

# Andie M. Creel

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## EDUCATION

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**Yale School of the Environment**, New Haven, CT

PhD in Environmental Economics, Expected 2026

Committee: Eli P. Fenichel (Chair), Kenneth Gillingham and Arianna Salazar-Miranda

*Dissertation Title: Essays on the Value of Outdoor Recreation and Green Space*

**Yale School of the Environment**, New Haven, CT

Master of Environmental Science, 2021

*Thesis Title: People Use Park with People: Usage Change during the COVID-19 Pandemic*

**Montana State University**, Bozeman, MT

Bachelor of Science in Economics, Summa Cum Laude, 2018

Minor in Computer Science

## JOB MARKET PAPER

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### Do Hot Deals Beat the Heat? Does Green Space Keep Bringing in the Green?

**The Effects of Heat and Green Space on City Storefronts:** Climate change is increasing the frequency and intensity of extreme heat events, particularly in cities where the urban heat island effect amplifies high temperatures. This paper estimates the causal effect of temperature on daily revenue at over 15,000 consumer-facing storefronts in the 49 largest U.S. cities between 2019 and 2023. Revenue begins to decline on days with a maximum temperature above 35 °C (95 °F) and drops by 9 percent on hot days above 37.5 °C (99.5 °F), relative to the average revenue on a 20 °C (68 °F) day. Substituting spending across days mitigates some damage from an extreme heat event, but a 1.3 percent revenue drop is persistent for two weeks following an extremely hot day. I examine the role of urban green space as an ex ante climate adaptation strategy because temporal substitution does not mitigate the negative effect of extreme heat ex post. I find that a one percent increase in surrounding tree cover raises revenue by 0.94 percent on extremely hot days due to its cooling effect. Moving from zero-percent tree cover to a 10 percent scenario completely mitigates the revenue loss from a 37.5 °C day, and halves the loss from a 40 °C day. Storefronts located in the Southwest and South have the most to gain from urban tree cover. The average business in this region can cover the cost of moving to a 10 percent tree cover scenario in four years with the avoided revenue losses. This length of time shortens under projected climate scenarios. These results suggest that green infrastructure can improve firm resilience to heat, providing evidence of a private incentive to finance public urban green space that could simultaneously provide a positive externality.

## WORK IN PROGRESS

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1. The National Value of Local Outdoor Recreation over the Past 20 Years (Dissertation Chapter)
2. Measuring the Value of Outdoor Recreation for National Environmental-Economic Statistics (with Eli P. Fenichel and Jorge Forero Fajardo)

## PUBLICATIONS

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Creel A. M. (2025). Muller et al., eds., Measuring and Accounting for Environmental Public Goods, Chap. 7 Comment. *National Bureau of Economic Research Book, University of Chicago Press.*

Creel, S., Creel, N. M., Creel, A. M., & Creel, B. M. (2016). Hunting on a hot day: effects of temperature on interactions between African wild dogs and their prey. *Ecology*, 97(11), 2910-2916.

## RESEARCH FELLOWSHIPS

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- 2024** Graduate Research Fellow, **Property and Environment Research Center** (PERC), Bozeman, MT.
- 2022** Graduate Research Fellow to **Eli P. Fenichel**, Yale School of the Environment and **Jude Bayham**, Colorado State University. *Analyzed mobility data on the daily dairies of individuals to identify close contacts of meat packer employees during the COVID-19 pandemic.*
- 2021** Research Associate to **Margaret Walls**, Resources for the Future, Washington D.C. *Examined distribution of Land Water Conservation Funds across sub-populations.*
- 2019** Graduate Research Associate to **Kerwin Charles**, Yale School of Management, New Haven, CT. *Collected primary source data to analyze the effect of closing Black hospitals during desegregation.*

## CONFERENCE AND SEMINAR PRESENTATIONS

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- 2025** CU Environmental and Resource Economics Workshop, Vail, CO  
Camp Resources, Asheville, NC  
AERE Summer Conference, Santa Ana Pueblo, NM  
Northeast Workshop on Energy Policy and Environmental Economics, New Haven, CT  
W5133 Economic Valuation and Management of Natural Resources, Burlington, VT
- 2024** Invited Speaker, Western Community and Connections Seminar Series, Yale School of the Environment  
PERC Summer Seminar, Bozeman, MT
- 2023** Camp Resources, Asheville, NC  
OSWEET Series: April 28
- 2021** OSWEET Series: August 27  
PERC Seminar Seminar, Bozeman, MT  
AERE Summer Conference (Virtual due to COVID-19 Pandemic)

## SELECT AWARDS AND HONORS

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- 2025** Institute for Humane Studies Expense Support Grant
- 2023** Yale Environmental Data Science Initiative Small Grant  
Teaching Fellow Award for Excellence, Yale School of the Environment  
Yale Institute for Biospheric Studies Small Grant  
Spring Alumni Feature, Montana State University Economics Departments' Magazine. [Link.](#)
- 2021** Class of '21 Student Highlight, Yale School of the Environment. [Link.](#)
- 2020** Alumni Association Board Scholarship, Yale School of the Environment  
Schiff Fund for Wildlife, Habitat and Biodiversity Research, Yale School of the Environment
- 2019** Merit Scholar, Yale School of the Environment  
Runner-Up for Best Digital Reporting, International Association of Fire Fighters

## TEACHING EXPERIENCE

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- 2025** **Instructor, Certificate in Environmental Data Science, Yale School of the Environment**  
*Prepared and presented 8 lectures for the data foundations unit, February 2025.*

[Link to Lecture Notes](#)

**Instructor, Intro to Programming Workshop, Yale School of the Environment**

*Prepared and presented 6 lectures over 3 days, January 2024 and 2025*

4.7/5 average review from a total of 28 students.

[Link to Lecture Notes](#)

**2024 Graduate Teaching Fellow, ENV 762, Yale School of the Environment**

*Applied Math for Environmental Scientists, Fall 2023, 2024 and 2025*

4.8/5 average review from 11 students in 2023. 4.6/5 from 5 students in 2024.

[Link to Prepared Notes](#)

**Instructor, Intro to Excel for Environmental Science, Yale School of the Environment**

*Prepared and presented a two-hour workshop on using Excel for environmental problems, Summer 2024 and 2025*

**Lead Teaching Fellow for Community Orientation (aka MODs), Yale School of the Environment**

*Co-developed teaching material with faculty member for three-day course in environmental leadership, Summer 2023, 2024, 2025*

4.83/5 instructor average review from 53 students in 2024 (2023 and '25 surveys not available)

**Graduate Teaching Fellow, ENV 617, Yale School of the Environment**

*Real World Environmental Data Science, Spring 2024*

4.6/5 average review from 17 students

**2023 Graduate Teaching Fellow, ENV 795, Yale School of the Environment**

*Nature as Capital, Spring 2023*

5/5 average review from 16 students (Received Teaching Fellow Award for Excellence)

[Link to Prepared Notes](#)

**2020 Graduate Teaching Fellow, ECNS 330, Yale Economics Department**

*Natural Resource Economics, Fall 2020*

4.7/5 average review from 33 students

**2017 Undergraduate Peer Leader, ECNS 101, MSU Economics Department**

*Economic Way of Thinking, Spring, Fall 2017*

**Undergraduate Teaching Assistant, CSCI 111, MSU Computer Science Department**

*Introduction to Programming with Java, Spring 2017*

**2016 Undergraduate Teaching Assistant, ECNS 204, MSU Economics Department**

*Microeconomics, Spring, Summer, Fall 2015; Spring 2016*

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## PROFESSIONAL ACTIVITIES AND ACADEMIC SERVICE

**Referee** Journal of Environmental Economics and Management

**2024 – 2025 Student Representative on Faculty Search Committee, Yale School of the Environment**

Participated with 3 faculty members to hire an economist and coordinated student engagement

**2023 – 2024 Chair of Economics Student Interest Group, Yale School of the Environment**

- Recruited and hosted eleven student seminars and seven group dinners
- 2023 – 2024** **Supervisor to two Research Assistants**, Yale School of the Environment  
Managed an undergraduate and masters student on two separate research projects related to local recreation.
- 2023 – 2024** **Lead Student Coordinator for Western Community and Connect Center**, Yale School of the Environment  
Hosted 18 events for 600 Yale affiliates, created network opportunities with 10 faculty members/practitioners
- 2019 – 2021** **Secretary of BIOMES**, Yale School of the Environment  
Invited and hosted speakers to Yale School of the Environment's flagship seminar series
- 2020 – 2021** **Chair of the Student Affairs Committee**, Yale School of the Environment  
Revised bylaws to define and fund affinity groups, required leadership training for student organizations funded by SAC

## SELECT NONPROFIT EXPERIENCE

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- 2018 – 2025** **Backcountry Squatters**, Bozeman, MT  
*Founder, President of Board*  
Founded with the mission to grow college-aged women and non-binary folks' participation, leadership, and representation in the outdoor industry and community. Grown to have chapters at 13 universities, and over 2000 members or alumni during my presidency.
- 2020** **Madera/Chowchilla Resource Conservation District**, San Joaquin Valley, CA  
*Research Fellow*  
Contributed to the RCDs' strategic plan aimed at preserving working landowners' livelihoods while also addressing environmental stressors, primarily groundwater depletion.
- 2017 – 2019** **The Montana Engagement Partnership: Prairie Populist**, Bozeman, MT  
*Advocacy Journalist*  
Published one article per week highlighting the positive solutions coming out of Montana's rural communities.

## RELEVANT PODCASTS, LETTERS OF OPINIONS, AND TESTIMONY

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- December, 2024** "Andie — Letting Go of the Familiar to Make Room for What is Next"  
*What The Hell Do I Do Now?*  
[Link to Podcast](#)
- October, 2024** "Promoting the Theory and Practice of Environmental Conservation with the Future Dr. Andie Creel"  
*Heartwood Podcast*  
[Link to Podcast](#)
- February, 2020** "Let's Remain Optimistic in Search for Our Next President"  
*Letter to the Editor of the Bozeman Daily Chronicle*
- April, 2019** Testified at Montana State Senate Fish and Game Committee on SJ-7  
Study resolution on the value and costs of wolves and grizzlies in Montana  
[Link to video of testimony](#)  
Covered by the Billings Gazette
- May, 2018** "Open Space Reminds us to be Stewards of the Land"

*Letter to the Editor of the Bozeman Daily Chronicle*

- March, 2017**    Testified at Montana State House Natural Resources Committee on HJ-7 Resolution calling on Congress to release wilderness study areas across Montana  
Link to published testimony as a blog post
- January, 2017**    “Return the Favor and Protect Public Lands”  
*Letter to the Editor of the Bozeman Daily Chronicle*
- October, 2016**    “We Must Ask Ourselves, Where Will the Children Go?”  
*Opinion to the Editor of the Bozeman Daily Chronicle*