

# Natalie Mayer

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## EDUCATION

**Master of Environmental Science and Management** (Expected June 2025)

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

Specialization: Water Resources Management

Highlighted Coursework: Sustainable Water Management, Watershed Analysis, Groundwater Management, Pollution Risk Management

**Bachelor of Arts in Biological Sciences** (June 2019)

**College of Biological Sciences – University of California, Davis (UCD)**

## MASTER'S GROUP PROJECT

**Understanding and Mitigating Kelp Forest Losses Caused by Environmental Change in New Zealand** (April 2024–Present)

**Role:** Data Manager | **Client:** Cawthron Institute

- Set up data workflow and GitHub repository
- Used Excel and R to wrangle ten datasets of biological surveys conducted along the coastal waters of New Zealand and conducted exploratory data analysis on changes in Phaeophyta, Rhodophyta, Chlorophyta, and relevant herbivorous species
- Conducted statistical analyses to determine how different sites changed over time in response to changes in sea surface temperature, geographic location, and depth

## EXPERIENCE

**World Wildlife Fund**, Remote

**Freshwater Metrics Intern** (June 2024–August 2024)

- Conducted a literature review on agricultural water use and water quality in the Upper Mississippi River Basin
- Analyzed correlation between land use, crop type, and surface water quality in the Upper Mississippi River Basin using QGIS, and selected a model watershed in the basin for further analysis
- Completed a time series and principal component analysis in R of water quality indicators such as temperature, pH, nitrate, phosphate, E. coli, and precipitation in the model watershed
- Conducted a statistical t-test in R to determine if nitrate levels were lower in surface waters where best management practices were implemented in the model watershed
- Wrote and presented a final report and PowerPoint summarizing my research and findings
- Created and provided feedback on visualizations and slides for internal and external communication

**UCSB Earth Science Department**, Santa Barbara, CA

**Teaching Assistant** (September 2023–Present)

- Courses taught: Principles of Physical Geology (3 Quarters); Dinosaurs (1 Quarter)
- Facilitate earth science laboratories; prepare and update course materials and course website; assist students with course content during office hours and review sessions; grade and provide feedback on post-labs and other assignments

**Weil College Preparatory School**, Ojai, CA

**Science & Math Teacher** (August 2019–June 2023)

- Designed and instructed 6 high school and 3 middle school STEM courses including Advanced Placement (AP) Biology and AP Chemistry
- Pitched, created, and taught new middle school Environmental Science & Global Impact class; designed syllabus by 6 units (Human Population Growth, Wildlife & Biodiversity Loss, Fossil Fuels & Sustainable Resources, Climate Change & Weather, Ocean Warming & Acidification, Pesticides & Agriculture)
- Facilitated Chemistry and Biology labs once per week during the school year, including acid-base titrations, conductivity of solutions, paper chromatography, growing and observing bacteria cultures, and plant identification

## SKILLS & CERTIFICATIONS

**Water Management Certifications:** Grade 2 Distribution Operator and Water Treatment Operator Certification (In Progress), CU Boulder Certificate in Water in the Western United States

**Other Certifications:** PADI Advanced Open Water Diver, IBM Data Science Professional Certificate, University of Florida Certificate in Sustainable Agriculture Land Management

**Computer Skills:** Microsoft Office (Word, Excel, PowerPoint, Outlook), Google Suite, RStudio, Shiny, Quarto, ArcGIS Pro, QGIS

**Language Skills:** Basic Spanish (Completed Summer Intensive Spanish Program at Middlebury Institute of International Studies in Monterey, CA in 2016 and lived in Mexico City for 6 months in 2021)