

Bonnie L. Keeler, Ph.D.

Assistant Professor, Humphrey School of Public Affairs
Center for Science, Technology, and Environmental Policy
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Education

University of Minnesota, Twin Cities Ph.D., 2013
Ph.D. in Natural Resources, Track: Economics, Society, Policy, & Management
Minor in Geographic Information Science
Dissertation: Water and wellbeing: Advances in measuring the value of water quality to people
Honors: National Science Foundation Graduate Research Fellow, Environmental Protection Agency STAR Fellow, Interdisciplinary Doctoral Fellow, Nominated Best Dissertation by the Natural Resources Science & Management program.

University of Minnesota, Twin Cities M.S., 2007
M.S., Ecology, Evolution, and Behavior

The Colorado College, Colorado Springs, CO B.A., 2001
Major in Biology, Minor in Central American Culture and Society
Honors: Magna cum Laude, Distinction in Biology, Phi Beta Kappa, Barnes Science Scholar (full tuition scholarship), Biedelman award for Most Promising Ecologist

Positions Held

Assistant Professor, Humphrey School of Public Affairs 2018 - present
Center for Science, Technology, and Environmental Policy
University of Minnesota

Natural Capital Project, Institute on the Environment 2014-2018
Program Director (2016 - 2018) & Lead Scientist (2014-2016)
The University of Minnesota, Stanford University, World Wildlife Fund, The Nature Conservancy

University of Minnesota, Minneapolis, MN 2009-2013
NSF Graduate Research Fellow, EPA STAR Fellow, Interdisciplinary Doctoral Fellow

St. Olaf College, Northfield, MN 2013
Visiting Faculty in Environmental Studies

Hamline University, St. Paul, MN 2008-2009
Visiting Faculty in Biology and Environmental Studies

Center for Science, Technology, and Environmental Policy 2008-2009
Project Manager, Climate & Governance
The Hubert H. Humphrey School of Public Affairs

Heinz Center for Science, Economics, and the Environment, Washington D.C. 2007-2008
Research Associate, Environmental Reporting Program

Marine Biological Laboratory, Woods Hole, MA 2003-2004
Research Assistant, Ecosystems Center

USGS Forest and Rangeland Ecosystem Science Center, Corvallis, OR 2002-2003
Research Technician, Oregon State University

Publications

Keeler, B.L. Progress and paradoxes in estimating the benefits of clean water policies. *In review in Annual Review of Resource Economics*. Vol 12..

K. Ehrman-Solberg, B.L. Keeler, K. Derickson, K. Delegard. Mapping a Path Towards Equity: Reflections on a Co-creative Community Praxis. *In review in GeoJournal*.

Ahlering, M., M. Cornett, K. Blann, M. White, C. Lenhart, C. Dixon, M. Dudash, L. Johnson, **B.L. Keeler**, B. Palik, J. Pastor, R. Sterner, D. Shaw, R. Biske, N. Feeken, J. Manolis, H. Possingham. A Conservation Science Agenda for a Changing Upper Midwest and Great Plains, USA. *In review in Conservation Science and Practice*.

Young, C., L. Chambliss, D. Gordon, **B.L. Keeler**, S. Montfort, H. Possingham, E. Sterling, T. Ticktin, A. Travis. Strengthening the conservation impact of academic institutions. *In review in Conservation Letters*.

Li, R., H. Zheng, C. Zhang, **B.L. Keeler**, L. Samberg, C Li, S. Polasky, Y Ni, Z Ouyang. Rural household livelihood and plantation dependence in the central mountainous region of Hainan Island, China: Implications for poverty alleviation. *In review in Forests*.

Taguchi, V., P. Weiss, J. Gulliver, M. Klein, R. Hozalski, L. Baker, J. Finlay, **B.L. Keeler**, J. Nieber. It's Not Easy Being Green: Overcoming Unintended Consequences of Green Infrastructure. *In Press in Water*.

Graves, R., **B.L. Keeler**, M. Hamann, E. Kutsckea, C. Nootenboom. 2019. A Social-Ecological Approach to Architecture and Planning. *Journal of Architecture and Construction*. 2:33-44.

Sterner, R. **B.L. Keeler**, S. Polasky, R. Poudel, K. Rhude, M. Rogers. 2019. Ecosystem services of the earth's largest freshwater lakes: Social and ecological drivers. *Ecosystem Services*. 41: 101046
<https://doi.org/10.1016/j.ecoser.2019.101046>

Keeler, B.L., R. Noe, J. Gourevitch, P. Hawthorne, K. Johnson, B. Dalzell. 2019. Putting people on the map improves the prioritization of ecosystem services. [Frontiers in Ecology and the Environment](#).
<https://doi.org/10.1002/fee.2004>.

Barnes, M., M. Donahue, **B.L. Keeler**, L. Shelby. 2019. Characterizing nature and participant experience in studies of nature-immersion for mental health. *Frontiers in Psychology*. 9:2617.

Keeler, B.L., M. Hamann, P. Hamel, T. McPhearson, M. Donahue, K. Meza Prado, K. Arkema, G. Bratman, K. Brauman, J. Finlay, A. Guerry, S. Hobbie, J. Johnson, G. MacDonald, R. McDonald, N. Neverisky, S. Wood. 2019. Social-ecological and technological factors moderate the value of urban nature. *Nature Sustainability*, 2(1), 29.

- Donahue, M.D., **B.L. Keeler**, S.A. Wood, D. Fisher, Z. Hamstead, T. McPhearson. 2018. Using social media to understand drivers of urban park visitation in the Twin Cities, MN. *Landscape and Urban Planning*. 175:1-10.
- Gourevitch, J., **B.L. Keeler**, T. Ricketts. 2018. Determining socially optimal rates of nitrogen fertilizer application. *Agriculture, Ecosystems and Environment*. 254: 292-299.
- Noe, R., **B.L. Keeler**, M. Kilgore, S. Taff, S. Polasky. 2017. Mainstreaming ecosystem services in state-level conservation planning: progress and future needs. *Ecology and Society*. 22:4. <https://doi.org/10.5751/ES-09581-220404>.
- Keeler, B.L.**, R. Chaplin-Kramer, A.D. Guerry, P.F.E. Addison, C. Bettigole, I.C. Burke, L. Chambliss, C. Darimont, B. Gentry, D.R. Gordon, J.J. Hellmann, P. Kareiva, S. Monfort, L. Olander, H.P. Possingham, T. Profeta, C. Schlotterback, E. Sterling, T. Ticktin, A.J. Travis, B. Vira, C. Young. 2017. Society is ready for a new kind of science – Is Academia? *BioScience*. Vol 67:591–592. <https://doi.org/10.1093/biosci/bix051>.
- Keeler, B.L.**, J. Gourevitch, S. Polasky, F. Isbell, C. Tessum, J. Hill, J. Marshall. 2016. The social cost of nitrogen. *Science Advances*. Vol 2:e1600219. <https://doi: 10.1126/sciadv.1600219>.
- Gourevitch, J., P. Hawthorne, **B.L. Keeler**, C. Beatty, M. Greve, M. Verdone. 2016. Optimizing investments in national-scale forest landscape restoration in Uganda to maximize multiple benefits. *Environmental Research Letters*. Vol 11 <https://doi:10.1088/1748-9326/11/11/114027>.
- MacDonald, G., H. Jarvie, P. Withers, D. Doody, **B. Keeler**, P. Haygarth, L. Johnson, R. McDowell, M. Miyittah, S. Powers, A. Sharpley, J. Shen, D. Smith, M. Weintraub, T. Zhang. 2016. Guiding phosphorus stewardship for multiple ecosystem services. *Ecosystem Health and Sustainability*. Vol 2:e01251.
- Noe, R.L., H. Heavenrich, E. Nachman, **B.L. Keeler**, D. Hernandez, J. Hill. 2016. Assessing uncertainty in the profitability of prairie biomass production with ecosystem service compensation. *Ecosystem Services*. Vol 21:103-108.
- Johnson, K.J, B. J. Dalzell, M. Donahue, J. Gourevitch, D. Johnson, G. Karlovits, **B.L. Keeler**, J. Smith. 2016. Conservation Reserve Program (CRP) lands provide ecosystem service benefits that exceed land rental costs. *Ecosystem Services*. Vol 18:175-185.
- Guerry, A.D., S. Polasky, J. Lubchenco, R. Chaplin-Kramer, G.C. Daily, R. Griffin, M. Ruckelshaus, I.J. Bateman, A. Duraipappah, T. Elmqvist, M.W. Feldman, C. Folke, J. Hoekstra, P.M. Kareiva, **B.L. Keeler**, S. Li, E. McKenzie, Z. Ouyang, B. Reyers, T.H. Ricketts, J. Rockström, H. Tallis, B. Vira. 2015. Natural capital informing decisions: from promise to practice. *Proceedings of the National Academy of Sciences*. 12.24: 7348-7355
- Polasky, S., B. Bryant, P. Hawthorne, J. Johnson, **B.L. Keeler**, D. Pennington. 2015. Inclusive Wealth as a Metric of Sustainable Development. *Annual Review of Environment and Natural Resources*. Vol. 40: 445-466.
- Keeler, B.L.**, S. Wood, S. Polasky, C. Kling, C. Filstrup, J. Downing. 2015. Recreational demand for clean water: Evidence from geotagged photographs by visitors to lakes. *Frontiers in Ecology and the Environment*. 10.1890/140124.
- Kelly, B., **B.L. Keeler**, G. Helm, G. Krantzberg, T. Lyon, W. Mabee. 2015. Energy as a driver of change in the Great Lakes-St. Lawrence River basin. *The Journal of Great Lakes Research*. 41:59-68.
- Keeler, B.L.** and S. Polasky. 2014. Land-use change and costs to rural households: A case study in

groundwater nitrate contamination. *Environmental Research Letters* 9:074002.

Guswa, A.J., K. Brauman, C. Brown, P. Hamel, **B.L. Keeler**, S. Stratton Sayre. 2014. Ecosystem Services: Challenges and Opportunities for Hydrologic Modeling to Support Decision Making. *Water Resources Research*. 50: 4535–4544.

Keeler, B.L., B. Krohn, T. Nickerson, J. Hill. 2013. A comparison of U.S. federal agency bioenergy feedstock production scenarios for achieving Renewable Fuel Standard (RFS2) biofuel volumes. *Environmental Science and Technology* 47: 10095–10101.

Kovacs, K, S. Polasky, E. Nelson, **B.L. Keeler**, D. Pennington, A. Plantinga, S. Taff. 2013. Evaluating the return in ecosystem services from investment in public land acquisitions. *PLoS ONE* 8(6): doi:10.1371/journal.pone.0062202.

Keeler, B.L., S. Polasky, K. Brauman, K. Johnson, J. Finlay, A. O’Neill, K. Kovacs, B. Dalzell. 2012. Linking water quality and human well-being for improved assessment and valuation of ecosystem services. *The Proceedings of the National Academy of Sciences* doi:10.1073/pnas.1215991109.

Polasky, S., K. Johnson, **B.L. Keeler**, K. Kovacs, E. Nelson, D. Pennington, A. Plantinga, J. Withey. 2012. Are investments to promote biodiversity conservation and ecosystem services aligned? *Oxford Review of Economic Policy* 28:139-163.

Polasky, S., S. Carpenter, C. Folke, and **B.L. Keeler**. 2011. Decision-making under great uncertainty: environmental management in an era of global change. *Trends in Ecology and Evolution* 26: 398-404.

Keeler, B.L., Hobbie, S.E. and Kellogg, L.E., 2009. Effects of long-term nitrogen addition on microbial enzyme activity in eight forested and grassland sites: Implications for litter and soil organic matter decomposition. *Ecosystems* 12:1-15.

Sinsabaugh, R., C.Lauber, M. Weintraub, B. Ahmed, S. Allison, C. Crenshaw, A. Contosta, D. Cusack, S. Frey, M. Gallo, T. Gartner, S. Hobbie, K. Holland, **B.L. Keeler**, J. Powers, M. Stursova, M. Waldrop, M. Wallenstein, D. Zak, L. Zeglin. 2008. Stoichiometry of soil enzyme activity at a global scale. *Ecology Letters*. 13: 1-13.

Non Peer-Reviewed Works - Reports, Blogs, Essays

Klein, M., **B.L. Keeler**, K. Derickson, F. Jacobs, K. Swift. 2020. Sharing in the benefits of a greening city. A policy toolkit to address the intersections of housing and environmental justice. Available: <https://create.umn.edu/toolkit/>

Noe, R.R; **B.L. Keeler**, T.E. Twine, KA Brauman, T Mayer, M Rogers. 2019. Climate change projections for improved management of infrastructure, industry, and water resources in Minnesota. University of Minnesota Digital Conservancy, <http://hdl.handle.net/11299/209130>.

Keeler, B.L. 2019. It’s time for a more inclusive earth day. Commentary. <https://www.hhh.umn.edu/news/it%E2%80%99s-time-more-inclusive-earth-day>

Davenport, M.A. and **Keeler, B.L.** 2018. The value of Minnesota Water: A resident survey. Center for Changing Landscapes, University of Minnesota, St. Paul, MN, pp. 8. <https://www.changinglandscapes.umn.edu/publications>

Keeler, B.L. 2017. A new NatCap software tool supports landscape restoration around the globe. <http://environment.umn.edu/news/new-natcap-software-tool-supports-landscape-restoration-around-globe/>

Keeler, B.L. 2016. What is clean water worth? Open Rivers. Summer 2016 Issue 3. Available: <http://editions.lib.umn.edu/openrivers/article/what-is-clean-water-worth/>

Keeler, B.L. 2015. Online photos offer evidence of clean water. <http://environment.umn.edu/discovery/natural-capital-project/online-photos-offer-evidence-for-the-value-of-clean-water/>

Keeler, B.L., L. Nguy, L. Hollenkamp, S. Kelley. 2009. Governance options for carbon cap and trade revenue. Report to the Minnesota Legislature. Minneapolis, MN: Center for Science, Technology, and Public Policy, University of Minnesota. Minnesota Publication 09-0356.

Hopp, J., **B.L. Keeler**, R. Garritt, and L. Deegan. 2003. Distribution of benthic chlorophyll among habitats in salt marsh tidal creeks. Biological Bulletin 205:259.

Grants Awarded

“Measuring What Matters: Co-Developing Metrics for Assessing the Full Suite of Benefits of Outdoor Heritage Fund Investments”. R. Noe (PI), G. Host (Co-PI), L. Johnson (Co-PI), E. Lonsdorf (Co-PI), B. Keeler (Co-PI). 1/30/2019 to 2/1/2020. \$131,057.

“Community-engaged scholarship in the Mississippi River corridor” B. Keeler (PI), K. Derickson (Co-PI). Sponsor: The McKnight Foundation. 12/1/2018 to 12/1/2020. \$100,000.

“Institutionalizing interdisciplinarity: A cross-institutional network to synthesize what is working (and not) in the pursuit of transformative sustainability science.” B. Keeler (PI). Sponsor: National Academies Keck Futures Initiative (NAKFI). 11/1/2018 to 10/31/2020. \$500,000.

“Investigating the resilience of Minnesota’s freshwater resources and the communities that depend upon them” B. Keeler (PI), M. Davenport (Co-PI), and K. Lutsky (Co-PI). Sponsor: Minnesota Sea Grant. 9/1/18 to 8/31/20. \$100,000.

“The value of nature and the nature of values.” B. Keeler (PI). Sponsor: University of Minnesota, Institute on the Environment. 12/1/2017 to 11/30/18. \$1,950.

“Circular economy and the economic value of clean water” B. Keeler (PI). Sponsor: Target Foundation. 10/1/2018 to 10/1/2019. \$30,000.

“Application of TEEBAgriFood Valuation Framework to Corn Systems in the U.S.” H. Sandhu, (PI), B. Keeler (Co-PI), D. Fujiwara (Co-PI), N. El-Hage Scialabba (Co-PI). Sponsor: Global Alliance for the Future of Food. 11/30/17 to 11/30/18. \$100,000.

“What is Clean Water Worth? Estimating Return on Investment for the Minnesota Clean Water Legacy Funds” B. Keeler (PI), S. Polasky Co-PI, M. Davenport (Co-PI), E. Lonsdorf (Co-PI). Sponsor: Clean Water Council 7/1/2017 to 6/30/2019. \$265,000.

“Water and Equity: Co-developing Research and Engaged Approaches to Transforming Environments”. B. Keeler (PI), Kate Derickson (PI), Sarah Hobbie (Co-PI), Steve Polasky (Co-PI), Susan Galatowitsch (Co-PI), Fred Rose (Co-PI). Sponsor: University of Minnesota Provost’s Office. 10/20/2017 to 12/31/2020. \$720,000.

“What are the public benefits of protecting sourcewater?” B. Keeler (PI), M. Davenport (Co-PI). Sponsor: Legislative Citizen Commission on Minnesota Resources 7/1/2017 to 6/30/2019. \$320,000.

“Understanding and building capacity to address changing water availability in the upper Corn Belt” M. Davenport (PI), B. Keeler (Co-PI), K. Brauman (Co-PI), J. Arbuckle (Co-PI) and R. Arritt (Co-PI). Sponsor: USDA Agriculture and Food Research Initiative. 3/1/2017 to 2/28/2020. \$494,707.

“Mainstreaming the value of clean water in the Mississippi River Basin” B. Keeler (PI). Sponsor: The McKnight Family Foundation. 9/1/2016 to 8/31/2018. \$100,000.

“Conservation easement assessment and valuation system”. B. Keeler (PI), M. Kilgore (Co-PI), S. Taff (Co-PI), S. Polasky (Co-PI). Sponsor: Legislative-Citizen Commission on Minnesota Resources. 7/2015 to 12/2017. \$250,000.

“Informed water management: Mapping scarcity, threats and values”. B. Keeler (PI), K. Brauman and T. Twine (Co-PIs). Sponsor: Legislative-Citizen Commission on Minnesota Resources. 7/2015 to 6/2018. \$234,000.

“Drivers and Feedbacks in the Food-Energy-Water System for Integrated Management of Agricultural Landscapes”. E. Foufoula (PI), B. Keeler (Co-PI) and S. Polasky (Co-PI). Sponsor: National Science Foundation. 9/1/2016 to 12/31/2017. \$290,000.

“Guidance for Urban Leaders on Nature-Based Solutions” B. Keeler [PI]. Sponsor: The Nature Conservancy. 5/1/2017 to 5/1/2019. \$67,000.

“Sustainable Development: Architecture and planning within the ecological footprint of one planet”. R. Graves (PI) and B. Keeler (Co-PI). Sponsor: University of Minnesota Provost Office Grand Challenges Exploratory Research Grant. 9/1/2016 to 8/31/2017. \$110,000

“Ecosystem Services and Restoration: Building capacity and magnifying impact” B. Keeler (PI). Sponsor: International Union for the Conservation of Nature. 5/10/16 to 9/15/2017. \$200,000.

“Sustainable Cities: Building an integrated research network to incorporate natural capital into design of urban systems”. B. Keeler (Co-PI), S. Polasky (Co-PI) and S. Hobbie (Co-PI). Sponsor: Institute on the Environment Project Grant. 6/1/2014 to 12/1/2017. \$75,400.

“Data-Intensive Analysis & Modeling for Socio-Environmental Synthesis pursuit”. B. Keeler (Co-PI) and Spencer Wood (Co-PI). Sponsor: National Socio-Environmental Synthesis Center [SESYNC] 6/2015 to 12/2017.

“Mental Health Benefits of Nature Experience: Translating Science to Urban Design” B. Keeler (PI), Kristen Nelson (Co-PI), Lacy Shelby (Co-PI). Sponsor: Office of the Vice President for Research, University of Minnesota. 7/1/2015 to 7/1/2016. \$19,700.

“Valuing CRP: Estimating the societal benefits of conservation lands” B. Keeler (PI). Sponsor: The Nature Conservancy. 3/2015 to 6/2015. \$9,052.

“Technology Innovations and Transfer to Scale Up Models of Success for Mainstreaming the Values of Natural Capital into Major Decisions”. B. Keeler (PI). Sponsor: The Google Foundation, via Stanford University. 12/2014 – 10/2015. \$105,970.

“Value-added conservation: Optimizing landscapes for ecosystem services” B. Keeler (PI). Sponsor: US Fish and Wildlife Service. 7/2014 to 7/2015. \$86,040.

“Optimizing investments in forest restoration to promote ecosystem services and human well-being”. B. Keeler (PI). Sponsor: International Union for the Conservation of Nature. 7/2014 to 9/2015. \$156,840.

“Estimating the external costs of nitrogen pollution”. B. Keeler (PI). Sponsor: Minnesota Center for Environmental Advocacy. 4/2014 – 9/2014. \$9,742.

Grants under Review

S. Hobbie (PI), B. Keeler, J. Finlay, K. Nelson, X. Feng (Co-PIs). “The Changing Nature of Cities: Ecological and Social Dynamics in the Minneapolis-St. Paul Urban Ecosystem”. National Science Foundation Long-Term Ecological Research Program.

P. Daoutidis (PI), Dhople, S, B. Keeler, Q. Zhang (Co-PIs) “Connecting Rural Communities via Sustainable Energy and Agriculture”. National Science Foundation Smart and Connected Communities. Requested amount \$1,969,000.

T. Fisher (PI), S. Benjaafar, R. Perkl, B. Keeler, D. Rouse, S. McElvaney (Co-PIs) “Integrating technology, community, and nature: A geo-analytical approach to planning smart cities that are equitable, sustainable and resilient”. National Science Foundation Smart and Connected Communities. Requested amount \$2,500,000.

Selected Public and Professional Presentations

Freshwater Society, Invited presenter to board meeting, February 2020.

Minnesota Pollution Control Agency, Water Exchange Webinar, January 2020.

Minnesota Soil and Water Conservation Society Annual Meeting, Invited Plenary, December 2019

Minneapolis Parks and Recreation Board, December 2019

[Measuring Value: Counting the Uncounted](#), Weisman Art Museum, November 2019

Climate of Creativity, Hennepin Theater Trust, Invited Panelist, November 2019

[Ways of Knowing Water](#), Weisman Art Museum, October 2019.

National Socio-Environmental Synthesis Center (SESYNC), Annapolis, MD, Invited Seminar Speaker, October 2019.

Minnesota Water Resources Conference, Oral Presentation. October, 2019.

Water Summit, Minnesota Economic Club, Invited Panelist. September 2019. Video [here](#).

Climate change and recreation workshop, USFS and MN DNR, Invited Speaker. September 2019.

Clean Water Council, August 2019.

Met Council, May 2019.

3M Tech Forum, May 2019.

Department of Natural Resources, Science Chat, May 2019.

Cornell University, Workshop on the Social Cost of Water Pollution, April 2019.

MN House of Representatives, Invited testimony, January 2019.

National Institute for Mathematical and Biological Synthesis, University of Tennessee, December 2018.

Soil Water Climate Seminar, University of Minnesota, December 2018.

Conservation Science Seminar, University of Minnesota, October 2018.

Eco-District Summit, Minneapolis, October 2018.

Center for Science, Technology and Environmental Policy Seminar, University of Minnesota, September 2018.

Nobel Peace Prize Forum, Augsburg University, Minneapolis, September 2018.

Natural Resources Research Institute, University of Minnesota, Duluth. July 2018.

Minnesota Sustainable Growth Coalition, Minneapolis, July 2018.

Environmental and Resource Economics Seminar. May 2018. Dept of Applied Economics. University of Minnesota.

Sustainable Growth Coalition. April 2018. Invited panelist. Minnesota Public Radio.

Society for Environmental Toxicology and Chemistry Annual Meeting. Plenary Speaker. November 2017.

Natural Resource Ecology Lab, Colorado State University Fall 2017 Seminar Series. November 2017.

Ecological Society of America Annual Meeting. August 2017.

University of Minnesota, Rochester. UMN Connects Speaker Series. April 2017.

University of Minnesota, Center for Urban and Regional Affairs, April 2017.

University of Minnesota, Department of Geography, Environment and Society Colloquium. February 2017.

Minnesota Sustainable Growth Coalition. Invited speaker. October 2016.

Interagency Coordination Team for Clean Water, State of Minnesota. Invited speaker. October 2016.
IUCN World Conservation Congress. Invited speaker. September 2016.
Summer Institute for Earth Surface Dynamics. Invited speaker. August 2016.
Minnesota Pollution Control Agency Water Communications Series, May 2016.
Minnesota Zoo Our World Speaker Series, April 2016.
Saint Anthony Falls Lab Seminar Series, April 2016.
MetroLab Smart Cities Workshop. March 2016.
Inter-American Development Bank. Invited Keynote Speaker. November 2015.
Minnesota Community Health Conference. October 2015.
Minnesota Water Technology Summit. Invited Speaker. September 2015.
Minnesota Department of Health, May 2015. Invited Speaker- Clean Water Forum.
World Bank Group, Advancing natural capital accounting. Invited participant. April 2015.
EPA Nutrient Strategies Webcast, Invited Speaker. April 2015.
Brainerd Area Environmental Learning Network, Invited Speaker. March 2015.
Ecology, Evolution, and Behavior Seminar, University of Minnesota, Invited Seminar. February 2015.
Water Resources Sciences Seminar, University of Minnesota, Invited Speaker. February 2014.
MSR Design, Minneapolis, MN. Invited Speaker. March 2014.
Minnesota Groundwater Association, St. Paul, MN. Invited Speaker. November, 2013.
Design Futures Council Sustainability Summit, Minneapolis, MN. Invited Speaker. October, 2013.

Selected media coverage

K. Miller. September 6th, 2019. Minnesota Public Radio and Minnesota Economic Club. How Minnesota can lead in a water-scarce world. Available:

<https://www.mprnews.org/episode/2019/09/11/miller-how-minnesota-can-lead-in-a-waterscarce-world>

N. Rademacher. March 25th, 2019. Minnesota Daily. UMN researchers examine how climate change affects state water. Available:

<https://www.mndaily.com/article/2019/03/n-umn-researchers-examine-how-climate-change-affects-states-water>

S. Du. City Pages. February 20th, 2019. Minnesota's climate begins its descent toward an unrecognizable future. Available:

<http://www.citypages.com/news/minnesotas-climate-begins-its-descent-toward-an-unrecognizable-future/506067291>

J. Marcotty. Minneapolis Star Tribune. February 16, 2019. Is the benefit of having trees 'oversold' in Twin Cities green space planning? Available:

<http://www.startribune.com/green-value-of-twin-cities-trees-get-second-look/505843392/>

J BJORHUS. Minneapolis Star Tribune. February 17, 2019. To clean up the murky Minnesota, state must control septic systems and livestock manure. Available:

<http://www.startribune.com/to-clean-up-the-murky-minnesota-state-must-control-septic-systems-and-livestock-manure/505943352/>

C. Nelson. Minnesota Public Radio. January 17th, 2019. From disease to habitat loss, researchers lay out Minnesota's bleak climate realities Available:

<https://www.mprnews.org/story/2019/01/17/minnesota-house-climate-committee-hearing>

J. Marcotty. Minneapolis Star Tribune. November 14th, 2018. Quoted in article about natural climate solutions in Minnesota. Available:

<http://www.startribune.com/scientists-conclude-that-simple-changes-in-forestry-farming-could-hugely-cut-carbon-emissions/500515641/>

“Society is ready for a new kind of science – Is academia?” Oxford University Press blog. Available: https://blog.oup.com/2017/07/society-ready-for-new-kind-science-academia/?utm_source=twitter&utm_medium=oupacademic&utm_campaign=oupblog

“A great river at risk” Minneapolis Star Tribune. December 31, 2016. Available: <http://www.startribune.com/a-great-river-at-risk/394188561/>

“Federal environmental review will measure mining risks to wilderness” Minneapolis Star Tribune. December 17, 2016. Available: <http://www.startribune.com/federal-environmental-review-will-measure-mining-risks-to-wilderness/407239186/>

“Mighty Mississippi River faces mounting environmental threats” Minneapolis Star Tribune. October 2, 2016. Available: <http://www.startribune.com/mighty-mississippi-river-faces-mounting-environmental-threats/393294611/>

“Study calculates fertilizer’s hidden social cost” Valley Public Radio. October 5, 2016. Available: <http://kvpr.org/post/study-calculates-fertilizers-hidden-social-costs>

“Potato grower's move into forest land raises water, wildlife concerns” Fargo Forum. April 26, 2015. Available: <http://www.inforum.com/news/3731551-potato-growers-move-forest-land-raises-water-wildlife-concerns>.

“Minnesota struggles to slow deforestation, protect water” Minneapolis Star Tribune. February 1, 2015. Available: <http://www.startribune.com/local/290436161.html>

“Cleaner lakes are social media stars”. Discover Magazine, Infish Blog. February 6, 2015. Available: <http://blogs.discovermagazine.com/inkfish/2015/02/06/cleaner-lakes-are-social-media-stars/#.VTmxGvnF-So>

“The Allure of Clean Lakes”. Conservation Magazine, February 5, 2015. Available: <http://conservationmagazine.org/2015/02/the-allure-of-clear-lakes/>

“Grasslands conversion may increase water pollution in SE Minnesota” Minneapolis Star Tribune. July 18, 2014. Available: <http://www.startribune.com/local/290436161.html>

“Crop switch could cost millions in water quality” Minnesota Public Radio. July 10, 2014. Available: http://www.mprnews.org/story/2014/07/10/ground-level-beneath-the-surface-grassland-nitrates*

“U Researchers look at the future of biofuels” Minnesota Daily. September 30th, 2013. Available: <http://www.mndaily.com/news/metro-state/2013/09/29/u-researchers-look-future-biofuels>

“Minnesota legislators and scientists team up on climate change” Minneapolis Star Tribune. January 16th 2013. Available: <http://www.startribune.com/politics/statelocal/187059651.html>.

“Prepare for impact of climate change.” Minneapolis Star Tribune. Editorial Board. January 19th, 2013. Available: <http://www.startribune.com/opinion/editorials/187524481.html>.

Radio Interview on Access Minnesota. Interviewed by Jim du Bois, Minnesota Broadcasters Association President, about my research on water quality and ecosystem services. Aired Dec. 2nd, 2012. Recording available at: <http://www.accessminnesotaonline.com/2012/11/27/measuring-the-value-of-water-quality/>.

Minnesota Public Radio. “Economist measures nature's benefit with dollars”. January 3rd, 2012. Story

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<http://minnesota.publicradio.org/display/web/2012/01/03/economist-measures-natures-benefit-with-dollars>.

Service

External Environmental Economics Advisory Committee on the Federal Waters of the United States (WOTUS) rule (2020)
Co-Director, CREATE Initiative and CREATE Graduate Scholars program (2018 - present)
Graduate School Advisory Board, University of Minnesota (present)
Interdisciplinary Doctoral Fellowship Selection Committee (2018-2020)
Faculty search committee, MURP position, STEP position (2018, 2019)
The Nature Conservancy of Minnesota, South Dakota, North Dakota, Science Advisory Council (present)
Research Advisory Committee, Minnesota Forest Resources Council (2018)
Minnesota Department of Health, Expert Panel on the Future of Drinking Water (present)
Boreas Environmental Leadership Program (2012-2013)
Carleton College Environmental Studies Comps Advisor (2011-2013)
UMore Park Sustainability Planning Process: Champion for Land Use and Wildlife (2011)
Council for Graduate Studies Representative, University of Minnesota (2007)
Preparing Future Faculty Program, University of Minnesota (2007)
EEB Graduate Student Co-President, University of Minnesota (2006)
St. Paul Public Schools, Common X-Change Program Scientist Volunteer (2006)
Science Mentor, School for Environmental Studies, Apple Valley, MN. (2005)
Center for Teaching and Learning Liaison, University of Minnesota (2004)

Associate editor: *Ecology and Society*

Reviewer: *Urban Studies, BioScience, Ecological Applications, Ecological Economics, Ecology Letters, Environmental Management, Environmental Research Letters, Environmental Science and Policy, Frontiers in Ecology and the Environment, Journal of Great Lakes Research, Land Use and Regional Planning, Land Use Policy, Landscape and Urban Planning, Nature Sustainability, Nature Ecology and Evolution, Proceedings of the National Academy of Science, Proceedings of the Royal Society B, Organization and Environment, Science of the Total Environment, Science Advances.*

Graduate students advised (primary advisor): *Terin Mayer, Ph.D. in Public Affairs, David Reeths, Ph.D. in Public Affairs, Rebecca Walker, Ph.D. student in Public Affairs, Margaret Rogers, MS STEP, Annamarie Rutledge, MS STEP, Lindsey Kruase MS STEP, Lauren Fisher MS STEP, Jamison Stallman MS STEP, Nathan Vikeras MS STEP, Rachel Hauber MS STEP, Orli Handmaker, M.S. in Natural Resources Science and Management (graduated 2019),*

Committee service: *Ian Luby, Ph.D. in Applied Economics, Nfamara Dampha, Ph.D. in NRSRM, Jaren Peplinski, M.S. in Natural Resources Science and Management, Amelia Kreiter, Ph.D. in Natural Resources Science and Management, Brian Krohn, Ph.D. in Natural Resources Science and Management (completed 2015), Hao Pang M.S. in Natural Resources Science and Management (completed 2014), Ryan Noe M.S. in Natural Resources Science and Management (completed 2014)*

Professional paper advising: *Alexander Venning, Annamarie Rutledge, Lauren Shenoebelen, Alex Ingulsrud, Margaret Rogers, Evan Davis.*

Undergraduate interns and research assistants: *Jillian Cady, Jessica Wyatt, Cameron Shorb, Carly Yu, Manisha Rattu, Roxana Ayala, Ramiro Piñedo, Mellisa Ofori, Kathy Dooley, Vu Dang.*

Research staff supervised: *Christina Locke (Senior Scientist), Ryan Noe (Senior Scientist), Mira Klein (Research Assistant), Kaleigh Swift (Program Coordinator), Fayola Jacobs (post-doctoral researcher, alum), Maike Hamann (post-doctoral researcher, alum), Kelly Meza-Prado (Research Manager, alum), Adi*

Penugonda (Project Coordinator, alum), Marie Donahue (Program Manager, alum), Kate Thompson (Research Assistant, alum), Justin Johnson (Research Economist, alum), Peter Hawthorne (Senior Scientist, alum), Jesse Gourevitch (Research Assistant, alum).

Fellowships & Awards

Winner, National Academies Keck Futures Initiative, NAKFI Challenge (2018)
Institute on the Environment Fellow (2018)
Nominee, Environmental Initiative, Emerging Leader Award (2017)
EPA Science To Achieve Results (EPA-STAR) Fellowship (2011-2014)
NSF Pre-Doctoral Graduate Research Fellowship (2005-2010)
Interdisciplinary Doctoral Fellow, Institute on the Environment, University of Minnesota (2010-2011)
Nominee, Best Dissertation, Natural Resources Science and Management program (2013)
Kenneth E. Grant Soil Water Conservation Society Scholarship (2011-2012)
Florence J. Rothman Fellowship, University of Minnesota (2006)
Florence J. Rothman Fellowship, University of Minnesota (2005)
Biedelman Award for most promising ecologist, Colorado College (2001)
Barnes Natural Science Scholar, four year full-tuition scholarship, Colorado College (1997-2001)

University of Minnesota Courses:

PA5722: Environmental and natural resource economics (Spring 2019, Spring 2020)
PA5790: Environmental Systems Analysis: food, energy, water nexus (Spring 2019, Fall 2019)
PA5790: Environmental leadership and engaged scholarship (Spring 2019, Spring 2020)