Daniel Saftner, M.S.
Staff Environmental Geologist

Professional Experience

Mr. Saftner is an environmental geologist and hydrologist with six years of academic and professional experience. Mr. Saftner's areas of expertise include aqueous geochemistry, hydrologic modeling, water resource management, GIS, and statistics. His responsibilities include hydrogeologic field investigations, environmental compliance inspections, oversight of drilling and remedial activities, groundwater and geochemical modeling, analytical data review, and technical report writing.

Education

M.S., Hydrogeology, University of Nevada, Reno, 2017.

B.S., Geology, Indiana University of Pennsylvania, 2011.

Certifications

OSHA, 29 CFR 1910 40-Hour, Hazardous Waste Operations and Emergency Response (HAZWOPER)

Professional Affiliations

Nevada Water Resources Association (NWRA); Member since 2016

Center for International Water and Sustainability (CIWAS); Member since 2015

Rural Water Supply Network (RWSN); Member since 2015

Project Experience

Hydrologic Characterization and Water Supply

- **Groundwater Quality and Sustainability Research, Torodi, Niger –** Mr. Saftner was awarded a Fulbright scholarship to collaborate with a multidisciplinary team at World Vision Niger to investigate seasonal variations in groundwater chemistry in a semi-arid region in southwest Niger, West Africa. Mr. Saftner's field responsibilities included field instrument installation, operation, and inspection, groundwater sample collection, measuring groundwater levels, and recording land-use practices. Multivariate statistical techniques were performed to understand spatial and temporal variations in groundwater chemistry and groundwater availability. Local water resource managers and non-governmental organizations are utilizing the results to manage the local groundwater supply.
- **Monitoring Water Quality in Lake Mead and Lake Mohave, Desert Research Institute** Mr. Saftner assisted in developing Python scripts that use Google's Earth Engine platform to process and analyze Landsat imagery paired with water quality data observations from lake Mead and Lake Mohave. The result is the ability to monitor water quality metrics in each lake using Landsat satellite imagery that is atmospherically corrected using standard algorithms.
- **Mapping Pluvial Lakes of the Great Basin and Mars, Desert Research Institute** Mr. Saftner mapped pluvial lakes of the Pleistocene in the Great Basin using Google Earth and ArcGIS. Paleoshorelines of Mars were mapped using Google Mars and ArcGIS. Results included more accurate estimates of paleolake areas and volumes and basin volumes.

- **White Pine County Water Resources Plan, Ely, NV**
  Mr. Saftner acted as a consultant to the White Pine County Water Advisory Committee to update the county's Water Resources Plan. His responsibilities included collecting water-usage, land-use, and population data from county, state, and regional databases to analyze for trends and correlations. Results characterize the county's current ground and surface water usage and estimate future water usage by land-use activity, industry, and water right.
- **Slug Testing, Battle Mountain, NV**
  Mr. Saftner performed slug testing activities to determine aquifer parameters (i.e. hydraulic conductivity and transmissivity). Information gathered during the testing was used to evaluate migration of the dissolved-phase contaminant plume.

Environmental Compliance

- **Various Sites in Nevada and California**
  Mr. Saftner has conducted sampling of groundwater monitoring and remediation wells at various sites in Nevada and California, analyzed associated analytical data, and written technical reports to assist in monitoring spatial and temporal trends in chemicals of concern and the stability of dissolved-phase contaminant plumes.
- **Storm Water Pollution Prevention Inspections, Various Sites**
  Mr. Saftner has conducted storm water pollution prevention inspections to identify potential sources of pollution that may affect the quality of storm water discharges at various construction sites in Nevada.
- **Environmental Compliance Inspections, McGinness Hills Geothermal Project – Phase III Power Plant, Austin, NV**
  Mr. Saftner acted as a Compliance Inspection Contractor to ensure environmental impacts did not exceed those analyzed in the project's Environmental Assessment. His responsibilities included conducting daily compliance inspections, environmental and safety orientations with new site arrivals, and writing weekly summary reports.

Climate Research

- **Oceanography and Paleoclimate Research, Indiana University of Pennsylvania**
  As part of a three-person laboratory team, Mr. Saftner conducted research on ancient wind patterns in the eastern equatorial Pacific Ocean. Mr. Saftner's laboratory responsibilities included operating equipment (e.g., sonicators, centrifuges, and grain-size analyzers) to chemically isolate eolian dust from deep-sea sediment cores. Statistical analyses were performed to determine variations in dust grain size and accumulation rates. Results led to a better understanding of how equatorial wind speeds and directions responded to past climate change.