Professional Summary

Hydrologist passionate about understanding and solving water resource challenges in California through data-driven approaches. Skilled in leveraging open-source data, spatial analysis, and modeling to support sustainable water management. Committed to applying technical expertise to develop innovative solutions for complex hydrological issues.

PROFESSIONAL SKILLS

Teamwork, ability to work on multiple projects simultaneously, manage deadlines and deliverables based upon project scope and budget, workflow and task planning, love working around people and not virtually.

TECHNICAL SKILLS

Integrated Water Flow Model (IWFM), ArcGIS Pro and Online, QGIS, Python, R, RESTful APIs, SQL, Groundwater Interpolation, Excel LET and LAMBDA, Field Documentation, Cartography

Professional Experience

WATER RESOURCES ENGINEER, Woodard & Curran

June 2023 - Present

Engineer 2 involved in the development of CA SGMA Groundwater Sustainability Plans (GSPs), groundwater budgets through CA IWFM modeling, and recharge and extraction optimization through geospatial analyses. I have contributed to several projects across California including Yuba, Sacramento Metro, Modesto, Cuyama Valley, Antelope Valley, and Malibu.

- Developed new figures, basemap, and layout templates for the <u>Cuyama 2025 GSP</u> using ESRI ArcGIS Pro
- Performed annual updates for the CoSANA Model and Cuyama Basin Water Resources Model (CBWRM)
- Utilized python, arcpy, and open-source geospatial libraries to automate large dataset processing
- Computed Recharge Suitability Index (RSI) scores using open-source geospatial data for the Yuba Subbasins
- Executed independent analysis of well sites in Southern California that provide reliable, clean water for future development
- Wrote technical memorandums and deliverable packages for clients

GEOSPATIAL ANALYST AND PROGRAMMER, <u>Geospatial Centroid</u> at Colorado State University October 2022 - May 2023

Involved in various spatial projects in Colorado and CONUS. Also provided project planning and technical tutoring for students.

- Developed R-Spatial scripts for NASA-Equity and Environmental Justice Grant project: Environmental Justice for Prisons
- Held office hours and supported students with any spatial project needs
- Utilize R and geospatial libraries to support project work
- Designed hexagonal project spotlight decorations for Centroid office
- Executed independent analysis of well sites in Southern California that provide reliable, clean water for future development
- Wrote technical memorandums and deliverable packages for clients

UNDERGRADUATE RESEARCH ASSISTANT, Colorado State University

January 2022 - October 2022

Field researcher and data analyst supporting a PhD Dissertation on stream metabolism. Study area was Fraser Experimental Forest, CO across four catchment basins. (Project Lead Lauren Kremer in Watershed Analysis Group)

- Constructed Campbell Scientific stream gages and planned on-site solar panel locations
- Installed Campbell Scientific, HOBO, and other in-situ sensors
- Collected stream geomorphology, velocity-area, and groundwater level measurements
- Read data and maintained sensors
- Processed water samples for Dissolved Organic Carbon (DOC), and Inorganic Carbon (IC)
- Documented all actions taken in the field and laboratory

Education

Colorado State University

BS in Watershed Science, Hydrology and Water Resources Science

Minor in Geospatial Information Systems (GIS)

A multi-disciplinary education that enabled me to remotely sense and quantify my favorite natural resource: water. Relevant coursework listed below.

- Hydraulics and Groundwater flow; Hydrogeology, Soil Physics, Physics I & II
- Data Science; Programming for GIS I & II, Watershed Analysis for Env. Data Science, Watershed Problem Analysis
- Remote Sensing; Geodetic and Near-surface Geophysical Methods, Remote Sensing and Image Interpretation