Sara Orofino

saraorofino@bren.ucsb.edu | 530.919.3709 | Goleta, CA | GitHub | LinkedIn

EDUCATION

Master of Environmental Science and Management (Expected June 2020)

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

Specialization: Coastal Marine Resource Management | Focus: Environmental Data Science

Coursework: Advanced Environmental Data Science, Advanced GIS, Environmental Data Visualization

Leadership: Co-Chair Environmental Justice Club; Co-Chair MESM 2020 Cohort

Bachelor of Science in Zoology, Cum Laude (June 2014)

Oregon State University, Corvallis, OR

Honors: Dean's List (9 Semesters), National Society of Collegiate Scholars

MASTER'S GROUP PROJECT

Evaluating Adaptive Management Strategies for Climate-Resilient Fisheries (4/19 - present)

Role: Data Manager | Client: Environmental Defense Fund

- Built a climate adaptive fisheries model in R containing surplus production, climate, and management components, to evaluate how various fish stocks will respond to different types of climatic variation
- Translated the 11 steps of EDF's fisheries management tool into model parameters and iteratively simulated 100+ adaptive management strategies using the framework under a variety of climate change scenarios
- Designed and presented a 15-minute talk to communicate key findings to a diverse public audience

MARINE AND DATA SCIENCE EXPERIENCE

Ocean Health Index Fellow – National Center for Ecological Analysis & Synthesis, Santa Barbara, CA (4/20-present)

- Compute the Ocean Health Index score for Palmyra Atoll using a data-intensive marine science framework in R; wrangle 50+ spatial and non-spatial datasets; quantify ocean-derived human benefits from 7 metrics
- Create a collaborative GitHub repository with the ability to publish results and data online via GitHub pages
- Host stakeholder engagement webinars to effectively tailor the global Ocean Health Index framework by prioritizing goals to reflect stakeholder needs and determining more geographically relevant reference points

Data Analyst – Bren School of Environmental Science & Management, Santa Barbara, CA (5/19-3/20)

- Queried satellite data using SQL to calculate post-hurricane damages for 78 municipalities; wrangled 13 social and economic datasets in R to assemble an analysis dataframe exploring disaster resilience in Puerto Rico
- Conducted statistical analysis to determine if funding discrepancies or social vulnerability explained municipality variances in proportion of damages or recovery times post-Hurricane Maria

Oceanographic and Communications Intern - Coral Reef Advisory Group, Tutuila, American Samoa (6/19-8/19)

- Devised and implemented a five-week field ecology program on the remote Manu'a Islands; conducted 20 salinity surveys; deployed 10 sets of oceanographic monitoring equipment, and collected 100+ water samples
- Catalogued and organized 1000+ survey data points; analyzed results in R to identify baseline conditions; mapped oceanographic trends using ArcGIS; and authored a 35+ page report compiling data and results
- Presented findings to 20 members of the American Samoa science network including the National Park Service, Department of Marine and Wildlife, and National Oceanic and Atmospheric Administration

Educational Interpreter – Birch Aquarium at Scripps Institution of Oceanography, San Diego, CA (11/17–10/18)

- Explained Scripps Institution of Oceanography research findings on climate change, biodiversity, and oceanography to 200+ children, families, and visitors per day, demonstrating results via interactive exhibits
- Instructed oceanography programs for up to 20 teenagers including plankton sampling; testing water samples for salinity, dissolved oxygen, and temperature; and exploring the pelagic and benthic invertebrate labs

SKILLS

Technical: R/RStudio, GitHub, Shiny, ArcGIS 10.6.1, Microsoft Office & Google Drive suites, Beginning Python, SQL

Communication: Report Writing (50+ pages), Science Communication Presentations (Audiences 25-50)

Additional Experience: Marine Science Intern (10/16-8/17), Planning Assistant (9/15-9/16), Divemaster (10/14-5/15), Outreach Intern (6/14-9/14)