

Heidi M. Peterson

International Plant Nutrition Institute
Phosphorus Program Director
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Education

Ph.D. in Biosystems and Agricultural Engineering, 2011, University of Minnesota, St. Paul, Minnesota
Estimating Renewable Water Flux from Landscape Features

M.S. in Agronomy, 2003, Purdue University, West Lafayette, Indiana
Soils and Onsite Wastewater Treatment System Performance in Northern Indiana

B.S. in Natural Resources and Environmental Science, 2000, Purdue University, West Lafayette, Indiana

Experience Overview

International Plant Nutrition Institute, 2017 – Present
Phosphorus Program Director

Department of Bioproducts & Biosystems Engineering, University of Minnesota, 2014 – Present
Adjunct Assistant Professor

Minnesota Department of Agriculture, 2013 - 2017
Research Scientist 3 - Impaired Waters Technical Coordinator, Pesticide and Fertilizer Management Division

Department of Bioproducts & Biosystems Engineering, University of Minnesota, 2011 - 2013
Post-Doctoral Research Associate with emphasis on watershed scale agricultural phosphorus fluxes.
Advisor: Lawrence Baker

Plant and Earth Science Department, University of Wisconsin – River Falls, 2010 – 2013
Associate Lecturer for Soil and Water Conservation and Introduction to Soil Science.

Department of Bioproducts & Biosystems Engineering, University of Minnesota, 2007 – 2011
Research Assistant with focus on statewide water resources sustainability estimates.
Advisor: John Nieber

Delta Environmental Consultants, Shoreview, Minnesota, 2003 – 2007
Project manager for environmental soil and water remediation activities.

Department of Agronomy, Purdue University, 2001 – 2003
Research Assistant to develop GIS onsite wastewater treatment system spatial mapping methodology.
Teaching Assistant for Introductory Soil Science and Soils and Land Use.
Advisor: Brad Lee

USDA-ARS National Soil Erosion Laboratory, 2001
Evaluator for the release of RUSLE2, soil erosion estimator.
Advisor: Glenn Weesies

Awards and Honors

Minnesota Agricultural and Rural Leadership (MARL) Class IX, 2016-2018
International Network of Research on Coupled Human and Natural Systems (CHANS) Fellow, 2013
Institute on the Environment Boreas Leadership Program, University of Minnesota, 2011
University of Minnesota Chapter of Sigma Xi, Charles and Dorothy Andrew Bird Award, 2010
University of Minnesota Council of Graduate Students Travel & Education Grant, 2010
University of Minnesota Graduate and Professional Student Assembly (GAPSA) Scholarly Travel Grant, 2010
Sigma Xi, Purdue University Poster Competition - Honorable Mention, 2002
Indiana Environmental Health Association's Committee on Professional Education Development Scholarship, 2002
Purdue University Department of Agronomy Scarseth Presentation Award, 2001

Professional Affiliation and Service Roles

American Society of Agronomy
 Women in Agronomy, Crops, Soils & Environmental Science Committee Appointment
American Society of Agricultural and Biological Engineers
 NRES-07 Nomenclature Committee (NRES-21, Hydrology Group Representative)
 X621 Guidelines for Calibrating, Validating, and Evaluating Hydrologic and Water Quality Models
Soil and Water Conservation Society
Sigma Xi Scientific Research Society
Alpha Zeta Agricultural Honor Society
Mortar Board Senior Honor Society
Gamma Sigma Delta Honor Society

Select Publications

Peterson, H.M., L.A. Baker, J.S. Ulrich, D. Bruening, J.L. Nieber and B.N. Wilson. 2016. Agricultural P Balance Calculator- A tool for watershed planning. *J. Soil Water Conserv.* doi: 10.2489/jswc.72.4.395

Lenhart, C., B. Gordon, J. Gamble, D. Current, N. Ross, L. Herring, J. Nieber, and **H. Peterson**. 2016. Design and Hydrologic performance of a tile drainage treatment wetland in Minnesota, USA. *Water*. doi: 10.3390/w8120549

Powers, S.M., T.P. Burt, N. Chan, J.J. Elser, P.M Haygarth, N.J. K. Howden, H.P. Jarvie, **H.M. Peterson**, J. Shen, F. Worrall, and A.N. Sharpley. 2016. Long-term accumulation and transport of anthropogenic phosphorus in three river basins. *Nature Geoscience*. doi:10.1038/ngeo2693

Minnesota Department of Agriculture. 2015. Minnesota Nitrogen Fertilizer Management Plan. St. Paul, Minnesota.

Haygarth, P.M., H.P. Jarvie, S.M. Powers, A.N. Sharpley, J.J. Elser, J. Shen, **H.M. Peterson**, N.I. Chan, N.J.K. Howden, T. Burt, F. Worrall, F. Zhang and X. Liu. 2014. Sustainable P management and the need for a long-term perspective: The legacy hypothesis. *Environ. Sci. Technol.* doi.:10.1021/es502852s

Peterson, H.M., J.L. Nieber, R. Kanivetsky, and B. Shmagin. 2013. Regionalization of landscape characteristics to map hydrologic variables. *J. Hydroinformatics*. doi:10.2166/hydro.2013.051

Peterson, H.M., J.L. Nieber, R. Kanivetsky, and B. Shmagin. 2012. Assessing water resources sustainability: application of the watershed characteristics approach. *Water Res. Management*. doi:10.1007/s11269-012-0232-9

Peterson, H.M., J.L. Nieber, and R. Kanivetsky. 2011. Hydrologic regionalization to assess anthropogenic changes. *J. Hydrology*, 408: 212-225. doi:10.1016/j.jhydrol.2011.07.042.

Lenhart, C., **Peterson, H.**, and J. Nieber. 2011. Increased streamflow in agricultural watersheds of the midwest: implications for management. *Watershed Science Bulletin*. Spring Issue.

Stout, H.M. and B.D. Lee. 2004. Land use planning exercise using geographic information systems and digital soil surveys. *J. Natural Resource and Life Science Education*. 33: 11-15.