

Maxwell Pepperdine

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EDUCATION

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

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

Specialization: Conservation Planning & Water Resources Management

Honors/Awards: 2023 Environmental Engineering and Science Foundation (EESF) Scholarship Recipient

Highlighted Coursework: Geospatial Analysis and Remote Sensing, Conservation Planning Practicum (both to be completed December 2024), Advanced Data Analysis for Environmental Science and Management (ESM), Geographic Information Systems, Environmental Data Visualization, Data Analysis for ESM, Financial Management and Environmental Accounting

Bachelor of Science in Environmental Management and Protection, GPA 3.91 (June 2023)

California Polytechnic State University (Cal Poly), San Luis Obispo

Minor: Biology & Sustainable Environments

Honors/Awards: Presidents Honor List (2020, 2021, 2022, 2023)

ENVIRONMENTAL EXPERIENCE

Arnhold Environmental Graduate Fellow – Environmental Markets Lab (emLab), Santa Barbara, CA (6/24 – Present)

- Assisting collaborative research projects under the "Spatial Planning for Climate Change: Land Use for Conservation, Agriculture, and Energy" (SPARCLE) umbrella with the emLab and Conservation International (CI).
- Acquiring and managing spatial data related to land use/land cover, agriculture, climate, energy & biodiversity.
- Developing and executing reproducible code for spatial and statistical analyses related to land/climate change, species distribution modeling, connectivity modeling and landscape fragmentation analysis.

Remote Sensing Research Assistant – Edge Hill University, Ormskirk, UK (6/24 – 9/24)

- Conducted independent research on the impacts of hurricane Dorian upon bathymetry in the Bahamian Islands, including induced changes and recovery, while working closely under the guidance of my research advisor.
- Collected and pre-processed over 100 tracks of ICESat-2 data and 10 Sentinel-2 images with various data analyses and remote sensing applications in Python.
- Generated 7 oceanic depth models to analyze bathymetric changes following hurricane Dorian in our study area.

Graduate Student Research Fellow – California Central Coast Joint Venture (C3JV), Santa Cruz, CA (11/23 – 4/24)

- Conducted research with the C3JV, a partnership-based conservation organization, to continue my previous research and identify areas of suitable nesting habitat for marbled murrelets, an endangered seabird that fly's inland to nest.
- Created 2 primary models using geospatial analysis and ModelBuilder in ArcGIS Pro to isolate patches of old-growth forest in the Santa Cruz Mountains that will be used to further conservation efforts for this declining species.
- Developed a 5-page written synopsis of research methodology and all GIS work conducted to aid in future grant applications and land acquisition efforts.

Research Assistant – Pacific Coast Conservation Alliance (PCCA), Santa Barbara, CA (10/23 – 12/23)

- Generated 4 maps in ArcGIS Pro that will be included in a research paper as part of a study conducted by William Haas, portraying the relationship between elevation, vegetation, and dispersal routes of the Western Yellow Bat.
- Created 3 maps in ArcGIS Pro that will be used in a research presentation for raptor...

Conservation Planning Intern – Frost Summer Undergraduate Research Program, Santa Cruz, CA (5/22 – 9/22)

- Directed research informing spatial conservation planning for an endangered marbled murrelet population in the Santa Cruz Mountains to inform future land protection and conservation efforts.
- Developed 5 models using spatial analysis in ArcGIS Pro to produce a map and shapefile portraying unprotected, suitable nesting habitat within our study area.
- Presented project findings in a 15-minute talk to 60 peer researchers and faculty at a research symposium.

(GIS?) PROJECT EXPERIENCE

Project Lead/Student – Applied GIS Course, San Luis Obispo, CA (4/23 – 6/23)

- Organized a task schedule for and collaborate with a 5-person team to establish more accurate land boundaries, zoning compliance, and property valuations for the Templeton Community Service District (CSD).
- Created 6 feature classes (each containing 15-25 parcels) of updated parcel layers and boundaries using coordinate geometry in ArcGIS Pro and measurements from recent surveying reports.
- Managed synthesis of each individual line layer into a final geodatabase that the GIS supervisor for San Luis Obispo used to update existing parcel layers.

Sustainability Consultant/Student – Implementing Sustainable Principles Course, Santa Maria, CA (4/23 – 6/23)

- Designed, constructed, and implemented 2 produce spray stations and a 10-page employee resource guide at Growing Grounds Farm in Santa Maria to enhance accessibility and sustainability throughout the farm on a 6-person team.

Geospatial Lead/Student – Nature-Based Solutions (NbS) Senior Capstone Project, San Luis Obispo, CA (1/23 – 3/23)

- Directed the geospatial analysis (primarily with ArcGIS and Google Earth Engine) on a 6-person team that implemented a nature-based solutions (NbS) project in the Chorro Creek Ecological Reserve (CCER).
- Managed the inventory of all geospatial data to inform fieldwork, geospatial analysis, and statistical analysis.
- Executed 2 primary analyses: 1) spatial variation of mean NPP for annual/perennial forbs and grasses throughout CA and the CCER, 2) evaluation of how spatial variation in mean NPP correlates with changes in temperature and precipitation.

GIS Specialist/Technical Writer/Student – Applied Research Analysis and Assessment Course, San Luis Obispo, CA (9/22 – 12/22)

- Developed an 80-page Environmental Constraints Analysis (ECA) for the San Simeon Wastewater Treatment Plant that identified the project's environmental constraints and required permits pertaining to CEQA and NEPA with a 6-person team.
- Performed all the spatial analysis and map making in ArcGIS Pro that was needed for the report.
- Completed all technical writing for the following sections of the ECA: biological resources and hydrology and water quality environmental constraints, permits and processes, and most of the project description.

ADDITIONAL EXPERIENCE

Graduate Teaching Assistant – Environmental Studies Program, Santa Barbara, CA (9/24 – Present)

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Graduate Teaching Assistant – Department of Ecology, Evolution, & Marine Biology, Santa Barbara, CA (4/24 – 6/24)

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Graduate Teaching Assistant – Environmental Studies Program, Santa Barbara, CA (1/24 – 3/24)

Lead two, 3-hour lab sessions weekly with 30+ students for a 'Form, Process, and Human Use of Rivers' course at the University of California, Santa Barbara (UCSB). Graded and gave feedback on 40+ assignments each week and providing support for students through weekly office hours.

Busser/Food Runner – Novo Restaurant & Lounge, San Luis Obispo, CA (4/22 – 6/23)

Adapted to a wide range of tasks to enhance guests' experiences in a fast-paced environment.

Veterinary Assistant – Pacific and Santa Cruz Veterinary Specialists, Santa Cruz, CA (6/21 – 8/21)

Provided attentive and compassionate care to 15-20 patients daily. Assisted doctors and technicians with the administration of medication, patient restraint, and any other duties as requested.

SKILLS

Computer: Esri ArcGIS Products (Pro, Office, Field Maps), RStudio, Python, Microsoft Office (Word, Excel, PowerPoint), Google Earth Engine, OpenLCA

Writing: Technical writing of scientific research manuscripts, policy memos, and CEQA and NEPA reports/assessments.

Stream Measurement: Water quality, streamflow discharge, bankfull cross-section, channel dimensions (width to depth ratio, floodprone width, entrenchment, slope, channel), canopy cover, riparian conditions by RipRAM, % pool/riffle habitat