

NATHAN J. DEMAAGD

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EDUCATION

Doctor of Philosophy, Economics

Aug 2020

University of Hawai'i at Mānoa

Fields: Natural resource and environmental economics, international trade

Master of Arts, Economics

May 2016

University of Hawai'i at Mānoa

Bachelor of Science, Mathematics and Economics

Aug 2014

Grand Valley State University

Frederik Meijer Honors College

PROFESSIONAL APPOINTMENTS

Research Economist

Sep 2020 - Present

University of Hawai'i Economic Research Organization

- Contribute to UHERO's overall mission by conducting economic and statistical analysis to evaluate natural resource and environmental management strategies
- Disseminate research results to both the scientific community and lay audiences by preparing, scheduling, and conducting presentations or meetings
- Lead in the planning of and speak at conferences, seminars, workshops, and stakeholder meetings
- Lead and contribute to the writing of reports, publications, and blog posts for a range of water management and environmental policy projects.

Economist

March 2021 - June 2021

State of Hawai'i Public Utilities Commission

- Prepare financial analysis on a variety of moderately complex to complex pending applications of the regulated entities
- Plan, organize, and perform economic analysis of operations, methods, and costs of financing, rates of return, and other financial and economic information
- Render technical assistance, advice, and evaluation of mathematical and statistical aspects of matters under consideration by the Commission.

Graduate Research Assistant

Jan 2016 - Aug 2020

University of Hawai'i Economic Research Organization

- Develop and test econometric and statistical models for a variety of resource and environmental topics
- Present work to stakeholders, at public outreach events, and at department seminars and academic conferences
- Write technical reports and articles for publication in academic journals

TEACHING

Lecturer

Jul 2015 - Aug 2019

University of Hawai'i at Mānoa Department of Economics

- Teach courses in introductory and intermediate microeconomics
- Experience teaching both online and in-person

Graduate Teaching Assistant

Aug 2014 - Dec 2015

University of Hawai'i at Mānoa Department of Economics

- Conduct small-group sessions pertaining to material presented in lectures, hold office hours, answer emails, hold review sessions, and maintain student records

Mathematics Tutor

Aug 2013 - May 2014

Grand Valley State University Math Center

- Guide students of all levels in mathematics courses ranging from introductory algebra through calculus and proof writing

CONFERENCE PRESENTATIONS

International Tropical Islands Water Conference

2021

Honolulu, HI

- “How will climate change affect residential water demand? Evidence from Hawai'i microclimates”

Pacific Water Conference

2020

Honolulu, HI

- “Targeting investments in source watershed protection and restoration”

Western Economic Association International 15th International Conference

2019

Tokyo, Japan

- “Effects of linked water resource management on consumer surplus for groundwater users”

Hawai'i Sea Grant Symposium

2018

Honolulu, HI

- “Climate, water, and the built environment: Understanding patterns of water use on an urban pacific island” (Poster)

NSF/EPSCoR Hawai'i State Conference

2018

Honolulu, HI

- “Securing groundwater in Hawai'i” (Poster)

Association of Collegiate Schools of Planning Annual Conference

2017

Denver, CO

- “Climate, water, and the built environment: Understanding patterns of water use on an urban pacific island”

Geological Society of America Cordilleran Section Meetings

2017

Honolulu, HI

- “Nonlinear effects of temperature on water demand”
- “Using historical pumping and head level data to estimate the maximum sustainable yield of Oahu's aquifers”

- “Econometric modeling of the maximum sustainable yield of the Pearl Harbor aquifer”

PUBLICATIONS

- DeMaagd, Nathan**, Michael Roberts (2021), “How will climate change affect residential water demand? Evidence from Hawai‘i microclimates”, *Water Economics and Policy*
- Bremer, Leah L, **Nathan DeMaagd**, Christopher A Wada, Kimberly B Burnett (2021), “Priority watershed management areas for groundwater recharge and drinking water protection: A case study from Hawai‘i Island”, *Journal of Environmental Management*
- Engels, Jennifer L, Sheree Watson, Henrietta Dulai, Kimberly M. Burnett, Christopher A. Wada, ‘Ano‘ilani Aga, **Nathan DeMaagd**, John McHugh, Barbara Sumida, Leah L. Bremer (2020), “Collaborative research to support urban agriculture in the face of change: The case of the Sumida watercress farm on O‘ahu”, *PLOS ONE*
- Bremer, Leah, Kathleen Farley, **Nathan DeMaagd**, Esteban Suárez, Daisy Cárate Tandalla, Sebastián Vasco Tapia, and Patricio Mena Vásconez (2019), “Biodiversity outcomes of payment for ecosystem services depend on program objectives: lessons from páramo grasslands”, *Biodiversity and Conservation*

REPORTS

- DeMaagd, Nathan**, Michael J. Roberts (2020), “How will climate change affect water demand? Evidence from Hawai‘i microclimates”, *UHERO Reports*
- DeMaagd, Nathan**, Michael J. Roberts (2020), “Estimating water demand using price differences of wastewater services”, *UHERO Reports*
- Bremer, Leah, **Nathan DeMaagd**, Christopher Wada, and Kimberly Burnett (2020), “Identifying priority watershed management areas for groundwater recharge protection on Hawai‘i Island”, *UHERO Reports*
- Wada, Christopher, Leah Bremer, **Nathan DeMaagd**, Sarah Medoff, Scott Cloudwatcher, and Kimberly Burnett (2019), “Identifying areas of cost-effective watershed management for groundwater recharge protection on Hawai‘i Island”, *UHERO Reports*

WORK IN PROGRESS

- Estimating water demand using price differences of wastewater services
- Tourism and water scarcity: The impact of hotels and vacation rentals on water resources
- Linking models to outcomes: How do Hawai‘i stakeholders use and contribute to land-to-sea ecosystem service analyses?
- Modeling fire risk under various landcover and climate scenarios
- Understanding shock longevity in resource commodity futures

VOLUNTEER EXPERIENCE

Ko‘olau Mountains Watershed Partnership

Mar 2019 - Present

- Engage in various outdoor activities, like invasive species maintenance and planting of native species, to help protect areas identified by local government as being critical to O‘ahu’s watersheds

OTHER SKILLS

Software & Tools

R, \LaTeX , QGIS, GitHub page (link)

Other

Commercial pilot, flight instructor, remote pilot