# 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)**

Specializations: Energy and Climate, Corporate Environmental Management
Highlighted Coursework: Energy Markets and Economics, Energy Demand Analysis, Environmental Policy Analysis, Advanced Data Analysis, Cost Benefit Analysis (All to be completed by June 2023)

**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)

## SUSTAINABILITY MASTER'S GROUP PROJECT

**Product Chemistry Hotspot Analysis to Reduce Human Health and Ecological Impacts** (4/22–Present)
**Client: MATE the Label | Role: Data Manager**
- Conducting an analysis of the environmental impact of chemical feedstocks for 6 textile fibers
- Gathering data on 125 chemicals in client's supply chain to identify ecological and human health hazards
- Creating a method for a relative hazard assessment and ranking of fabrics using R to analyze hazard data
- Providing client with 93-page report and presentation outlining recommendations for chemical alternatives

## ENVIRONMENTAL & ENGINEERING PROFESSIONAL EXPERIENCE

**Corporate Sustainability Intern – Lean Green Way**, Long Beach, CA (6/22–8/22)
- Researched and developed recommendations for the client on 24/7 carbon-free energy, construction life cycle impacts and relevant LEED metrics, water stress measurement tools, and nuclear power
- Improved company's greenhouse gas estimates by incorporating updated scope 3 emissions factors, reviewing a construction life cycle assessment, and creating 3 data visualizations to show sustainability metrics progress
- Authored 2 blog posts about water restoration certificates and the environmental impacts of 3 battery types

**Food Systems Policy Research Assistant – Carnegie Mellon University**, Pittsburgh, PA (8/20–5/21)
- Analyzed effectiveness of 3 policies pertaining to the sustainability of Pittsburgh's food system using Excel
- Wrote 17-page policy analysis and recommendations paper explaining how to lower food system emissions

**Civil Engineering Research Assistant – Carnegie Mellon University**, Pittsburgh, PA (5/19–12/19)
- Collected and analyzed vibration data from 4 sink locations to develop a hand-washing monitoring system
- Co-authored paper (25 pages) that is published in ACM Transactions on Computing for Healthcare

## SUSTAINABILITY & POLICY PROJECTS

**Zero Carbon Plan for Car Manufacturing – Corporate Environmental Management Course** (1/23–3/23)
Designed roadmap for a car manufacturing facility to eliminate emissions from electricity, natural gas, and diesel
**Life Cycle Assessment of Beverage Containers – Life Cycle Assessment Course** (1/23–3/23)
Modeled life cycle stages of 3 beverage containers in GaBi, performed contribution and scenario analyses
**Power Plant Carbon Footprint Analysis – Carbon Footprints & Carbon Accounting Course** (9/22–11/22)
Calculated and compared scope 1, 2, and 3 emissions of a natural gas power plant and a hydrogen power plant
**Electric Vehicle (EV) Adoption Impacts – Engineering and Public Policy Senior Projects II** (2/21–5/21)
Analyzed the effects of increased EV adoption in Excel and formed recommendations for policymakers

## SKILLS

**Energy & Carbon Accounting:** GHG Protocol Emissions Calculation Tool, Life Cycle Assessment (GaBi)
**Computer:** Microsoft Office (Word, Excel, PowerPoint), R, GitHub, Geospatial Analysis
**Communication & Teaching:** Technical Writing; Teaching Assistant – Quantitative Methods (Environmental Studies Dept.) and Introduction to Statistics (Psychology Dept.) – UCSB, Santa Barbara, CA