SIMON J. MARKS

My background has inspired a desire to contribute toward natural resource management that strikes a careful balance between satisfying the anthropogenic and environmental resource requirements of today with those of the future. With my budding skills in research, hydrology, and statistical analysis, I am applying myself in water resource science as a graduate student. Taking great pride in my work, I hold myself, peers, and collaborators to high standards, while also exuding a calmness to minimize unnecessary stress.

EDUCATION

current | 2019

M.S., Environmental Sciences and Management

California Polytechnic State University — San Luis Obispo, CA

- Thesis: Estimating evapotranspiration of a mountain meadow encroached by conifers using sap flow measurements
- Expected June 2021

2019 | 2015

B.S., Environmental Management and Protection (minor statistics)

California Polytechnic State University — San Luis Obispo, CA

- Concentration: Watershed management and hydrology
- Summa cum laude

RESEARCH EXPERIENCE

current | 2019

Graduate Research Assistant

Dr. Chris Surfleet's Lab — California Polytechnic State University

- Primarily working with sap flow field data to quantify evapotranspiration of a conifer encroached meadow near Chester, CA
- Managed maintenance of field instruments at meadow restoration study sites and developed R scripts designed to streamline compilation and temporal aggregation of field data
- Performed regression analysis (MLR) to study hydrologic and suspended sediment effects of forest roads at the Caspar Creek Experimental Watershed

Summer 2018

Summer Undergraduate Researcher

Dr. Chris Surfleet's Lab — California Polytechnic State University

- Completed sub-surface soil sampling, performed soil particle size distribution lab analysis, and computed soil hydraulic properties in support of meadow restoration research- presented results with a poster at an on campus research symposium to conclude the summer
- Cleaned and analyzed storm event peak flow and sediment discharge data collected at the Caspar Creek Experimental Watershed needed for distributed hydrology soil vegetation model (DHSVM) development

CONTACT

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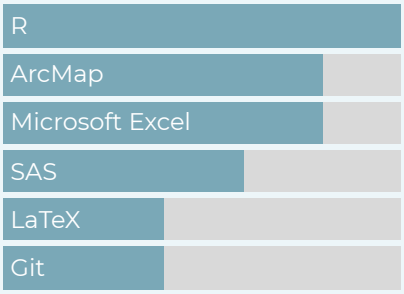
github.com/sjmarks
linkedin.com/in/sjmarks97
Academic Portfolio

TECHNICAL SKILLS



The source code used to create this CV is available on github.com/sjmarks/datadriven_cv.

Last updated on 2021-03-30.

INDUSTRY EXPERIENCE

Summer 2017

Natural Resource Damage Assessment Intern

California Department of Fish and Wildlife — Sacramento, CA

- Worked within the Office of Spill Prevention and Response on tasks related to injury assessment and environmental sampling including development of environmental reports, field documentation, checklists, and operating procedures
- Created an instructional 'how to' video detailing field procedures when collecting environmental samples following a deleterious material spill event

TEACHING EXPERIENCE

current | 2019

Watershed Processes and Management TA

Cal Poly NRES Dept. — San Luis Obispo, CA

- Covered (all field based) streamflow measurement, stream channel and riparian assessment, road erosion hazard rating, and water quality measurement
- Assisted in GIS-based labs, troubleshooting spatial analyst tools

2018 | 2016

Supplemental Workshops in Science Facilitator

Cal Poly Student Academic Services — San Luis Obispo, CA

- Facilitated medium groups of undergraduate students, providing instruction in chemistry coursework and promoting community/collaboration

ACADEMIC PROJECTS

Spring 2020

Evaluation of Lower Scotts Creek Floodplain and Habitat Enhancement Project in HEC-RAS[1]

CE 536: Computer Applications in Water Resources with GIS

- Ran steady flow analysis at lower Scotts Creek (near Davenport, CA) to compare floodplain activation between pre and post-restoration states in the context of salmonid habitat improvement

Spring 2020

1-Way ANOVA- Model Representations, Power, and Sample Size Tutorial[2]

STAT 431: Advanced Statistical Computing in R

- Authored tutorial using the `bookdown` package, showcasing the means and effects models including their manual implementation via matrix algebra
- Demonstrated data viz skills using `ggplot2` and `gganimate` packages, creating static and dynamic figures communicating the role of power and sample size in ANOVA

Fall 2018

Froom Ranch Specific Plan Draft EIR[3]

NR 425: Applied Resource Analysis and Assessment

- Identified environmental impacts and prescribed respective mitigation measures pertaining to hydrology, aesthetics, public services, and recreation for a locally proposed project in San Luis Obispo, CA

Fall 2017

Morro Bay Water Reclamation Facility Proposal to Prepare EIR[4]

NR 416: Environmental Impact Analysis and Management

- Gained familiarity with the CEQA process, specifically environmental impacts associated with hydrologic, geologic, biologic, and aesthetic resources

ACADEMIC PUBLICATIONS

2021 **Hydrologic and suspended sediment effects of forest roads using field and DHSVM modelling studies**
Under-Review in Forest Ecology and Management (copy available upon request.)

- Authored with Chris Surfleet of the California Polytechnic State University San Luis Obispo NRES Dept.

AWARDS AND HONORS

2019 **Hull Graduate Assistantship**

2019 | 2015 **Cal Poly San Luis Obispo Dean's List**

2018 **Association of Environmental Professionals (AEP) Scholarship**

LINKS

1: https://portfolium.com/entry/eval-of-scotts-creek-habitat-restoration-project
2: https://sjmarks.github.io/anovatutorial/
3: https://portfolium.com/entry/froom-ranch-specific-plan-deir
4: https://portfolium.com/entry/proposal-to-prepare-eir