reductions. *Journal of American Water Resources Association*, DOI: 10.1111/1752-1688.12342.

Products- 5 additional:

- Park, J., M.J. Mitchell, P.J. McHale, **S.F. Christopher**, M.R. McHale, D.J. Raynal, and T.P. Myers. 2003. Interactive effects of changing climate and atmospheric deposition on N and S biogeochemistry in a forested watershed of the Adirondack Mountains, New York State. *Global Change Biology* 9: 1-18.
- Christopher, S.F.**, B.D. Page, M.J. Mitchell, and J.L. Campbell. 2006. Contrasting stream water NO₃⁻ and Ca²⁺ in two nearly adjacent catchments: The role of soil Ca and forest vegetation. *Global Change Biology* 12: 364-381.
- Mitchell, M.J., K. Piatek, **S.F. Christopher**, B. Mayer, C. Kendall, and P. McHale. 2006. Solute sources in stream water during consecutive fall storms in a northern hardwood forest watershed: A combined hydrological, chemical and isotopic approach. *Biogeochemistry* 78: 217-246.
- Campbell, J.L., L.E. Rustad, E.W. Boyer, **S.F. Christopher**, C.T. Driscoll, I.J. Fernandez, P.M. Groffman, D. Houle, J. Kieckbusch, A.H. Magill, M.J. Mitchell, and S.V. Ollinger. 2009. Consequences of climate change for biogeochemical cycling in forests of eastern North America. *Canadian Journal of Forest Research* 39: 264-284.
- Christopher, S.F.** , Schoenholtz, S.H., Nettles, J. 2015. Water Quantity Implications of Regional-Scale Switchgrass Production in the Southeastern U.S. *Biomass and Bioenergy* 83: 50-59.

Synergistic Activities:

- Invited to contribute to the report by Michelle Perez, “Water Quality Targeting Success Stories: Achieving measurably cleaner water through U.S. farm conservation watershed projects”, World Water Institute, January 2016.
- Invited Outreach Demonstration of soil and water quality sampling and analysis for our funded USDA RCPP project, Indiana Watershed Initiative Soil Health Partnership Summit Jan 21-22 2016, Indianapolis, IN.
- Field Day at Shatto Ditch Watershed describe our USDA Regional Conservation Partnership Program (RCPP) project to area farmers and resource conservationists with Dan Towery, Field Manger for the Soil Health Partnership (<http://soilhealthpartnership.org/index.html>) who specializes in continuous no-till, cover crops and soil health. September 16, 2015.
- Working Group Member: “Beginning Regional Conservation Partnership Program (RCPP) Watershed Projects,” 5th Annual Leadership for Midwestern Watersheds Meeting, January 21-22, 2015, Sycamore, IL.
- Working Group Member: “Healthy Soils for Healthy Waters” Workshop,” The Ohio State University, September 14-15, 2014, Columbus, OH.