Jason K Hawes, PhD | jhawes@uwyo.edu
School of Computing and Haub School of Environment and Natural Resources, University of Wyoming
Affiliations: CoLaborative for Intersectoral Modeling of the Earth System (CLIMES)
Center for Rural Community Resilience and Innovation (CRCRI)
Center for Controlled Environment Agriculture (CCEA)
Wyoming Geographic Information Science Center (WyGISC)
Joint Appointment: Critical Infrastructure Resilience Division, Idaho National Laboratory
Website: jkhawes.com
Alternative E-mail: jasonkhawes@gmail.com Also known as: Jake Hawes

Current Appointment

1/2025 - Present — Assistant Professor
School of Computing and Haub School of Environment and Natural Resources

Education

8/2019 - 8/2024 — PhD in Resource Policy and Behavior at University of Michigan School for Environment and Sustainability
Advisor: Joshua Newell
Dissertation: Urban Agriculture: Good for people, places, planet?

8/2017 - 8/2019 — MS Ecological Sciences and Engineering, Natural Resources Social Science, Purdue University
Advisor: Zhao Ma
Thesis: Mixed-methods analysis of agricultural adaptation to water stress

8/2013 - 5/2017 — BS Environmental and Ecological Engineering, Purdue University
Minor: Environmental Policy and Politics, Natural Resources & Environ. Sci.

Certifications

Innovation to Translation Ambassador – University of Wyoming, Wy-CORPS Program – Jan 2025 to Feb 2026
Diversity, Equity, and Inclusion Certificate – University of Michigan, Rackham Graduate School – April 2024
Graduate Teaching Certificate – University of Michigan, Center for Research on Learning and Teaching– December 2022

Publications and Presentations

Per Google Scholar (profile): Total citations: 728, h-index: 12, i-10 index: 13
ORCID: https://orcid.org/0000-0001-8215-5046

Peer-reviewed Publications

Mentee at time of research; *Graduate student at time of research*

18. **Hawes, J.K.**, Dimitrios Gounaridis, Joshua P. Newell, et al. "Assessing the Potential to Scale-up Urban Agriculture in the Global North." Landscape and Urban Planning 272 (August 2026): 105657. https://doi.org/10.1016/j.landurbplan.2026.105657.
17. *Levy, D.*, **Hawes, J.K.**, Finn, B., Goldstein, B.P. A typology of resource circularity in cities (March 2026). Resources, Conservation, and Recycling.
16. **Hawes, J. K.**, Goldstein, B. P., Newell, J. P., Dorr, E., Caputo, S., Fox-Kämper, R., Grard, B., Ilieva, R. T., Fargue-Lelièvre, A., Poniży, L., Schoen, V., Specht, K., & Cohen, N. (2024). Comparing the Carbon Footprints of Urban and Conventional Agriculture. Nature Cities, 1(2). https://doi.org/10.1038/s44284-023-00023-3
15. *Limerick, S.*, **J.K. Hawes**, D. Gounaridis, N. Cohen, and J.P. Newell. "Community Gardens and the 15-Minute City: Scenario Analysis of Garden Access in New York City." Urban Forestry & Urban Greening 89 (November 1, 2023): 128107. https://doi.org/10.1016/j.ufug.2023.128107.
14. Fox-Kämper, R., C.K. Kirby, K. Specht, N. Cohen, R. Ilieva, S. Caputo, V. Schoen, **J.K. Hawes**, L. Ponizy, and B. Béchet. "The Role of Urban Agriculture in Food-Energy-Water Nexus Policies: Insights from Europe and the U.S." Landscape and Urban Planning 239 (November 1, 2023): 104848. https://doi.org/10.1016/j.landurbplan.2023.104848.
13. Feagan, M., M. Fork, G. Gray, M. Hamann, **J. K. Hawes**, E. H. T. Hiroyasu, and B. Wilkerson. "Critical Pedagogical Designs for SETS Knowledge Co-Production: Online Peer- and Problem-Based Learning by and for Early Career Green Infrastructure Experts." Urban Transformations 5, no. 1 (April 3, 2023): 6. https://doi.org/10.1186/s42854-023-00051-1.
12. Dorr, E., **Hawes, J. K.**, Goldstein, B., Fargue-Lelièvre, A., ..., Jean-Soro, L., & Grard, B. (2023). Food production and resource use of urban farms and gardens: A five-country study. Agronomy for Sustainable Development, 43(1), 18. https://doi.org/10.1007/s13593-022-00859-4
11. Busse, M. M., **Hawes, J. K.**, & Blatchley, E. R. (2022). Comparative Life Cycle Assessment of Water Disinfection Processes Applicable in Low-Income Settings. Environmental Science & Technology, 56(22), 16336–16346. https://doi.org/10.1021/acs.est.2c02393
10. **Hawes, J. K.**, Gounaridis, D., & Newell, J. P. (2022). Does urban agriculture lead to gentrification? Landscape and Urban Planning, 225, 104447. https://doi.org/10.1016/j.landurbplan.2022.104447
9. **Hawes, J. K.**, Burnham, M., du Bray, M. V., Hillis, V., Ma, Z., & Running, K. (2022). Social Vulnerability to Irrigation Water Loss: Assessing the Effects of Water Policy Change on Farmers in Idaho, USA. Environmental Management. https://doi.org/10/gnz5j4
8. Killion, A. K., Ostrow M. J., & **Hawes, J. K.** (2022). Toward Identifying Sustainability Leadership Competencies: Insights from Mapping a Graduate Sustainability Education Curriculum. Sustainability, 14(10), 5811. https://doi.org/10.3390/su14105811
7. **Hawes, J. K.**, Johnson, R., Payne, L., Ley, C., Grady, C. A., Domenech, J., Evich, C. D., Kanach, A., Koeppen, A., Roe, K., Caprio, A., Puente Castro, J., LeMaster, P., & Blatchley, E. R. (2021). Global Service-Learning: A Systematic Review of Principles and Practices. International Journal of Research on Service-Learning and Community Engagement. https://doi.org/10/gnzbpv
6. Kirby, C. K., Specht, K., Fox-Kämper, R., **Hawes, J. K.**, Cohen, N., Caputo, S., Ilieva, R. T., Lelièvre, A.,

Poniży, L., Schoen, V., & Blythe, C. (2021). Differences in motivations and social impacts across urban agriculture types: Case studies in Europe and the US. Landscape and Urban Planning, 212, 104110. https://doi.org/10/gjsqbq

5. Caputo, S., Schoen, V., Specht, K., Grard, B., Blythe, C., Cohen, N., Fox-Kämper, R., **Hawes, J.**, Newell, J., & Poniży, L. (2020). Applying the Food-Energy-Water Nexus approach to urban agriculture: From FEW to FEWP (Food-Energy-Water-People). Urban Forestry & Urban Greening, 126934. https://doi.org/10/ghr386
4. Yu, D. J., Schoon, M. L., **Hawes, J. K.**, Lee, S., Park, J., Rao, P. S. C., … Ukkusuri, S. V. (2020). Toward General Principles for Resilience Engineering. Risk Analysis, risa.13494. https://doi.org/10.1111/risa.13494
3. Running, K., Burnham, M., Wardropper, C., Ma, Z., **Hawes, J. K.**, & du Bray, M. V. (2019). Farmer adaptation to reduced groundwater availability. Environmental Research Letters. https://doi.org/10.1088/1748-9326/ab4ccc
2. Alwang, A., Busse, M., Caprio, A., Fenton, M., **Hawes**, **J.K.**, Kanach, A., McElfresh-Sutton, A. (2017) Water Supply in Developing Countries: A Reflective Essay. Purdue Journal of Service Learning, 4(1).
1. **Hawes, J. K.**, Conkling, E. N., Casteloes, K. S., Brazeau, R. H., Salehi, M., & Whelton, A. J. (2017). Predicting contaminated water removal from residential water heaters under various flushing scenarios. Journal - American Water Works Association, 109(8), E332–E342. https://doi.org/10.5942/jawwa.2017.109.0085

Commentaries and Perspectives * Invited

2. Capnerhurst, H., Quigley, H., **Hawes, J.K.** (2024). Sustainable agriculture impacts in urban settings make the case for federal investments. Journal of Agriculture, Food Systems, and Community Development, 14(1), 1-13.
1. Fargue-Lelièvre, A., **Hawes, J. K.**, Goldstein, B., Poniży, L., & Dorr, E. (2024). What do we really know about urban agriculture's impact on people, places, and the planet?. Bulletin of the Atomic Scientists, 80(3), 174-177.*

Book Reviews

1. **Hawes, J. K.**, Erwin, A., McWherter, B., Nixon, R., Popovici, R., Rathjen, M., & Ma, Z. (2019). A Review of Grassroots Global Governance. Society & Natural Resources, 32(11), 1330–1332. https://doi.org/10.1080/08941920.2019.1602239

Invited Presentations

18. **Hawes, JK.** Human-Environment Systems Modeling for a More Sustainable, Resilient, and Secure Future. Recurring Speaker, INL Joint Appointment Seminar: June 2025, June 2026.
17. **Hawes, JK,** B. McMillan, M. Joyce, S. Li, N. Case, R. Sivanpillai, S. Albeke. AI in the Classroom – Practice and Praxis at the School of Computing. Recurring Speaker, UW AI in Teaching Series: January 2026, April 2026.
16. **Hawes, JK.** AI for Sustainability: From best places to best practices. 10/2/2025. Environmental Policy Working Group.

15. **Hawes, JK.** Spatial Analysis in Cities. University of Wyoming Speaker Series: Geospatial Forum. March 2025
14. **Hawes, JK.** Invited guest lecture: Spatial Analysis in Cities. University of Michigan Course: SEAS 540, Intro to Remote Sensing,
13. **Hawes, JK**. Comparing the carbon footprints of urban and conventional agriculture. Invited Seminar, Department of Sustainable Agriculture, University of Patras, Greece. March 2024
12. **Hawes, JK,** Gounaridis, D., Goldstein, B., Newell, JP. November 10, 2023. Presentation to the Center for Sustainable Systems External Advisory Board. Urban Agriculture: Good for People, Places, Planet?
11. **Hawes, JK.** October 5, 2023. Invited speaker: Climate Change and the University. American Studies 301. Purdue University.
10. **Hawes, JK**. February 14, 2023. Panel moderator for Climate Change: Part of the Great Decisions speaker series at the Indiana Council on World Affairs.
9. **Hawes, JK**. Delivered in 2021 & 2022. Invited guest lecture: Decolonizing Sustainability. University of Michigan Course: Environ 207, Sustainability and Society.
8. **Hawes, JK,** Gounaridis, D., Goldstein, B., Newell, JP. Delivered in October 2021, 2022, & 2023. Invited guest lecture: Urban Agriculture: Good for Cities, People, Planet? University of Michigan Course: SEAS 517, Urban Sustainability.
7. **Hawes, JK**. November 2022. Invited panelist: Closing the Loop: Opportunities to Advance the Circularity of Organic Waste. Industrial Ecology Day. https://www.youtube.com/watch?v=zUlwaabElS0
6. **Hawes, JK**. February 2022. Invited panel moderator: Water Systems. Michigan University-Wide Sustainability & Environment (MUSE) Initiative: Annual Conference.
5. **Hawes, JK**. July 30, 2020. Climate Change: Part of the Great Decisions speaker series at the Indiana Council on World Affairs.
4. **Hawes, JK**, Kanach, A. August 2018. Invited guest lecture: How we got here: A look back at historical motivations and trends shaping the Water Supply in Developing Countries team. Purdue Univ. Course: CE 597.
3. **Hawes, JK**. 2016. Safe Water in Developing Countries: Rethinking Water Supply from the Lab to Las Canas. September Presentation to the Environmental and Ecological Engineering External Advisory Council, Purdue University.
2. Ma, Z, **Hawes, JK**, Clarke, M, Nixon, R, Domenech, J. Oct. 2017. Invited guest lecture: Introduction to Natural Resources Social Science. Purdue Univ. Course: Introduction to Nat. Resources and Environmental Science.
1. Schirm, V, **Hawes, JK**, Russel, M. September 2018. Invited guest lecture: Deep Leadership and Applying for International Scholarships and Grants. Purdue Univ. Course: EEE 290, Professional Development Seminar.

Selected Presentations

Mentee at time of research; *Graduate student at time of research*

25. *Hossain, Md Ismail*, **JK Hawes,** Jeff Hamerlinck. Digital Twins for Smart Rural Places. American

Association of Geographers (AAG) Annual Meeting, March 2026, San Francisco, CA. Oral research presentation.

24. *Pantha, Sandip,* **JK Hawes.** Social Vulnerability in Wyoming. American Association of Geographers (AAG) Annual Meeting, March 2026, San Francisco, CA. Oral research presentation.
23. **Hawes, JK,** Dimitrios Gounaridis, Joshua P Newell, Matthew Liesch. Advanced Methods for Detection and Tracking of Amenity-Driven Gentrification. American Association of Geographers (AAG) Annual Meeting, March 2026, San Francisco, CA. Oral research presentation.
22. **Hawes, JK,** Dimitris Gounaridis, Benjamin Goldstein, Joshua P. Newell**.** The Role of Industrial Ecology in Understanding Tradeoffs Across Urban Agriculture Futures. International Society for Industrial Ecology, June 2025, Singapore. Oral research presentation.
21. **Hawes, JK.** Federal Policy in Urban Greening. American Association of Geographers (AAG) Annual Meeting, April 2025, Detroit, MI. Oral research presentation.
20. **Hawes, JK**, Benjamin Goldstein, Joshua P. Newell. Comparing the carbon footprints of urban and conventional agriculture. Gordon Research Conference on Industrial Ecology, May 2024, Les Diablerets, Switzerland. Poster research presentation.
19. **Hawes, JK**, Dimitris Gounaridis, Benjamin Goldstein, Joshua P. Newell. Understanding sustainability, resilience, and justice synergies and tradeoffs across urban agriculture futures. American Association of Geographers (AAG) Annual Meeting, March 2024, Online presentation to conference in Honolulu, HI. Oral research presentation.
18. **Hawes, JK**, Dimitris Gounaridis, Benjamin Goldstein, Joshua P. Newell. Evaluating sustainability, resilience, and justice tradeoffs across urban agriculture futures. American Geophysical Union Annual Meeting, December 2023, San Francisco, CA. Poster research presentation.
17. **Hawes, JK**, Dimitris Gounaridis, Benjamin Goldstein, Joshua P. Newell. Spatial metabolism of urban agriculture. American Association of Geographers (AAG) Annual Meeting, March 2023, Denver, CO. Oral research presentation.
16. **Hawes, JK**, Dimitris Gounaridis, Benjamin Goldstein, Joshua P. Newell. Spatial metabolism of urban agriculture. American Geophysical Union Annual Meeting, December 2022, Chicago, IL. Oral research presentation.
15. **Hawes, JK**, Benjamin Goldstein, Dimitris Gounaridis, Joshua P. Newell. Spatial metabolism enables more just, sustainable urban agriculture. Gordon Research Conference on Industrial Ecology, June 2022, Maine, USA. Poster research presentation.
14. **Hawes, JK**, Dimitris Gounaridis, Benjamin Goldstein, Joshua P. Newell. Spatial metabolism of urban agriculture. AAG Annual Meeting, February 2022, online. Oral research presentation.
11. **Hawes, JK**, Joshua P. Newell. Spatial Planning for Hybrid Infrastructures: The case of urban agriculture. AAG Annual Meeting, April 2021, online. Oral research presentation.
10. **Hawes, JK**, Zhao Ma, Rebecca Nixon, and Morey Burnham. Adaptation, Tradeoffs, and Cross-cultural Value Systems. AAG Annual Meeting, April 2020, online. Oral research presentation.
9. **Hawes, JK**, Benjamin Goldstein, Dimitris Gounaridis, Joshua P. Newell. Evaluating the multi-dimensional sustainability of urban agriculture through comparative case study. MUSE Annual Conference, February 2020, Ann Arbor, MI. Oral research presentation.
8. **Hawes, JK**, Zhao Ma, Rebecca Nixon, and Morey Burnham. Tradeoffs in Adaptation Decision

Making: Testing a new analytical lens in the Eastern Snake Plain of Idaho. Sustainability and Development Conference, October 2019, Ann Arbor, MI. Oral research presentation.

7. **Hawes, JK**, Rebecca Nixon, Zhao Ma, and Morey Burnham. Multi-scalar trade-offs in adaptation decision-making in the Eastern Snake River Plain, Idaho and Khyber Pakhtunkhwa, Pakistan. International Symposium on Society and Resource Management (ISSRM), June 2019, Oshkosh, WI. Oral research presentation.
6. **Hawes, JK**, Zhao Ma, David Yu, and Morey Burnham. Understanding farmer adaptation to water scarcity and climate change: Improving decision-making in agent-based models of coupled natural and human systems. AAG Annual Conference, April 2019, Washington, DC. Oral research presentation.
5. **Hawes, JK**, Zhao Ma, David Yu, and Morey Burnham. Using empirically-grounded agent-based modeling to assess decision-making theories for farmer adaptation to water scarcity. ISSRM, 19 June 2018, Snowbird, UT. Oral research presentation.
4. **Hawes, JK**, Zhao Ma, David Yu, and Morey Burnham. Understanding farmer adaptation to water scarcity and climate change: Improving decision-making in agent-based models of coupled natural and human systems. AAG Annual Conference, 11 April 2018, New Orleans, LA. Oral research presentation.
3. **Hawes, JK**, Whelton, AJ. Premise Plumbing Decontamination: New Lessons from the Field and Purdue University's Pilot-Scale Testing Facility. Water Quality Technology Conference, 15 Nov, 2016, Indianapolis, IN. Oral research presentation.
2. **Hawes, JK**, Caprio, A, Busse, M. Water Supply in the Dominican Republic. Innovation for International Development Lab Exposition, 1 April, 2017. Awarded Top Poster Presenter.
1. **Hawes, JK**, Blatchley, E. Direct and Indirect UV Disinfection: Life Cycle Impacts for Use in Developing Countries. Summer Undergraduate Research Fellowship Symposium, 4 August, 2016. Awarded Top Oral research presentation.

Extension and Outreach Publications

3. **Hawes, JK**, BP Goldstein, and JP Newell. "Urban Agriculture Isn't as Climate-Friendly as It Seems – but These Best Practices Can Transform Gardens and City Farms." The Conversation, January 22, 2024. https://theconversation.com/urban-agriculture-isnt-as-climate-friendly-as-it-seems-but-these-best-practices-can-transform-gardens-and-city-farms-221537.
2. Fox-Kämper, Runrid, Kathrin Specht, Silvio Caputo, **Jason K Hawes**, Agnès Lélièvre, Nevin Cohen, and Lidia Poniży. "Roadmap to Resource Efficient Urban Agriculture." Zenodo, August 24, 2022. https://zenodo.org/record/6622125.
1. Bly, Dr. Bridget, Dr. Constance Cook, Jim Kosteva, Sandra Sorini Elser, J.D., **Jason Hawes**, Charlie Beall, and Alyson Grigsby. "Final Report on Redistricting Activities." Voters Not Politicians, September 1, 2022. https://docs.google.com/document/d/1t8-jxuIiI9ZQeXcMu8Iu6-_3yuJflMlQBqKsAVJ4sog/edit?pli=1.

Extension and Outreach Presentations

2. **Hawes, JK**, Dimitris Gounaridis, Benjamin Goldstein, Joshua P. Newell. Resource-Efficient Urban

Agriculture. Policymaker Webinar – FEW-meter project, October 2021, online. Oral extension presentation.

1. **Hawes, JK**, Dimitris Gounaridis, Benjamin Goldstein, Joshua P. Newell. Environmental Footprint of Urban Agriculture. Farmer/Gardener Outreach Workshop – FEW-meter project, April 2021, online. Oral extension presentation.

Datasets

2. **Hawes, Jason K.**, Benjamin P. Goldstein, Joshua P. Newell, Erica Dorr, Silvio Caputo, Runrid Fox-Kämper, Baptiste Grard, et al. "Data for: Comparing the Carbon Footprint of Urban and Conventional Agriculture." University of Michigan - Deep Blue Data, January 4, 2024. https://doi.org/10.7302/yjtn-gq37.
1. **Hawes, Jason K.**, Rebecca Johnson, Lindsey Payne, Christian Ley, Caitlin A. Grady, Jennifer Domenech, Carly D. Evich, et al. "Data for: Global Service-Learning: A Systematic Review of Principles and Practices [Data Set]." University of Michigan - Deep Blue Data, January 1, 2022. https://doi.org/10.7302/wazb-wk46.

Fundraising and Grant History (successful experience only)

15. **WIHR Seed Grant: AI for Wyoming** – PI – Univ of Wyoming - $30,000 – January 2026
14. **Alaska Railbelt Critical Assets Project (ARCAP), Port of Alaska** – PI – ADAC Arctic– $142,000 – January 2025
13. **Assessing the potential for controlled environment agriculture to support grid balancing and reduce food costs in renewable energy futures** – PI – University of Wyoming Internal Seed Grant – $30,000 – January 2025
12. **Assessing blue gentrification in Michigan's coastal communities** – Co-PI – Michigan Sea Grant - $220,000 –September 2023
11. **Graduate Student Professional Development Grant** – Sole author – University of Michigan Rackham Graduate School - $400 – June 2022
10. **Graduate Student Travel Grant** – Sole author – University of Michigan Rackham Graduate School & School for Environment and Sustainability - $1,000 – Nov. 2019, Nov. 2021, Nov. 2022
9. **Graduate Student Research Grant** – Sole author – University of Michigan Rackham Graduate School & School for Environment and Sustainability - $1,500 – Jan. 2021
8. **Ecological Sciences and Engineering Symposium Fundraising** – *Sought from donors as chair of event* - $21,000 – 2018-2019
7. **Purdue Climate Change Research Center Travel Grant**— Sole author – Purdue Climate Change Research Center—$1,500—Nov. 2018
6. **Blosser Environmental Travel Grant** – Sole author – Purdue University—$1,500 – Nov. 2018
5. **Anderson Rotary Club** – Project Supplemental Support Grant – Anderson, IN Rotary Club—$1,000– August 2018
4. **Purdue Climate Change Research Center Travel Grant**— Sole author – Purdue Climate Change Research Center—$1,500—Nov. 2017
3. **Andrews Environmental Travel Grant**— Sole author – Purdue University—$1,500—Nov. 2017

2. **Hydrologists Helping Others Grant:** *sought on behalf of Water in the Dominican Republic team*—Purdue University, Department of Earth, Atmospheric, and Planetary Sciences—$20,000—March 2017
1. **Purdue Service-Learning Grant:** *sought repeatedly on behalf of Water in the Dominican Republic team*—Purdue University, Center for Instructional Excellence – Received six times between 2015 and 2018—$1,500 each time

Awards and Honors

Presidential Research Excellence Award for Early Career Faculty – University of Wyoming – May 2026
Poverty Solutions Fellowship – University of Michigan Ford School of Public Policy – April 2023
Rackham Pre-Doctoral Fellow—University of Michigan—March 2023
Outstanding Graduate Student Instructor for the Program in the Environment – University of Michigan, PiTE– May 2021
Chappelle Fellow—Purdue University—March 2017

- Awarded to a small group of graduate applicants from Purdue University, the Charles C. Chappelle Award is selected on the basis of character, intellectual ability, and promise of degree attainment.

Black and Veatch, Building a World of Difference Award Winner—American Water Works Association—June 2016

- Awarded to one student nationally, the Building a World of Difference Award recognizes academic and research achievement in the drinking water field.

Outstanding Senior Student—Purdue University, Division of Environmental and Ecological Engineering—April 2017
I2D Expo Top Poster Presenter—Purdue University, Innovation for International Development—April 2017
Summer Undergraduate Research Fellowship Top Research Presenter —Purdue University—August 2016
Beering Scholar—Purdue University—April 2013

- Awarded to between 8 and 10 incoming freshmen, the Steven C. Beering Award honors academic achievement, service to community, and other exceptional performance prior to entering the University.

Eagle Scout—Boy Scouts of America—October 2012

Selected media coverage of research

12. Carolis, Roberta De. “Gli orti urbani producono emissioni sei volte maggiori di quelli di campagna, lo studio.” greenMe, January 27, 2024. https://www.greenme.it/ambiente/agricoltura/orti-urbani-emissioni-sei-volte-maggiori/.
11. Elbein, Saul. “Urban Agriculture Beats Conventional Agriculture on Climate — If It’s Done Right.” Text. The Hill, January 22, 2024. https://thehill.com/policy/equilibrium-sustainability/4418561-climate-carbon-urban-agriculture-versus-conventional-study/.

10. Hart, Robert. “Urban Farming Has A Shockingly High Climate Cost — Here’s How Growers Can Bring Carbon Down, According To Scientists.” Forbes, January 22, 2024. https://www.forbes.com/sites/roberthart/2024/01/22/urban-farming-has-a-shockingly-high-climate-cost---heres-how-growers-can-bring-carbon-down-according-to-scientists/?sh=4c4ac8b15400.
9. Lopes, Helder. “Agricultura urbana e o desafio da sustentabilidade. Pegada de carbono e práticas para um futuro mais verde.” Meteored, January 23, 2024. https://www.tempo.pt/noticias/ciencia/agricultura-urbana-e-o-desafio-da-sustentabilidade-pegada-de-carbono-e-praticas-para-um-futuro-mais-verde-ambiente.html.
8. Sica, Julia. “Wenn Gemüse aus der Stadt weniger nachhaltig ist als Lebensmittel vom Land.” Der Standard, January 23, 2024. https://www.derstandard.at/story/3000000204088/wenn-gemuese-aus-der-stadt-weniger-nachhaltig-ist-als-lebensmittel-vom-land?ref=nl.
7. The Conversation. “Your Community Garden May Not Be That Climate-Friendly. Here’s How to Make It Better for the Environment.” Fast Company, January 22, 2024. https://www.fastcompany.com/91014808/your-community-garden-may-not-be-that-climate-friendly-heres-how-to-make-it-better-for-the-environment.
6. Timmer, John. “Urban Agriculture’s Carbon Footprint Can Be Worse than That of Large Farms.” Ars Technica, January 23, 2024. https://arstechnica.com/science/2024/01/urban-agricultures-carbon-footprint-can-be-worse-than-that-of-large-farms/.
5. Simon, Matt. “You Can Turn Your Backyard Into a Biodiversity Hot Spot.” Wired, February 27, 2023. https://www.wired.com/story/you-can-turn-your-backyard-into-a-biodiversity-hotspot/
4. Huffman, B. (2022, September 27). Detroit has plenty of land. Do residents have equal access? BridgeDetroit. http://www.bridgedetroit.com/detroit-has-plenty-of-land-do-residents-have-equal-access/
3. Conte, C. (2022, September 21). The impacts of urban gardening on gentrification. Denver 7 Colorado News (KMGH). https://www.denver7.com/news/national/the-impacts-of-urban-gardening-on-gentrification (produced by Scripps Media and shown on local news channels across the USA)
2. Brasuell, J. (2022, June 3). No Connection Between Gardens and Gentrification in Detroit, Study Says. https://www.planetizen.com/news/2022/06/117368-no-connection-between-gardens-and-gentrification-detroit-study-says
1. Batcheller, P. (2022, June 2). Urban gardens don’t lead to gentrification in Detroit, study says. WDET 101.9 FM. https://wdet.org/2022/06/02/urban-gardens-dont-lead-to-gentrification-in-detroit-study-says/

Academic Service

University of Wyoming

1. **University of Wyoming Faculty Senate – School of Computing Representative**– 2025-2028
2. **University of Wyoming AI in Teaching Committee** – Spring 2025 – Present
3. **Department of Kinesiology and Health Hiring Committee (Joint with SoC) – Member** – Fall 2025

4. **UW In Your Community – Faculty Representative, Pinedale, WY** – October 2025
5. **Hoskinson Health Clinic Engagement Exercises – Faculty Representative** – October 2025

Professional Societies

1. **Human Dimensions of Global Change Specialty Group** –Treasurer– American Association of Geographers **–** March 2024 to March 2026
2. **International Society for Industrial Ecology** – Conference Scientific Steering Committee – ISIE – August 2024 – June 2025
3. **Gordon Research Symposium, Industrial Ecology** – Co-Chair – Gordon Research Conferences and the International Society for Industrial Ecology – June 2024
4. **Multi-Sector Dynamics Human Systems Modeling Working Group** – Member – American Geophysical Union **–** May 2023 to Present
5. **Human Dimensions of Global Change Specialty Group** – Student Board Member – American Association of Geographers **–** March 2022 to April 2024
6. **Organized Session – Lead Author and Organizer** – ISSRM 2019 (June 2019) – Session title: Examining multi-scalar adaptation to social-ecological change in food-energy-water systems (FEWS)
7. **International Association for Society and Natural Resources (IASNR) Student Affairs Committee** – Professional Development Committee – Fall 2017 to June 2019

University of Michigan

6. **School for Environment and Sustainability (SEAS) Specializations Committee – Member** – Calendar Year 2022
7. **SEAS Chief Diversity Officer Hiring Committee – Member** – July 2021
8. **SEAS DEI Student Support position Hiring Committee – Member** – May 2021
9. **SEAS Doctoral Organizing Committee – Chair** – Calendar Year 2021 – Responsibilities: Lead Doctoral Organizing Committee, facilitating new initiatives in professional development, community-building, outreach, and DEI. Also responsible for overseeing DOC budget and serving as PhD community liaison.
10. **SEAS Doctoral Organizing Committee – Seminar Chair** – Calendar Year 2020 – Responsibilities: Oversaw and facilitated the planning and implementation of weekly professional development and community-building seminars for the SEAS PhD community. Also served on the Doctoral Organizing Committee, involved with COVID-19 response, DEI efforts, and annual event planning
11. **SEAS Fall 2020 COVID Response Committee – Student Member** – Summer 2020 – Responsibilities: Served as PhD student representative and advocate during planning

Purdue University

1. **Ecological Sciences and Engineering Symposium – Co-Chair** – Fall 2017 to Spring 2019 – Responsibilities: Oversaw and facilitated the planning, design, and implementation of an annual symposium for interdisciplinary environmental scholars, included fundraising and oversight of a

budget exceeding $20,000

2. **Water in the Dominican Republic Service Learning Project – Project Manager** (Spring 2017) and Design Lead (Spring 2016 - Spring 2018)

Peer review

Completed peer reviews for more than 20 different publications, including leading journals in geography, engineering, and computing: *Nature Communications, Environmental Science and Policy*, *Environmental Research Letters*, *Journal of Environmental Management*, *Landscape and Urban Planning*, *Urban Forestry and Urban Greening*

Employment History

Research Positions

1/2024 – 12/2024 **Critical Infrastructure Analyst** – Idaho National Laboratory

- Key responsibilities included: Identification and assessment of critical infrastructure across the US for various clients; Design of data-driven, spatial analytics; Communication of results through cartography and client-facing reports

9/2019 – 8/2024 **Graduate Research Assistant** —Urban Sustainability Research Group—School for Environment and Sustainability, University of Michigan—Advisor: Joshua Newell

- Dissertation research focus: Investigation of the sustainability, resilience, and justice tradeoffs associated with changes in urban social and material systems that result from changes to one selected resource provisioning system. Studying this via a series of case studies of urban agriculture. Conducting a life cycle assessment of urban agriculture in seven case study cities in US and Europe. Employing empirical data collected by citizen science and spatial data from secondary sources to assess the potential for scaling in case study cities, as well as the long-term implications of urban agriculture on the urban metabolism of the city.

5/2017 - 8/2019 **Graduate Research Assistant** —Human Dimension of Natural Resources Lab—Forestry and Natural Resources as member of Ecological Science and Engineering Interdis. Grad. Program, Purdue University——Advisor: Zhao Ma

- Primary research focus: Investigated the social and cognitive dimensions of water scarcity adaptation among farmers in the Eastern Snake River Plain of Idaho. Conducted three primary projects in collaboration with researchers at Idaho State University and Purdue:
  - Parameterization of agent-based modeling using social cognitive theory and secondary data in the context of adaptation in

agriculture;
- Qualitative investigation of adaptation decision making and the role of tradeoffs in decision making; and
- Quantitative characterization of the vulnerability of farmers to sudden onset water scarcity and analysis of the drivers of such vulnerability.

6/2016 - 7/2017 **Undergraduate Research Assistant** —Summer Undergraduate Research Fellowship: Functionality and Life-Cycle of Analysis of Four Direct and Indirect UV Disinfection Technologies for Use in Developing Countries– Dr. Ernest "Chip" Blatchley—Purdue University

- Led Life-Cycle Analysis (LCA) portion of two-part project researching the functionality and environmental and economic sustainability of UV disinfection technologies in developing countries. To assess life cycle impacts, conducted LCA using existing functionality data

9/2014 - 1/2017 **Undergraduate Research Assistant** —Biocide Degradation of HDPE pipe, Leaching of Contaminants from PEX pipe, and Pilot-Scale Decontamination of Premise Plumbing Systems– Dr. Andrew Whelton—Purdue University

- Premise Plumbing Decontamination: Led project laying foundation for science-based premise plumbing flushing guidance. Publication focused on premise plumbing flow-rate analysis and pilot-scale tests of flushing fully contaminated water heaters to determine flushing time required to make a premise plumbing system safe for use after large-scale drinking water contamination events. Analyzing model presented by Casteloes in journal of the Royal Society of Chemistry. Results presented at AWWA Annual Conference and Exhibition, (ACE) 2016 and published in Journal AWWA, August 2017.
- Role of Water Temp. and pH in PEX Drinking Water Quality Impacts: Co-led PEX pipe exposure experiment to identify and determine concentrations of leachates from drinking water pipe. Results presented at AWWA ACE, 2016.
- Biocide-Induced Aging of HDPE Cooling Water Pipe: Private Report Submitted (January 2016): Constructed and operated HDPE pipe loop to investigate the effects of bromine and chlorine on cooling tower plumbing systems.

Teaching Positions

8/2022 – 5/2024 **Graduate Student Mentor** —Program in the Environment—University of Michigan

- Train first-time Graduate Student Instructors to teach effectively and

equitably.
- Conduct observations and student surveys to evaluate and support first-time Graduate Student Instructors

Fall 2020, Fall 2021, Fall 2022 — **Graduate Student Instructor**—Environ 207: Society and Sustainability—Program in the Environment, University of Michigan—Fall 2020, Fall 2021, Fall 2022—Lead instructor: Joshua Newell
- Responsible for teaching three discussion sections and grading all course materials.
- In Summer 2021, participated in a "Decolonizing Curriculum" initiative and led significant overhaul of course syllabus.
- Taught course online in Fall 2020, Hybrid in Fall 2021, In-person in Fall 2022
- Served as co-instructor in Fall 2022

Consulting and Extension

1/2023 - Present — **Social Science Consultant**—Southwick Consultants—Supervisor: Dr. Lou Cornicelli
- Constructing surveys and conducting data analysis for natural resources conservation and recreation.
- Producing written reports on best practices and lessons learned for use by Southwick clients

1/2022 - 6/2022 — **Evaluation Consultant**—Voters Not Politicians—Supervisor: Dr. Connie Cook
- Designed and led an evaluation process centered on the redistricting outreach efforts conducted by VNP between 2019 and 2021.
- Cleaned and analyzed submissions to the public comment portal. Included sentiment analysis across space and time.
- Produced written deliverables on best practices in redistricting for non-profits and government.

Previous Work History

3/2015 - 7/2016 — **Sustainability Intern**—Clerical work and research in Sustainability at the University Level— Global Sustainability Institute – Dr. Ron Turco—Purdue University

1/2017 - 8/2017 — **Student Environmental Technician** – Purdue University Radiological and Environmental Management

5/2014 - — **Summer Intern**—Design Engineering—LMC Workholding, Logansport, IN

8/2014

6/2013 - 8/2013 **Summer Intern**—Robotics Research and Development—Myers Spring Company, Logansport, IN

Languages and Applied Skills

Languages

English – Native

Spanish – Limited working proficiency spoken, working proficiency written

Applied Skills

Levels of expertise divided into categories of Basic, Moderate, and Advanced. "Basic" refers to familiarity with the tool or method equivalent to expertise approximately resembling an introductory course. "Moderate" refers to familiarity and skill with the tool or method beyond that which is gained through an introductory workshop or course, most often due to experience gained through research or involvement in a team project requiring creative application of the tool or method. "Advanced" refers to extensive application of the method or tool in a research context, requiring expertise beyond that which is traditionally associated with the tool or method (e.g. implementation of multiple imputation in R or generation of novel decision-making algorithms in Agent-Based modeling). Further details provided under each item as necessary and examples of work available upon request.

Methodological Expertise

- Quantitative Social Science:
  - Household survey development – Advanced
    - Experience in industrialized and industrializing settings
  - Fuzzy Cognitive Modeling – Moderate
  - Delphi Consensus Method – Basic
  - Advanced statistical analysis – Multiple Imputation, Linear Regression, Structural Equation Modeling, Cluster Analysis, Descriptive Analysis – Experience varies by method
- Qualitative Social Science:
  - Semi-structured interviews – Advanced
    - Development and execution
- Computational Social Science:
  - Agent-based modeling – Advanced
- Spatial Science:
  - Spatial multi-criteria analysis – Advanced
  - Manual and automated remote sensing – Moderate
- Systematic Literature Review – Advanced
- Workshop Design and Implementation – Moderate
- Analytical Environmental Chemistry – Moderate
  - Methods development and use experience with LCMS, Spectrophotometry, Organic

Carbon analysis, and traditional field-based water testing techniques.

- Field Ecology – Basic
    - Sampling, surveying, and taxonomy methods developed in advanced population ecology coursework – no formal research experience

Software Expertise

- R – Statistical Analysis – Advanced
- Python – Statistical and Spatial Analysis, AI/ML – Advanced
- NetLogo – Agent-Based Modeling – Advanced
- Microsoft Office Suite (including Word, PowerPoint, Excel, Publisher, and Access) – Advanced
- ArcGIS (Pro) and QGIS – Spatial Analysis – Advanced
- Slack – Project Communication – Moderate
- NVivo – Qualitative Content Analysis – Moderate
- SimaPro – Life Cycle Assessment – Moderate
- Basecamp – Project Management – Moderate
- Stata – Statistical Analysis – Moderate
- Rayyan – Abstract Review – Moderate
- Google Sites and WordPress – Website Design– Moderate
- Adobe Creative Suite (including InDesign, Photoshop, and Illustrator) – Graphic Design – Moderate
- MATLAB – Computational Analysis – Basic
- Stella – Systems Modeling Platform – Basic