

# Libby Kula

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## EDUCATION

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**Ph.D. Applied Economics, University of Minnesota**, St. Paul, Minnesota.

ADVISORS: Stephen Polasky & Justin A. Johnson

ALL BUT DISSERTATION: May 2024

EXPECTED COMPLETION: May 2026

**B.S. Economics & Mathematics, St. Catherine University**, St. Paul, Minnesota, 2019. *Summa cum laude*.

## DISSERTATION

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Urban nature provides numerous benefits to people. Urban vegetation provides cooling that lessens the urban heat island reducing heat stress and energy bills and stormwater retention that lessens urban flooding. Urban green spaces also provide valuable mental and physical health benefits. Quantifying and monetarily valuing these urban ecosystem services is not straightforward, however. In my dissertation, I model and economically value a subset of urban ecosystem services across all 380 U.S. metropolitan areas for the years 2001, 2011, and 2021. I estimate that urban ecosystem services declined sharply over the 2001-2011 period, with more modest declines from 2011 to 2021. In my second chapter, I measure the inequality in the distribution of these services across various socioeconomic groups. Furthermore, I show what an urban greening project's optimal land parcel allocations would be under various welfare frameworks (utilitarian, egalitarian, prioritarian, or sufficientarian) based on the level and distribution of ecosystem services.

## RESEARCH EXPERIENCE

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**Graduate Research Assistant**, Dept. of the Interior, Office of Policy Analysis. Jan. 2023-Aug. 2024

Project: "Accounting for Environmental Justice and Equity within Natural Capital Accounts."

Supervisor: Robert Richardson

**Graduate Research Assistant**, U. of Minnesota, Center on Women, Gender, & Public Policy. June-Aug. 2021

Project: "Status of Women & Girls in Minnesota Report."

Supervisor: Christina Ewig

**Pre-Doctoral Research Assistant**, St. Catherine U., Economics & Political Science Dept. Jan.-Aug. 2020

Project: "An investigation of Jordan's fertility stall and resumed decline: The role of proximate determinants."

Supervisor: Caroline Krafft

## TEACHING EXPERIENCE

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**Full-Time Instructor**, Economics & Political Science Dept., St. Catherine University. Sept. 2024-May 2025

**Teaching Assistant**, Applied Economics Dept. 8001-02. Sept.-Dec. 2022

**Teaching Assistant**, Applied Economics Dept., 1101. Jan.-May 2022

**Teaching Assistant**, Applied Economics Dept., 1101 Honors. Sept.-Dec. 2021

## PROFESSIONAL EXPERIENCE

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**Program Coordinator**, Minnesota Center for Diversity in Economics. Jan.-Aug. 2020

## PUBLICATIONS

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*Refereed Journal Publications:*

Caroline Krafft, Kristine West, Ashley McFarlane, **Elizabeth Kula**, Fardowsa Abdinoor, Morgan Weyrens-Welch, and Karri Drain. 2022. "Virtually nonexistent: Gender and racial representation in online K-12 economics lessons." *Eastern Economic Journal*.

Caroline Krafft, **Elizabeth Kula**, and Maia Sieverding. 2021. "An investigation of Jordan's fertility stall and resumed decline: The role of proximate determinants." *Demographic Research* 45(19): 605-652.

*Un-refereed Publications:*

Christina Ewig, Youngmin Chu, **Libby Kula**, and Joseph Ritter. 2022. "2022 Status of Women & Girls In Minnesota." Women's Foundation of Minnesota and the Center on Women, Gender, and Public Policy of the Humphrey School of Public Affairs. Report.

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## WORK IN PROGRESS

**Libby Kula**, Ben Janke, Justin A. Johnson, Yanxu Long, Eric Lonsdorf, Chris Nootenboom, & Stephen Polasky. In Progress. "Urban ecosystem services in decline: The cost of urban expansion in U.S. metropolitan areas from 2001 to 2021."

**Libby Kula**. In Progress. "How equitably are ecosystem services distributed in U.S. metropolitan areas?" Jay Coggins, Manlin Cui, **Libby Kula**, Yanxu Long, and Mwaso Mnensa. In Progress. "Fill Three Needs with One Deed: Energy Transmission for Energy Equality, Climate Change, and Poverty Alleviation."

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## PRESENTATIONS

"How Equitably Are Ecosystem Services Distributed in U.S. Metropolitan Areas?" (Dec. 2024). *A Community on Ecosystem Services Conference*.

"How Equitably are Ecosystem Services Distributed in U.S. Metro Areas? Incorporating Environmental Justice Into Federal Natural Capital Accounting." (June 2024). *United States Society for Ecological Economics 13<sup>th</sup> Conference*.

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## PROFESSIONAL DEVELOPMENT

**Graduate Scholar Program**, Institute on the Environment, U. of Minnesota. Sept. 2023–May 2024

**Berkeley/Sloan Summer School in Environmental and Energy Economics**, UC Berkeley. Aug. 2023

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## COMMUNITY INVOLVEMENT

**Women in APEC**, Dept. of Applied Economics, U. of Minnesota. Sept. 2023–Present

**NatCap The Earth Economy Modelers**, U. of Minnesota. Aug. 2020–Present

**Advisory Board**, Minnesota Center for Diversity in Economics (MCDE). Aug. 2020–Present

**Assistantship Mentoring Program**, St. Catherine University. Aug. 2024–May 2025

**Communications Committee**, Dept. of Applied Economics, U. of Minnesota. Sept. 2022–May 2023

**C-FEM Mentorship Program** (for a total of 15 young women in economics), MCDE. Jan. 2020–Sept. 2023

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## HONORS & AWARDS

**2025 Borealis Award for Exemplary Student Organization (graduate)**. College of Food, Agricultural and Natural Resource Sciences, U. of Minnesota.

**2022-2023 Graduate Assistant Teaching Award**. College of Food, Agricultural and Natural Resource Sciences, U. of Minnesota.

**2021-2022 Teaching Assistant Award for 1000 Level Classes**. Dept. of Applied Economics, U. of Minnesota.

**2020–2021 Mary A. and Robert B. Litterman Endowed Fellowship**. Dept. of Applied Economics, U. of Minnesota.

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## TECHNICAL SKILLS

Software: MSI (Supercomputer), Urban InVEST, Pygeoprocessing, QGIS, Stata, Zotero.  
Programming Languages: Python, R, TeK.