

Ariel O'Callaghan
Environmental Scientist/ Geologist, Glorieta Geoscience Inc.

**EXPERIENCE
SUMMARY**

3 Years of Experience Encompassing the Following Areas:

- Water rights abstracting, evaluation and research.
- Water resource planning for towns, municipalities, and agricultural facilities.
- Groundwater discharge permits compliance and reporting for CAFO facilities.
- Analysis of water quality and source pollution control.
- Environmental compliance with federal and state agencies.
- Stormwater Pollution Prevention Plan (SWPPP) preparation.
- Groundwater sampling at monitoring wells, landfills, and underground storage tanks.
- Field work in surface water, groundwater, marine and estuarine systems.

**SELECTED
PROJECT
EXPERIENCE**

City of Jal: Historic Water Rights Research (2015-Present)

Research of the City's 60-year water right history and set up meetings with OSE to uncover Jal's historic well field to substantiate its bre-basin rights. Currently working with the State Land Office to obtain a water easement for use of these wells. Ongoing compliance with OSE and State Land Office for permit conditions of approval.

La Acequia De El Ojo Del Gallo: Water Rights Abstract (2016)

Created water right chronology flow charts documenting each water right permit, transfer (surface to ground) as well as change of ownership for an acequia association. Final product and supporting documentation are being used in a larger water rights adjudication case to prove non-forfeiture.

Dairy/CAFO Environmental Monitoring, NM (2015-Present)

Provide consulting services to dairy facilities for compliance with groundwater discharge permits and environmental monitoring. Preparation of quarterly compliance reports to state agencies. Data verification and validation through GGI's own online aggregate system CAFOweb for data management of water quality, water usage and nutrient management.

Town of Red River, NM (2015)

Well field inventory for water rights evaluation. Preparation of a conservation plan using New Mexico Office of the State Engineer Gallons Per Capita per Day calculator (GPCD) and Water Loss Control American Water Works Association (AWWA) water audit software. Analysis of water usage, supply, demand, and cost of water distribution. Identified inefficiencies within the towns distribution system. Recommended conservation measures for implementation by the Towns city officials.

Moapa Valley Water District, NV (2016)

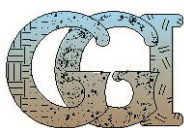
Conducted a 96-hour pumping test on the districts main well field with one observation well.

Taos Ski Valley, NM: Highway 150 Joint Utility Trench Stormwater Pollution Prevention Plan (2015):

Analysis of best management practices to mitigate stormwater runoff in compliance with EPA and USFS guidelines. Worked directly with federal agencies for project implementation and construction phasing.

El Llano Landfill, NM (2015)

Soil vapor monitoring and groundwater sampling for NMED Solid Waste Bureau for landfill closer compliance plan. Data analysis and inter-well comparison to establish background water quality in the aquifer.



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PREVIOUS WORK EXPERIENCE

Santa Fe County: Water Services Agreements, NM (2015-Present)

Evaluation of water service Agreements/Water Delivery agreement contracts. Records review with county clerk, county utility and individual water rights holders. Matrix completed outlining terms of each contract, water commitment and further actions. Prepare letters to each water rights holder on behalf of Santa Fe County.

Practivistas Program, Dominican Republic (2012)

- Program in environmental engineering and appropriate technology studying alternative environmental design criteria.
- Implementation of environmental projects while conducting public scoping meetings with local universities, engineers, contractors, architecture firms and community members.
- Projects include construction of an alternative design classroom, rain catchment systems and feasibility studies of solar and micro-hydro power.

National Park Service, California (2011):

- Conducted NPS Inventory and Monitoring Protocol for endangered Coho Salmon and threatened Steelhead Trout by mapping aquatic habitat and monitoring ecological metrics.
- Applied fisheries field techniques such as seining, snorkel surveys, electrofishing, and basin wide habitat surveys.
- Trained volunteers on field procedures, mapping of aquatic habitat and proper maintenance of equipment and gear.

Point Reyes National Seashore, California (2010):

- Measured core water quality parameters by collecting and processing samples to determine long term variability and trends for San Francisco Bay Area Network Freshwater Monitoring Protocol (SFAN).
- Other responsibilities include water quality sampling, stream flow monitoring, processing of lab samples for total coliform and E. Coli.

Romberg Tiburon Center for Environmental Studies, California (2008-2010)

- Conducted research under the supervision of Wilkerson/Dugdale Laboratory in San Francisco Bay and San Joaquin delta to study inorganic inputs and fluxes affect phytoplankton populations.
- Data analysis of real time data for San Francisco Bay Environmental Assessment and Monitoring Station
- Participated in research cruises collecting samples in Gulf of the Farallones National Marine Sanctuary, San Joaquin Delta on NOAA's RV Fulmar, and Romberg's Questuary.

EDUCATION

B.S. Environmental Science: Humboldt State University, 2013

EDUCATION EXPERIENCE

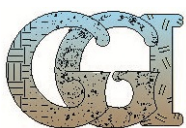
- Speaker at California Student Sustainability Coalition on Micro-hydropower.
- Solar insolation data collection for National Renewable Energy Laboratory.
- Secretary for an environmental resource engineering club; responsibilities include project development and implementation, community outreach, and recordkeeping.
- Environmental educator for Youth Educational Services

SKILLS

- Microsoft word, Excel, PowerPoint, and Arc GIS.
- Equipment: Stadia Rods, DOC Auto Analyzer, Flow Cytometer, Fluorometer, Ecolab, Pyranometers, CTD, YSI, DBH Tapes, Sky Quality Meters.
- Familiar with CEQA and NEPA processes, Environmental Impact Reports, and grant writing.



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