

Ashley C. Lowe Mackenzie

ENVIRONMENTAL ECONOMIST

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Objective

I am an Environmental Economist with research interests at the intersection of social and ecological systems, in particular public lands, natural resources, and outdoor recreation. My work leverages empirical frameworks within environmental economics, notably non-market valuation, benefit-cost analysis, and causal inferences. I've examined emerging public land management questions involving visitation and social media, public health advisories impact on the economic value of recreation and the prioritization of adaptation strategies to improve community resilience given challenges from sea level rise and ocean acidification.

Positions

2024-Present	Assistant Professor (I3) Non-Tenure University of Hawaii at Manoa Department of Natural Resources and Environmental Management
2023	Post Doctorate Fellow University of Hawaii at Manoa Department of Natural Resources and Environmental Management Kirsten Oleson ~ Oleson Lab

Education

2018-2023	Oregon State University Ph.D. Applied Economics Dissertation: "Understanding the New Outdoor Recreation Paradigm in the Era of Social Media and Increasing Public Health Advisories" Link to dissertation
2017-2020	Oregon State University MS Applied Economics Thesis: "Is Instagram Influencing Visitation to Public Lands?" Advisor: Steven Dundas
2008-2011	Portland State University BS Economic

Research Experience

2023	Postdoctoral Fellow at University of Hawaii Manoa This project is funded through NOAA Ocean Acidification Project. I am translating outputs of an ecological model into outcomes for Hawaii's people through the ecosystem provision of recreation and tourism. The focus is on identify spatial vulnerabilities across the island to improve community resilience.
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The dataset of this project is exploring secondary data developed from the lab, reservation systems from DLNR and data from Department of Tourism Hawaii.

Work Schedule: 40hrs/week
Supervisors: Kristen Oleson

2021-2022

Graduate Research Assistant at OSU

This project was funded by the Oregon Department of Transportation examining the potential impacts from highway infrastructure failures stemming from coastal erosion and sea level rise. For this analysis I used Oregon state park reservation data sets and visitor levels to public parks to estimate various potential impacts of adaptation strategies, including permanent beach width loss from coastal hardening, benefits and cost associated with access to amenity, as well as cost from added emissions from reroutes using the social cost of carbon.

The analysis uses both market and non-market values in a benefit cost analysis addressing, natural resource connections, community resilience through land-use planning, climate change vulnerability and adaptation. Collaborates with managers, policymakers, and scientists to produce research addressing the needs of natural resource managers, policymakers, and communities.

Work Schedule: 20hrs/week
Supervisors: Steven Dundas
Phone: (541) 737-1402

Summer 2019

Data Analyst at Oregon State Parks and Recreational Dept (OPRD)

Conducted field work on visitation to Oregon State Parks validating estimation methods for OPRD. I collected visitor counts and compared it to car counters at entrances of day use area. We also examined other visitor counting systems such as trail counters and newer traffic counter monitoring systems.

Disseminates research results to peers and park managers.

Work Schedule: 40hrs/week
Supervisors: Caleb Dickson
Phone: 503-428-8790

Teaching Experience

2024

**University of Hawai'i at Mānoa
Professor**

Department of Natural Resource and Environmental Management

- UPCOMING: NREM 691 Valuing Nature Fall 2024
- UPCOMING: NREM 429 Spreadsheet Modeling for Business and Economic Analysis Fall 2024
- NREM 494 Environmental Problem Solving Capstone On-campus

Course using structured decision making and applying it to a local environmental problem.

2023

**Western Oregon University
Instructor**

Department of Sustainability

- SUS 390 Global Climate Change On-campus

Course covering climate science using IPCC AR6, adaptation & mitigation strategies, historical climate policies, carbon wealth inequalities, economics, Social Cost of Carbon and carbon pricing.

Developed lectures, quizzes, exams, and homework

- SUS 340 Sustainability & Capitalism Ecampus

Currently designing course covering pillars of sustainability & capitalism framework. I use UN Sustainability Development Goals to examine the how the pillars and incentives of capitalism fit within the framework.

Developed lectures, quizzes, exams, and homework

2020

Oregon State University

Instructor

Department of Applied Economics

- AEC 253 Environmental Law, Policy and Economics Ecampus

2018-2021

Oregon State University

Teaching Assistant

Applied Economic and Sustainability Departments

- AEC 253 Environmental Law, Policy and Economics Ecampus
- AEC 525 Applied Econometrics
 - Graduate level lab teaching econometric commands in STATA
- AEC 447 Agriculture Price and Market Analysis
- AEC/ECON 432 Environmental Law Ecampus & On-campus
- AEC 388 Agricultural Law Ecampus & On-campus
- AEC/ECON 352 Environmental Economics and Policy
- SUS 350 Sustainability Communities (3quarters) Ecampus
 - Including a role in developing a new canvas course material on Canvas.
- SUS 304 Sustainability Assessment (3quarters) Ecampus
- AEC 253 Environmental Law, Policy and Economics (3quarters) Ecampus & On-campus
 - In-class conducting Pollution Control Games, highlighting the difference between command and control, taxes, and Cap & Trade.
- AEC 122 Introduction to Climate Change Economics and Policy Ecampus & On-campus

Publications

2023

Publications

Olsen, M. J., J. Allan, S. J. Dundas, A. Lowe Mackenzie, M. Krivova, A. Senogles, B. A. Leshchinsky, J. Hermann, and C. Parrish (2024). US Highway 101 Coastal Hazard Vulnerability and Assessment for Mitigation Prioritization, Oregon Department of Transportation Project, Federal Highway Administration, [Final Report](#)

Lowe Mackenzie, A., S. J. Dundas, and B. Zhao. (2024) *The Instagram Effect: Is Social Media Influencing Visitation to Public Land?* Land Economics. DOI : <https://doi.org/10.3368/le.100.2.122920-0192R1>

2022

Working Paper

Lowe Mackenzie, A., S.J. Dundas. Is a Photo Worth 1,000 Likes? The Influence of Instagram at National Parks [Link](#)

Lowe Mackenzie, A., A. Dugstad & K. Oleson. The economic value of forest campsite closures in Hawai'i

Lowe Mackenzie, A., S.J. Dundas & Dickson C. The Effects of Public Health Advisories on the Value of Recreational Camping

Current

Work in Progress

Integrating spatial dynamics and recreational values from the impacts of ocean acidification on coral reefs to the Hawaiian Islands

Estimating the Impacts of Removing Oregon's Severance Tax on Large Industrial Timber Harvesting

Fourthcoming **WEAI** Summer Conference – Seattle, WA
Accepted **MSEAS** – Japan
AERE Summer Conference – DC, USA

Presentations

2023

Camp Resources

Is a Photo Worth 1,000 Likes? Visitation Modeling and Influence of Instagram at National Parks *Aug. 8 2023*

2020

People and Nature At OSU

Is Instagram Influencing Visitation to Public Lands?

Professional training

2022

Graduate Teaching Seminar Oregon State University

Description: focuses on evidence-based pedagogical practices with an emphasis on practical strategies and problem-solving, and will be tuned to graduate students' needs and the classes they are instructing.

2019

Training Social Justice Education Initiative Workshop

Description: Apply a vocabulary of basic terms in common with other participants. Recognize how history relates to the current context of Oregon and OSU. Describe some of your own social identities. Recognize that your OSU community is comprised of diverse and intersecting social identities. Understand that a dominant culture exists, even if it is invisible to you.

Computer skills

Programming

Python, R, HTML, markdown, JavaScript, CSS

Applications

Visual Studio Code, QGIS, Rstudio, Latex, Anaconda, Stata, ArcGis, Final Cut, Matlab, Git, Github, Google Cloud

Libraries

- File Directories : macOS, Microsoft Windows, Ubuntu/Unix
- JavaScript: D3.js, C3.js, bootstrap, Leaflet, JQuery, dc.js
- R : tidyverse, NLP, dplyr, tidyr, ggplot2, tidytext
- Python : pandas, pip, NumPy, Matplotlib, NLK, spaCy

References

[Dr. Steven Dundas](#)
Advisor

Department of Applied Economics – Oregon State University Phone: (541) 737-1402
• Advisor Chair & CoAuthor

[Dr. Ashley D'Antonio](#)
Committee

Department of Forest Ecosystems & Society – Oregon State University Phone: (541) 737-5043
• Committee Member
• Advisor for recreation ecology concentration

[Dr. Nadia A. Streletskaya](#)
Committee

Department of Applied Economics – Oregon State University Phone: (347) 735.1787
• Advisor for behavioral economics concentration

[Dr. Kirsten Oleson](#)
Post Doc PI

Dept. of Natural Resources & Environmental Management – University of Hawaii at Manoa Phone: (808)956.8864
Post Doc PI on Ocean Acidification