

As an undergraduate at UC Berkeley majoring in Integrative Biology, I developed a passion for studying, researching, and teaching environmental science, and for the last three years I have honed my communication skills as a science educator. I now want to pursue graduate studies in Soils and Biogeochemistry as I believe a PhD will provide me with the necessary qualifications to work as a scientist and teacher dedicated to the sustainability and best management of water and soils in California's changing climate. I am interested in soil-water interactions, primarily groundwater recharge, water quality, best management practices, and long-term climate-water interactions, with an emphasis on California. Ten years from now, I envision working in natural resource management, environmental consulting, collaborating on research and/or teaching at a university..

As an undergraduate at UC Berkeley, I took a wide range of coursework in the sciences including chemistry, organic chemistry, biology, physics, calculus, botany, and paleoecology. My past research experiences include field studies on Sudden Oak Death, the impacts of climate change on the American pika, and a forest ecology research plot I designed and established with other students to investigate invasive species dynamics. My research has taken me to field sites across California, allowed me to communicate with others about my work, exposed me to the nuances of designing a rigorous methodology, and given me the opportunity to analyze data and write a scientific paper. Through these experiences, I have come to understand the challenges and rewards of graduate research.

A Ph.D in Soils and Biogeochemistry will provide me the opportunity to engage in interdisciplinary coursework and research, which is critical to understanding and addressing emerging environmental issues. Courses in soil chemistry, physics, microbiology, and fertility combined with electives in hydrology, atmospheric science, and computer modeling will equip me with the tools to respond to California's unique environmental challenges. Wide course offerings in LAWR, world-renowned facilities, and expert faculty will assist me with my studies.

I am also drawn to UC Davis by the collaborative faculty. Professors have listened to my interests and shared their own in a collegial way, and graduate students report satisfaction with the mentorship they receive. My interest in the intersections between climate change, groundwater sustainability, biogeochemistry, soil science, and water quality, align with many LAWR faculty, especially those in Soils and Biogeochemistry. I am interested in Randy Dahlgren's interdisciplinary expertise on water quality and nutrient cycling in California, and the wide range of projects at the Center for Watershed Sciences. I have also spoken with Helen Dahlke, Toby O'Geen, and Thomas Harter about their work on groundwater banking, water quality, and projects at the interface of soil science, hydrology, and climate change. I see potential to work with them on projects related to agricultural groundwater banking and soil-groundwater relationships. In addition, I am interested in the CCWAS Fellowship and the opportunity to study the impact that climate change will have on soils and water in California. Lastly, faculty history in securing research partnerships with local, state, and national agencies also draws me to UC Davis. I hope to do work that has a direct and positive impact and want to become familiar with governmental and nongovernmental agencies working on soil-water interactions for the benefit of society and the environment.

In summary, I am motivated to make a positive impact on the health and sustainability of watersheds and water resources in California through research and education. My future plans include, a management role in a governmental or nonprofit organization working on resource management, environmental consulting, research, and teaching at a university.