



McGinley & Associates
A Universal Engineering Sciences Company

Education

Ph.D., Hydrology, University of Nevada, Reno, Nevada

M.S., Hydrology, University of Nevada, Reno, Nevada

B.S., Geology, University of Massachusetts, Amherst, Massachusetts

Years of Experience

8

Licenses, Registrations, & Certifications

- Geological Society of Nevada (GSN)
- Society for Mining, Metallurgy, & Exploration (SME)
- International Mine Water Association (IMWA)
- MSHA Part 48, Surface Miner Training.
- Certified Environmental Manager, Nevada CEM No. 2457
- OSHA, 29 CFR 1910 40-Hour, Hazardous Waste Operations and Emergency Response (HAZWOPER).

Daniel R. Pasteris, Ph.D.

Geochemist

Dr. Pasteris is a Ph.D. geochemist and hydrologist with eight years of professional experience conducting studies of present and future impacts to water quality and water quantity. Dr. Pasteris offers a valuable combination of field experience, advanced technical capabilities in geochemistry and hydrology, and a pragmatic approach to study design and project management that have been key to the success of his projects with proponents, regulatory agencies, and stakeholders.

Specific services include mine site geochemical characterization, baseline hydrologic resource assessments, rapid infiltration basin (RIB) assessments, permit compliance studies, agricultural and industrial water quality impairment and mitigation work, closure plans designed to protect water resources, and the operation of surface and groundwater monitoring equipment used to collect hydrologic data. Dr. Pasteris has a strong commitment to his clients and a successful track record of producing high-quality work products to meet their needs.

SELECT PROJECT EXPERIENCE

Comprehensive Waste Rock Geochemical Characterization, Relief Canyon Mine Phase II

Pershing County, NV

Dr Pasteris was the Lead Geochemist responsible for the geochemical characterization work in support of the plan of operations modification and associated environmental impact statement (EIS). He directly oversaw the waste rock sampling and analysis program, defined the geochemical characteristics of the rock types encountered, and prepared the comprehensive baseline report.

Rock Dump Geochemical Characterization

Bald Mountain Mine, NV

Dr Pasteris was the Lead Geochemist responsible for determining the acid generating capacity of a waste rock dump that contained an unknown quantity of potentially acid generating waste rock. A work plan was developed and quickly approved by NDEP, enabling field work to proceed on a schedule that provided for characterization and subsequent rock dump reclamation and closure in the same year, thus maintaining permit compliance.

Predictive Pit Lake Water Quality Study, Relief Canyon Mine

Pershing County, NV

Dr Pasteris was the Lead Geochemist who conducted the pit lake water quality modelling study for Phase II of the Relief Canyon project. This study and the supporting waste rock geochemical characterization work were key components of successfully permitting the project with state and federal regulatory agencies, included a rigorous review of a National Environmental Policy Act (NEPA) Environmental Impact Statement (EIS). Dr. Pasteris implemented the geochemical modeling using PHREEQC geochemical modeling software.

Waste Rock Management Plan

Proposed Barite Mine for Halliburton Energy Services

Lead Geochemist responsible for deriving appropriate waste rock management practices for a Barite deposit that contains a minor amount of unoxidized, potentially acid generating (PAG) waste rock. Coordinated with mine representatives and regulatory agencies to achieve mutually agreeable adaptive management protocols.

Rapid Infiltration Basin Water Quality Study

Slaven Canyon Mine, NV

Dr Pasteris was the Lead Geochemist/Hydrologist evaluating impacts to groundwater from the use of rapid infiltration basins (RIBs) to discharge dewatering water. Soil-column tests were conducted and the resulting data were used to interpret field observations.

Metals Attenuation Study, Gold Bar Mine

Eureka County, NV

Dr. Pasteris was the Project Geochemist responsible for developing methodology and computing the attenuation capacity of the native ground beneath mine pits and waste rock dumps.

Intermittent Pit Lake Study, Bald Mountain Mine

White Pine County, NV

Dr. Pasteris was the Lead Geochemist who conducted the characterization study of an intermittent pit lake for water pollution control permit (WPCP) compliance. McGinley & Associates provided a novel solution to sampling an inaccessible pit lake by flying a drone into the pit to collect the sample, thus acquiring the data necessary to alleviate water quality concerns. Dr. Pasteris also developed a calibrated hydrologic water balance model that was used to determine the magnitude of water fluxes into and out of the pit from runoff, evaporation, and seepage.

Seep Source Determination

Jerritt Canyon Mine, Nevada

Dr. Pasteris was the Lead Geochemist overseeing a study to determine the source of water emanating from a seep at the base of a waste rock dump. Dissolved constituents and isotope ratios are used for geochemical fingerprinting of the seep and potential source waters and hydrologic flow measurements are performed to provide mass-balance information. The chemical and flow data enable estimations of source contributions to be made with a mixing model.

Process Water Infiltration Study

Midas Mine, NV

Dr Pasteris conducted a quantitative assessment of the risk to groundwater associated with a mining process water release to surface soil. The study was carried out using HYDRUS-1D unsaturated flow modeling software to demonstrate the anticipated extent of natural attenuation during unsaturated zone solute transport .

Drone Pit Lake Sampling

Dr Pasteris developed methodology for collecting mine pit lake water quality samples from shore using an unmanned

aerial vehicle (UAV). The sample collection accurately targets desired depth intervals and produces replicate samples that meet or exceed the quality of samples traditionally collected using a boat and Kemmerer bottle. Accurate vertical profiles of conductivity and temperature are also generated using sensors deployed by the drone.

Baseline Hydrogeologic Characterization

Spring Valley Project, NV

Dr Pasteris analyzed large amounts of surface water and groundwater monitoring data to establish local and regional water quality and quantity characteristics.

Groundwater Modeling for Underground Injection Control (UIC) Permit Application

American Pacific Borate and Lithium

Dr. Pasteris worked with an experienced groundwater modeler to prepare a MODFLOW groundwater model and accompanying report describing the regional groundwater flow pattern and the extent of potential impacts from solution mining in the Mojave Desert.

Reclamation Cost Estimate, Dry Canyon Mine

Winnemucca, NV

Dr. Pasteris was the Project Manager responsible for overhauling the RCE for the Dry Canyon mine near Winnemucca, Nevada. Negotiated on behalf of the mine with regulators from the BLM and the NDEP to improve the accuracy and scope of reclamation plan to meet commonly applied standards of public safety and visual aesthetics. The cost associated with an increase in reclamation activities was offset by savings found elsewhere in the previous RCE, such that there was no overall increase in the reclamation bond amount.

Hydrogeological Characterization, Bald Mountain Saga Pit

White Pine County, NV

Dr. Pasteris played a primary role in assimilating preexisting hydrogeologic data and developing the work plan conceptual approach for the pit hydrogeologic characterization.

Third Party Document Review

Multiple Mines throughout NV

Dr. Pasteris was the Lead geochemist responsible for evaluating geochemical and hydrogeological studies, generating review comments with the goal of meeting agency standards of acceptance and maintaining or improving project time schedules, and serving as regulatory liaison. Mines with studies reviewed include Phoenix, Marigold, Round Mountain, Goldstrike, Relief Canyon, Three Kids Mine, ect.