

Samantha Lance

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EDUCATION

Master of Environmental Science and Management, 4.0 GPA (Anticipated June 2025)

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

Specialization: Water Resources Management

Highlighted Coursework: Quantitative Geomorphology, Sustainable Water Resources Management, Groundwater Management, Conservation Planning, Data Analysis

Bachelor of Arts in Environmental Earth Science, 3.83 GPA (May 2022)

Washington University in St. Louis (WashU), St. Louis, MO

Honors/Awards: Lynne Cooper Harvey Writing Prize, Graduated with College Honors

Involvement: Member of Academic Geology Fraternity Sigma Gamma Epsilon

Highlighted Coursework: Surface Processes, Hydrology, Introduction and Advanced GIS, Sedimentary Geology, Biogeochemistry, Physics I

MASTER'S GROUP PROJECT

Role: Data & Lab Manager (3/24–Present)

Client: Santa Ynez Chumash Environmental Office, Santa Barbara, CA

Safety and Sustainability Assessment of Biochar Produced From Biosolids for Agricultural Applications

- Collaborate on 4-person team to grow 200 native and agricultural plants to understand whether adding biosolids-based biochar to soils would affect plant growth and nutrient quality
- Manage all laboratory activities by creating the experimental plan, addressing all plant-related concerns such as predation, and leading all nutrient extraction lab sessions
- Import all data into RStudio to create data visualizations and prepare to perform preliminary statistical analyses (t-tests) in the winter quarter

PROFESSIONAL EXPERIENCE

Research Assistant (6/24–Present)

Surface Processes Group, Geography Department, UCSB, Santa Barbara, CA

- Developed code in Python to download and clean 30 years of NetCDF discharge data from the Global Flood Awareness System for river discharge data for 200+ avulsion sites around the world
- Calculated the average and peak annual flow during an avulsion year for each site, and created visualizations in RStudio to find spatial or temporal patterns

Environmental Planning Intern (6/24–12/24)

Morro Bay National Estuary Program, Morro Bay, CA (Remote)

- Designed an ArcGIS StoryMap containing maps and descriptions of 20+ projects to show the progress the Estuary Program has made to address areas of improvement cited by the EPA
- Compiled 5 years of project information and data into an Excel matrix that will become the core of their Program Evaluation documentation submitted to the EPA this March

Research Assistant (10/23–3/24)

Industrial Sustainability Analysis Laboratory, UCSB, Santa Barbara, CA

- Compiled environmental impacts for 6 major industries from 50+ Environmental Product Descriptions
- Data from this project was submitted to the California Air and Resource Board to develop future embodied carbon policies

PROFESSIONAL EXPERIENCE

Staff Geologist (8/22–11/22)

Haley & Aldrich, New York, NY

- Managed 10+ staff on a construction site in the South Bronx to ensure the proper removal and movement of 750-1500 tons of highly contaminated soil so it would not impact local communities
- Created Bluebeam site maps of 30+ contaminants to allow clients to reduce their costs by qualifying for state regulated brownfield remediation grants

GIS Consultant (12/22–2/23)

Nashville Parks Foundation, Nashville, TN (Remote)

- Analyzed and cleaned a set of Google Earth Pro data for QGIS to create a high-resolution map of parks for the CEO to use in presentations to potential donors
- Spearheaded a project to map HG Hill Realty Company managed properties within a mile of high-need parks in Nashville, which led to a \$3,000 donation for park beautification

Research Assistant (1/21–5/21)

Aqueous Geochemistry and Mineralogy Group, St. Louis, MO

- Analyzed the effect of trace metal presence on sulfide content of soils from Oak Ridge, Tennessee
- Measured pH and sulfide levels and created sulfide standards each week in an anoxic glovebox

ADDITIONAL TEACHING & EDUCATION EXPERIENCE

Time Management Assistant (TMA), Transitioning into Academic Excellence Course (1/24–3/24)

UCSB, Santa Barbara, CA

- Conducted individual weekly meetings with 10+ students to provide them the resources to succeed at UCSB and remain off of academic probation
- Collaborated weekly with fellow TMAs to evaluate how to handle high risk cases

Peer Mentor

Calculus I Peer Led Team Learning, WashU, St. Louis, MO (8/20–12/20, 8/21–5/22)

- Led a 15+ person class each weekend to help students struggling with Calculus I coursework by providing challenging questions and support
- Participated in a 3-credit leadership seminar to become a better mentor for undergraduate students

Water Quality Intern

University of Georgia Marine Extension and Georgia Sea Grant, St. Simons, GA (6/20–9/20)

- Published 3+ lesson plans and a coloring book on coastal wetlands to become curricula in the St. Simons and Brunswick public school systems
- Wrote and filmed 13 permanent Instagram stories about wetlands and climate change to target an untapped demographic of teenagers and young adults
- Led tours of freshwater wetlands for groups of 20+ students and adults to encourage local engagement

SKILLS & CERTIFICATIONS

Spatial Analysis: ArcGIS Pro, ArcMap

Map-Making: ArcGIS Pro, ArcMap, Google Earth Pro, RStudio

Data Analysis: RStudio, Python, Excel

Language: Basic Knowledge of Chinese and Spanish

Certifications: CPR, First Aid