

WILLIAM TROSKE

Email: wtroske@ucdavis.edu
Phone: (859) 321-6412

Dept. of Agricultural & Resource Economics,
SS&H 2161
250 N Quad
University of California, Davis
Davis, CA 95616

EDUCATION

Ph.D. in Agricultural and Resource Economics, University of California, Davis	(Expected) 2027
<i>Committee: Jim Sanchirico, Jamie Hansen-Lewis, Erich Muehlegger</i>	
M.A. in Economics, University of Wisconsin, Madison	2022
B.S.E. in Chemical Engineering, University of Michigan	2017

RESEARCH FIELDS

Environmental Economics, Industrial Organization, Agricultural Economics, Trade

ACADEMIC PUBLICATIONS

“Carious Lesions: Nanoparticle-Based Targeting and Detection of Microcavities” (2017) *Advanced Healthcare Materials* 6(1), 2192-2640. DOI: [10.1002/adhm.201600883](https://doi.org/10.1002/adhm.201600883) (with Nathan A. Jones, Sywe-Ren Chang, Brian H. Clarkson, Joerg Lahann)

RESEARCH IN PROGRESS

The Behavioral Impact of Sulfur Fuel Content Regulations

Abstract In 2012, the US and Canada implemented a technological regulation, called the ECA (emission control area), in their exclusive economic zone to reduce emissions from ocean-going ships. The ECA required ships to use low-sulfur fuel, increasing a ship’s main operating cost. The EPA estimated that the operational cost of ships would increase by \$18 for a twenty-foot-equivalent container. Operation costs, however, are not the only costs of regulation. In international trade, fuel and capital are substitutes and an increase in fuel prices leads to demand for larger (more fuel-efficient) ships. In this paper, I use data from 2006 to 2016 on commercial container ships’ calls to US ports, from the Army Corps of Engineers, to construct a panel at the port-quarter level that tracks ship size and port exposure to the ECA for all US ports. Port exposure measures the average time a ship operates in ECA-regulated waters before reaching said port. I use the variation in port exposure to estimate the relative change in ship size for more exposed US ports after the ECA. I find the ECA led to about 3% larger ships for ports further along container routes. This is driven by larger ships shifting to serve the more exposed US ports. These findings show that fuel regulations favor larger ships, with implications for container movement along trade routes and investments for port expansions.

Behavioral Responses to Information on PFAS in Drinking Water

with Laura Alcocer Quiñones and Jeff Hadachek

Abstract Per- and Polyfluoroalkyl Substances (PFAS) are a family of man-made chemicals detrimental

to human health. Despite widespread exposure to PFAS, evidence of avoidance behavior remains limited. This paper estimates the effect of information provisions on the avoidance of PFAS exposure. Past research quantified how individuals avoid exposure to chemicals, such as E-coli or lead, when notified by measuring additional bottled water purchases. The case of PFAS is unique; the full health effects of PFAS are relatively uncertain, and PFAS stays in drinking water longer than other common contaminants. Our work contributes to the literature by examining how individuals affected by emerging PFAS contamination respond to information and by estimating the extent to which people continue to be exposed to PFAS, even after being informed. We leverage variation in PFAS Maximum Contaminant Level (MCL) violations across nine states for the years 2019 to 2023 to quantify these impacts. We employ a two-way fixed effects design, pairing detailed violation data at the weekly level with Nielsen retail scanner data, including purchases of bottled water and water filters per store. Our results show water filter purchases increase by 6% in the week following a violation and no significant increase for bottled water. This increase represents a community-level cost of approximately \$60,000 for each violation and \$11.5 million over our sample. These results show that consumers spend significantly more on durable filters to protect themselves in anticipation of exposure over the long run, rather than investing in short-run solutions, like bottled water.

SCHOLARSHIPS, HONORS, AND AWARDS

UC Davis Jastro-Shields Graduate Research Award	2024
UC Davis Summer Research Fellow	2024
UW Madison, Honorable Mention Scholarship (Outstanding Research Paper in Applied Econometrics)	2022
Eagle Scout, Boy Scouts of America	2013

TEACHING EXPERIENCE

Teaching Assistant, University of California, Davis

Intermediate Microeconomics	Spring 2025, Fall 2024, Fall 2022
Econometric Theory & Applications	Summer 2024
Environmental Economics	Fall 2025, Winter 2025, Spring 2024
Operations Research & Management Science	Summer 2023
Principles of Finance	Spring 2026
Economic & Business Analytics	Winter 2026

RESEARCH EXPERIENCE

Research Assistant, University of California, Davis

Tim Beatty & Joakim Weill: Estimated the labor response to wildfire smoke	Fall 2023 - Winter 2024
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Research Assistant, University of Wisconsin, Madison

Sarah Johnston: Created an algorithm in R to match car information to VIN numbers	Summer 2022
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Research Assistant, University of Michigan, Ann Arbor

Nathan Jones: Developed a starch nanoparticle to identify carious lesions	Fall 2015 - Spring 2017
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PROFESSIONAL ACTIVITIES

UCD Natural Resource Economics and Policy Lab

Graduate Student Coordinator

2025 - Present

UCD ARE Graduate Student Association

Representative

Fall 2022 - Fall 2024

Co-President

Fall 2024 - Present

Policy Researcher - Clean Wisconsin

March 2022 - Aug 2022

Summarized current academic knowledge around Natural Climate Techniques (Agroforestry or cover crops, for example) for carbon sequestration in agriculture, and made estimates to their effectiveness in Wisconsin

Quoting and Process Engineer - Advanced Plating Technologies

Jan 2018 - July 2020

Served as an engineering resource and initial contact for customers in need of surfacing finishes for their parts.

PRESENTATIONS AND WORKSHOPS

8th Annual Social Cost of Water Pollution

Sept, 2025

Giannini Foundation of Agricultural and Resource Economics Student Conference

May, 2025

UChicago Price Theory Summer Camp

June, 2025

OTHER WRITING AND MEDIA

Advanced Plating Technologies - Technical Blog

[Solderable Gold Plating of Electrical Contacts](#) (Aug 6th, 2020)

[Nitric vs Citric Acid Passivation](#) (July 11th, 2019)

OTHER

Software

Stata, R, Python, Julia, Git, ImageJ

REFERENCES

Dr. Jim Sanchirico (Chair)
Professor
Environmental Science and Policy
University of California, Davis
jsanchirico@ucdavis.edu

Dr. Jamie Hansen-Lewis
Assistant Professor
Agricultural & Resource Economics
University of California, Davis
jhansenlewis@ucdavis.edu

Dr. Erich Muehlegger
Professor
Economics
University of California, Davis
emuehlegger@ucdavis.edu