

Sarah I. Hamilton

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EDUCATION

Master of Environmental Science and Management, 4.00 GPA (Expected June 2023)

Bren School of Environmental Science & Management – University of California, Santa Barbara (UCSB)

Specialization: Corporate Environmental Management

Highlighted Coursework: Advanced Data Analysis, Business and the Environment, Economics of Environmental Management, Environmental Law and Policy (all to be completed by June 2022)

Bachelor of Science in Civil Engineering, 3.95 GPA (May 2021)

**Additional Major in Engineering and Public Policy, Minor in Environmental and Sustainability Studies
Carnegie Mellon University (CMU), Pittsburgh, PA**

Honors/Awards: H.A. Thomas Senior Scholarship Award, Civil & Environmental Engineering Research Award College of Engineering Honors, University Honors, Dean's List (8 Semesters)

Leadership/Involvement: Academic Review Board and University Disciplinary Committee, American Society of Civil Engineers Senior Class Representative

ENVIRONMENTAL & ENGINEERING PROFESSIONAL EXPERIENCE

Food Systems Policy Research Assistant – Carnegie Mellon University, Pittsburgh, PA (8/20–5/21)

- Developed recommendations for food policy by analyzing the effectiveness and uncertainty of three proposed policies pertaining to the environmental sustainability and equity of the Pittsburgh food system
- Authored an academic paper with policy recommendations to reduce food waste and meat consumption to lower carbon emissions by up to 50%

Civil Engineering Research Assistant – Carnegie Mellon University, Pittsburgh, PA (5/19–12/19)

- Developed a hand washing monitoring system through data analysis; collected vibration data from 4 sink locations and analyzed the data in MATLAB using feature selection and support vector machines
- Co-authored an academic paper that will be published in ACM Transactions on Computing for Healthcare

Engineering, Scientific, and Technical Intern – Pennsylvania Department of Transportation, Pittsburgh, PA (5/18–8/18)

- Utilized roadway design plans and construction standards to ensure accurate implementation and environmental compliance of various types of drainage adjustments and paving operations
- Assisted construction inspectors with calculations for bridge and roadway construction projects to ensure PennDOT construction specification were met and to ensure engineering integrity

SUSTAINABILITY & POLICY PROJECTS

Electric Vehicle (EV) Adoption Impacts – Engineering and Public Policy Senior Projects II (2/21–5/21)

- Analyzed the effects of increased EV adoption by using Excel to model what percent of EV adoption would threaten local electric grid reliability due to decreased prospective reserve margins
- Formed recommendations for policy makers to support an equitable transition to electric vehicles

Aquaponics Greenhouse – Civil and Environmental Engineering Senior Design (8/20–12/20)

- Designed and built a mockup aquaponics system with a nine-person team for a Pittsburgh community
- Consulted with stakeholders at the Center of Life and at Hatponics Sustainable Agriculture to ensure that the complex technical components of the system met the center's educational and environmental goals

SKILLS AND CERTIFICATIONS

Computer: Microsoft Office (Word, Excel, PowerPoint), AutoCAD, MATLAB, R-Script, GitHub

Certifications: Engineer in Training (EIT)

Communication & Teaching: Technical Writing; Teaching Assistant for Earth Science, Catastrophes – UCSB, Santa Barbara, CA; Teaching Assistant for Geography, Maps and Spatial Reasoning – UCSB, Santa Barbara, CA; Teaching Assistant for Introduction to Engineering and Public Policy – CMU, Pittsburgh, PA