Kristen Swedberg

(she/her)

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EDUCATION

Ph.D., Virginia Tech   2024
Economics
    Advisor: Kevin Boyle
    Dissertation: Essays in Surface Water Quality Valuation

M.S., Virginia Tech   2020
Agricultural and Applied Economics
    Advisor: Kevin Boyle
    Thesis: Examining Implicit Price Variation for Lake Water Quality

B.S., Virginia Tech   2017
Engineering Science and Mechanics; Sociology
    Minors: Green Engineering; Peace Studies and Violence Prevention

RESEARCH EXPERIENCE

ORISE Research Fellow mentored by Joel Corona   2022 – Present
U.S. EPA Office of Water, Water Economics Center

Graduate Research Assistant for Kevin Boyle   2018 – 2022
Department of Agricultural and Applied Economics, Virginia Tech

Lab and Research Specialist   2017 – 2018
Virginia Tech Transportation Institute

"Senior Design Project" advised by Jonathan Boreyko   2016 – 2017
Department of Biomedical Engineering and Mechanics, Virginia Tech

TEACHING EXPERIENCE

Instructor of Record "Real Estate Data Analysis" 3 credits, 24 students   Spring 2019
Program in Real Estate, Virginia Tech

Teaching Assistant "Real Estate Data Analysis" 2 credits, 27 students   Fall 2018
Program in Real Estate, Virginia Tech

Grader "Environmental Life Cycle Analysis" 3 credits, 186 students   Spring 2017
Department of Material Science Engineering, Virginia Tech

MENTORING EXPERIENCE

Undergraduate Research Mentor   2019 – 2020
Program in Real Estate, Virginia Tech

PEER-REVIEWED PUBLICATIONS

Phillips, M., Boyle, K. J., & Swedberg, K. (2025). Valuation of forested river riparian buffers: Support for riverine integrity and climate resilience. *Forest Policy and Economics.* doi:10.1016/j.forpol.2024.103406

Swedberg, K., Cardoso, D., Castillo, A., Mamun, S., Boyle, K., Nolte, C., Papenfus, M., Polasky, S. (2024). Spatial Heterogeneity in Hedonic Price Effects for Lake Water Quality. *Land Economics.* doi:10.3368/le.100.1.102122-0086R

Nolte, C., Boyle, K. J., Chaudhry, A. M., Clapp, C., Guignet, D., Hennighausen, H., Kushner, I., Liao, Y., Liao, Y., and Mamun, S., Pollack, A., Richardson, J., Sundquist, S., Swedberg, K., Uhl, J. (2024). Data Practices for Studying the Impacts of Environmental Amenities and Hazards with Nationwide Property Data. *Land Economics.* doi:10.3368/le.100.1.102122-0090R

Mamun, S., Castillo, A., Swedberg, K., Zhang, J., Andarge, T., Boyle, K., Keiser, D., Kling, C., Nolte, C., Papenfus, M., Phaneuf, D., Polasky, S. (2023*).* Valuing water quality in the US using a national data set on property values. *Proceedings of the National Academy of Sciences* doi:10.1073/pnas.2210417120

Swedberg, K., Boyle, K., Stachelek, J., Ward, N. K., Weng, W., Cobourn, K. M. (2022). Examining Implicit Price Variation for Lake Water Quality. *Water Economics and Policy* doi:10.1142/S2382624X22400057

Hansen, O. L., Sheen, A. B., Swedberg, K. M., Vitale, K. W., Wray, S. M., Fox M. D., & Boreyko, J. B. (2018). Thermally Absorptive Blankets for Highly Efficient Snowbank Melting. *Langmuir* doi:10.1021/acs.langmuir.7b0318

ORAL PRESENTATIONS

2024: "Locally Satisfying Adding Up Condition in Meta-Regression Models: A Simple Solution to a Persistent Regulatory Challenge", Association of Environmental and Resource Economics Conference (Washington, D.C.)

"Locally Satisfying Adding Up Condition in Meta-Regression Models: A Simple Solution to a Persistent Regulatory Challenge", U.S. Environmental Protection Agency Office of Water Seminar (virtual)

"Developing a Use-Based Water Quality Index", Social Cost of Water Pollution Workshop (Washington, D.C.)

"Disentangling Sources of Water Quality Variation in Property Sale Models", U.S. Environmental Protection Agency Office of Research and Development Seminar (virtual)

"Disentangling Sources of Water Quality Variation in Property Sale Models", A Community in Ecosystem Services Conference (Austin, TX)

2023: "Evaluating the Spatial Extent of Integrated Hedonic Property Sales and Recreation Demand Models for Water Quality in Southern New England", Association of Environmental and Resource Economics Conference (Portland, ME)

"The Impacts of Model Precision in Integrated Assessment Models for Environmental Policy: An Application in Water Quality Benefits", International Society for Ecological Modelling Conference (Toronto, CAN)

"Modelling water quality for economic analysis with The Hydrologic and Water Quality System (HAWQS) 2.0", The Workshop in Environmental Economics and Data Science (Portland, OR)

"The Impacts of Model Precision in Integrated Assessment Models for Environmental Policy: An Application in Water Quality Benefits", Social Cost of Water Pollution Workshop (Washington, D.C.)

2022: "Spatial Heterogeneity in Hedonic Price Effects for Lake Water Quality", Social Cost of Water Pollution Workshop (Washington, D.C.)

"Spatial Heterogeneity in Hedonic Price Effects for Lake Water Quality", ZTRAX Special Issue Workshop (Virtual)

"Spatial Heterogeneity in Hedonic Price Effects for Lake Water Quality", Virginia Tech AAEC Departmental Seminar (Virtual)

2021: "Examining Implicit Price Variation for Lake Water Quality", North American Lake Management Symposia (Virtual)

"Examining Implicit Price Variation for Lake Water Quality", Social Cost of Water Pollution Workshop (Virtual)

"Examining Implicit Price Variation for Lake Water Quality", Private-Land Conservation Evidence System Webinar (Virtual)

"Examining Implicit Price Variation for Lake Water Quality", Virginia Tech AAEC Departmental Seminar (Virtual)

TRAINING

2022: Contemporary Pedagogy Course, Association of Clean Water Administrators Water Quality Modelling Workshop, Water Standards Academy, National Pollutant Discharge Elimination System Training

2021: Berkeley/Sloan Summer School in Environmental and Energy Economics

SKILLS

Programming and Statistical Analysis: Proficient in Python and R; Experience with Stata
Geospatial Analysis: Proficient in GeoPandas and ArcGIS Pro

AWARDS

Oak Ridge Institute for Science and Education (ORISE) Fellowship	2022 – 2025
Paul J. Driscoll Fellowship	2019 – 2021

SERVICE

Reviewer for *Journal of the American Water Resources Association*	2024 – Present
Volunteer for Social Cost of Water Pollution Workshop	2023 - 2024
Departmental Senator to Graduate and Professional Student Senate	Spring 2022
Vice President of Departmental Graduate Student Association	2021 – 2022
Departmental Representative to Graduate Student Assembly	2019 – 2020
Social Chair of Departmental Graduate Student Association	2019 – 2020

PROFESSIONAL MEMBERSHIPS

Association of Environmental and Resource Economics	2023 – Present
International Society of Ecological Modelling	2023 – Present
North American Lake Management Society	2021 – 2023

WORKING PAPERS

Locally Satisfying the Adding Up Condition in Meta-Regression Models: A Simple Solution to a Persistent Regulatory Challenge

The Impacts of Model Precision in Integrated Assessment Models for Environmental Policy: An Application in Water Quality Benefits

Disentangling Sources of Water Quality Variation in Property Sale Models *with Nathaniel Merrill, Joel Corona, and Matthew Heberling*

Evaluating the Spatial Extent of Integrated Hedonic Property Sales and Recreation Demand Models for Water Quality in Southern New England *with Nathaniel Merrill, Joel Corona, and Matthew Heberling*

WORK IN PROGRESS

Developing a Use-Based Water Quality Index *with Joel Corona, Ahmed Rachid El-Khattabi and Baishali Bakshi*

Assessing Climate Sensitivity in a Use-Based Water Quality Index *with Joel Corona, Ahmed Rachid El-Khattabi and Baishali Bakshi*

No Benefits Left Behind: Addressing Extent of Market in Benefit Transfer for Wetland Valuation *with Ahmed Rachid El-Khattabi, Adam Theising, Todd Doley, Joel Corona, and Julie Hewitt*