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.) – UCSB, Santa Barbara, CA and Introduction to Statistics (Psychology Dept.)