

**Thomas Keenan Gallagher, P.E.**

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**EXPERTISE:** Nevada water rights and mineral resource development statutes and regulations; regulatory permitting and environmental regulatory compliance; regional groundwater and surface water hydrology and water availability; drilling engineering, well design and borehole abandonment; well flow testing and analysis of aquifer characteristics.

**EDUCATION:** Bachelor of Science Degree in Hydrology, University of Nevada, May 1980; received College of Agriculture Outstanding Senior Award. Continuing Education in Hydrology and Groundwater Engineering.

**NEVADA REGISTRATION:**

Engineer Intern Certificate, #1938, July 1988

Professional Engineer, Civil #8248, 1989 to present

Nevada State Licensed Water Right Surveyor #1284, 2013 to present

**PROFESSIONAL EXPERIENCE:**

Nevada Water Solutions LLC – Reno, Nevada

**Consulting Engineer and Manager** – (2013 to Present) Assist clients in acquiring and managing water for their projects. Successfully completed a major new public supply water well project for the developer and the utility in Washoe County, and a smaller new well for a public water system in Pershing County; completed five large agricultural wells in Lassen County with great success; provided regulatory compliance with Nevada Bureau of Safe Drinking Water (NDEP, BSDW) and Nevada Division of Water Resources (DWR); assisted counsel as an expert in preparing for pending litigation with the DWR and prevailed in District Court in that precedent case; prepared reports for both Federal Court and two District Courts; qualified as an expert before the court regarding the Nevada drilling regulation and well drilling engineering and well design and well completion; as a consultant for the Nevada Division of Minerals, developed the first hydraulic fracturing regulation for Nevada in 2014 throughout the process of final adoption.

State Division of Water Resources - Carson City, Nevada

**Hydraulic Engineer III, Manager and Water Rights Section Chief** – (1989 to 2012) Responsible for final review and approval or denial of pending water applications to be submitted to the State Engineer. As senior groundwater engineer, train and assist other engineers and staff in all aspects of the division operations; responsible for research to assist in the decision making of the Nevada State Engineer; participated in numerous administrative hearings and conducted analyses to evaluate evidence and testimony in contested cases involving groundwater, geothermal filings and regional hydrology studies; prepared draft Rulings and Administrative Orders; Schedule and conduct state licensing examinations for water well drillers and schedule and participate in hearings on well driller regulatory compliance; established intensive networks for measuring groundwater levels across large areas of northern Nevada; established water use inventory for major irrigated

agricultural areas based on field measurements of water flows from wells and surface water sources; conducted significant research in and developed minimum regulatory standards for new statewide well drilling and borehole abandonment regulations in 1989. Conducted workshops and hearings to take public comment on the new regulation again in 1997 and 2006 and again in 2012.

State Division of Water Resources - Carson City, Nevada

**Hydraulic Engineer II** - (1985 to 1989) Assisted the public, both in person and with telephone inquiries, directly resolving various groundwater and water rights related questions and problems; conducted field investigations in contested cases and drafted rulings; regularly field-checked drilling activity for regulatory compliance; prepared drilling and plugging programs; prepared and conducted pumping tests; analyzed pressure drawdown data to estimate permeability and storage characteristics of aquifers and geothermal reservoirs; provided regulatory oversight for geothermal drilling operations during casing and cementing operations, mechanical integrity testing and blowout preventer testing throughout the state; drafted state's first-ever decision approving additional development in a *Known Geothermal Resource Area at Brady's, Nevada*, overruling the neighboring protestants; completed the revision of drilling regulations including for the first time borehole plugging requirements.

State Division of Water Resources - Carson City, Nevada

**Hydraulic Engineer I** - (1981 to 1985) Examined all new water right applications and supporting survey maps for adequacy and accuracy; studied numerous existing USGS publications on regional water availability in Nevada; drafted recommendations for state's action on pending applications based on water commitments and availability; collected statewide water level and stream flow data for state's ongoing studies concerning impacts from existing groundwater development; worked closely with USGS in creating the first well log database to efficiently manage drilling records; inspected drilling operations for contractor compliance with state's well construction specifications.

U.S.D.A. Field Experiment Station - Fallon, Nevada

**University of Nevada Research Assistant** - (1978 to 1980) Responsible for collecting and processing all data utilized in computer programs for estimating evapotranspiration; collected and tested sub-surface drainage samples and maintained lysimeters for calculating actual crop water use.

## **PROFESSIONAL AFFILIATIONS:**

Member – American Society of Civil Engineers (ASCE)

Member – American Water Resources Association (AWRA)

Member - National Ground Water Association (NGWA)

Board Member / President – Nevada Groundwater Association, a State Affiliate of NGWA

Board Member and Program Technical Director – Mountain States Groundwater Expo

(Former) Board Member and Treasurer – Nevada Petroleum and Geothermal Society

Member – Nevada Cattlemen's Association

**MINE SAFETY CERTIFICATION:** MSHA Safety Training - 1999 to present