

**Dwight L. Smith**  
**Principal Hydrogeologist**

**Professional Experience**

Mr. Smith has 30 years of experience as a consulting hydrogeologist, specializing in groundwater and surface water resource evaluations in the Western U.S., primarily in Nevada and California.

His professional experience includes: water resources development feasibility, water resources management, regional and watershed scale hydrogeologic assessments, groundwater recharge and sustainability evaluations, well design and aquifer pumping assessments, water rights surveying and research, design of dewatering systems, geochemical evaluations to assess sources of water, computer-aided groundwater and surface water flow modeling, stream flow gaging, stream and groundwater interaction studies, spring evaluations, water quality management plans, and environmental impact evaluations.

Mr. Smith has consulted to a wide range of clients, including municipalities; city, county, state and federal agencies; regional water authorities; Indian tribes; private industries including power, mining and manufacturing; resort and recreational developments; commercial and residential establishments; private land trusts; and to other civil, geotechnical, and environmental engineering firms.

Mr. Smith is a recognized expert in hydrogeology in Nevada having testified in over a dozen water right hearings before the Nevada State Engineer, and has testified in civil proceedings in California and Nevada.

**Education**

- B.S., Geological Engineering, Colorado School of Mines, 1988
- M.S., Hydrogeology, University of Nevada, Reno, 1996

**Certifications and Registrations**

- P.E. – Professional Geological Engineer in Nevada, No. 11906
- C.Hg – Certified Hydrogeologist in California, No. 194
- P.G. – Professional / Registered Geologist in California and Arizona, No's. 5974 & 28482
- W.R.S. – Water Right Surveyor in Nevada, No. 1045

**Select Project Experience**

**Basin and Regional Scale Hydrogeologic Studies**

- Hydrogeologic data collection for a comprehensive evaluation of basin-scale flow system, water budgets and perennial yield for **Dixie Valley, Churchill and Pershing Counties, Nevada**, including valley-floor and mountain-block spring reconnaissance and data collection, assistance with installation and operation of a 9-gage high-altitude precipitation network, and installation and operation of a 23-gage stream flow and playa run-on network, conducted in corporation with the USGS as part of corporative studies funded by the Bureau of Reclamation. As the culmination to the team scientific studies, a regional groundwater flow model was prepared to potential future pumping scenarios,

which included the entire geographic area of three hydrographic basins, representation of shallow valley floor flow systems and deep geothermal flow systems, and high salinity geothermal and brine water transport - BOR & Churchill County.

- Regional-scale and local-scale hydrogeologic evaluations in support mining water supply development, including work presented in a water rights hearing and for an EIS, within the **Diamond Valley Regional Flow System** and adjacent basins, including **Kobeh Valley, Antelope Valley, Pine Valley, and Diamond Valley, Eureka County, Nevada**. Major work tasks included examination of water budgets and perennial yield, well field exploration and test well drilling programs, aquifer testing, pit area drilling and hydrogeologic data collection, stream flow gaging, basin-line hydrologic data collection efforts, assistance with long-term monitoring plan development, and agency and stakeholder presentations – General Moly, Inc.
- Hydrogeologic review of sources and occurrence of arsenic in the groundwater of **Ralston Valley, Nye County, Nevada** in review of possible alternative blending sources to the existing Tonopah Public Utilities municipal system. Interflow Hydrology compiled and collected additional data on the distribution and potential sources of arsenic to groundwater, including development of a conceptual flow and sources model, exploration drilling to assess vertical distribution of arsenic in the existing Rye Patch well field, and test well drilling to assess aquifer conditions and water quality in an alternative source area further up-gradient in the regional flow system. The work successfully identified an alternative source for blending for Tonopah Public Utilities, displacing the need to construct and operate an arsenic treatment facility - Tonopah Public Utilities.
- Hydrogeologic Evaluations of **Muddy River Springs and Regional Carbonate Aquifer in southern and eastern Nevada**, including examination of spring flow sources and explanations for seasonal and long-term variability in water levels and spring discharges, and evaluations in support of the multi-year aquifer testing of the MX-5 well - Southern Nevada Water Authority.
- Hydrogeologic evaluations of **Tikaboo and Three Lakes Valleys** and the Ash Meadows portion of the **Death Valley Regional Flow System, Nye, Clark and Lincoln Counties, Nevada** in support of proposed groundwater development and a water right hearing - Southern Nevada Water Authority.
- Comprehensive groundwater and surface water resource evaluations in **Smoke Creek Desert, Washoe County, Nevada** – including exploration drilling programs, regional aquifer testing, defining basin water balance and perennial yield, aqueous chemistry to evaluation sources of aquifer recharge and define the flow system, and numeric flow modeling of the flow systems, including work with the Desert Research Institute for groundwater discharge and evapotranspiration evaluations, and USGS for regional scale geophysical evaluations – Sempra Power Generation.
- Review of hydrogeologic conditions and potential impacts to **Ash Meadows and Devils Hole** from proposed shifts in pumping distributions in western **Amargosa Desert, Nye County, Nevada**, including water right hearing participation and development of an approach with the Nevada State Engineer for off-setting impacts associated with water right transfers – Ponderosa Dairy.
- Shallow and surfacing groundwater evaluations, regional monitoring well network, and aqueous geochemistry assessments to define sources and occurrence of regional shallow

water table conditions in an urbanized portion of **Las Vegas Valley** – City of Henderson, Nevada.

- Hydrogeologic evaluations of **Coyote Spring Valley** and associated **Regional Carbonate Aquifer Interpretations, Clark and Lincoln Counties, Nevada**, in support of a water rights hearing - Coyote Springs Investments.
- Hydrogeologic and review of wells and farming in **Smith Valley, Lyon County, Nevada**, including review of Walker River issues and perennial yield of groundwater to support the farms, done as part of a due diligence review for farm acquisition – Confidential Client.
- Hydrogeologic evaluations of **Warm Springs Valley, Washoe County, Nevada**, including review of basin perennial yield, numeric flow modeling of a proposed artificial recharge-storage-recovery project, monitoring well construction, and establishment and operation of a stream and spring flow gaging network – Intermountain Land and Cattle.
- Hydrogeologic investigation of **Granite Springs and Kumiva Valleys, Churchill and Pershing Counties, Nevada**, including defining the flow system and providing estimates of basin recharge and discharge and perennial yield – ATS & C-Punch Ranch in cooperation with Churchill County.
- Basin-fill and regional potentiometric water-level database development, mapping, and assessment for over 30 Hydrographic Basins in **Eastern and Central Nevada and Western Utah** - Southern Nevada Water Authority.
- Hydrogeology, well and aquifer testing, water rights review, and consumptive water uses evaluation for the **Tracy Segment of the Truckee River, Washoe and Storey Counties, Nevada** – Grand Slam Enterprises.
- **Martis Valley** groundwater recharge and perennial yield assessment, **Placer and Nevada Counties, CA**, conducted as part of the Martis Valley regional planning effort – Martis Valley Property Owners Trust.
- Hydrogeologic evaluations of the **Dry Valley and Bedell Flat, Washoe County, Nevada**, including estimates of water budgets and perennial yield, testing well drilling program, aquifer testing, and numeric flow modeling, in support of water rights permits and EIS impact analyses – Intermountain Water Supply.
- Hydrogeology of the **Cabazon Basin, Riverside County, CA** including defining groundwater conditions and basin water budget.
- Multi-basin water supply feasibility review, **Northeastern Nevada** - Coastal Power Company.
- Potential for land subsidence from water level declines, **Wickenburg, Maricopa County, Arizona** - Toyota Testing Facility.
- Hydrogeologic evaluations, sustainable yield estimates, test well drilling program and aquifer testing at the **Hamilton Ranch, Big Bear Lake, San Bernardino County, CA**.

### Numerical Groundwater Flow Modeling

- **Dixie Valley Regional Flow Model** using MODFLOW-NWT with MT3D, including simulation of shallow basin-fill systems, deep geothermal flow systems, and saline playa environment - Churchill and Pershing Counties, Nevada - U.S. Bureau of Reclamation & Churchill County.

- **Mt Hope Regional Flow Modeling** process wellfield water supply and open-pit mine dewatering modeling using MODFLOW-SURFACT of a portion of the Diamond Valley Flow System, including Kobeh, Antelope, Pine and Diamond Valleys, Eureka County, Nevada, for use in water rights hearings and the project EIS – General Moly.
- **Fort Cady Borate Solution Mining Project** numerical flow modeling using MODFLOW2005 and MT3D for UIC permitting (Region 9 EPA) for a solution mining project in southern CA, including deep injection and pumping recovery, solute transport, and land subsidence.
- **Cascade Project** numerical flow modeling using MODFLOW USG for prediction of open-loop earth heat system wellfield performance and effects of operation at a 200-250 gpm pumping and injection rate adjacent to Lake Tahoe and Incline Creek, Washoe County, Nevada.
- **Tahoe Keys Pump Lift Station** dewatering options modeling using MODFLOW USG, South Lake Tahoe, California.
- **Pahrump Valley**, Nye and Clark Counties, Nevada, numerical flow modeling for assessment of long-term water resource management strategies including artificial recharge and pumping redistributions, using a model version developed by the Desert Research Institute.
- **Bizkaia Subdivision**, numerical flow modeling of potential nitrate buildup and transport resulting for proposed use of individual septic systems for a development in Elko, NV, using MODFLOW and MT3D.
- **Olympic Valley Groundwater Flow Model**, Professional Peer Review for Squaw Valley Public Utilities District, Placer County, CA.
- **Klondike Wellfield**, Goldfield Public Utilities, Esmeralda County, Nevada, local-scale MODFLOW-USG model for wellfield capacity review.
- **Colorado River Regional Groundwater Flow System**, Professional Peer Review of a MODFLOW model prepared to simulate regional flow in a carbonate aquifer system of Southeastern Nevada and Southwestern Utah, for the Southern Nevada Water Authority.
- **Lower Virgin River Numerical Flow Modeling** (MODFLOW), Southern Nevada and Northwestern Arizona – Southern Nevada Water Authority.
- **Smoke Creek Desert Basin-scale Numerical Flow Modeling** of the Smoke Creek Desert, Washoe County, Nevada using MODFLOW with solute transport for salinity - Sempra Power Generation.
- **Bedell Flat** Basin-scale Numerical Ground-Water Flow Modeling for an EIS, Washoe County, Nevada - Intermountain Water Supply.
- **Dry Valley** Basin-scale Numerical Flow Modeling for an EIS, Washoe County, Nevada - Intermountain Water Supply.
- **Pioneer Meadows Temporary Barrow Pit Dewatering** Facilities numerical flow modeling and dewatering system design, Sparks, Nevada.
- Professional Peer Review of a MODFLOW groundwater model prepared for Herlong Utility Coop, **Honey Lake Valley**, CA.
- **Warm Springs Valley**, Washoe County, Nevada, MODFLOW simulation of basin-scale effects of Artificial Recharge for use in project design and a water rights hearing, Intermountain Water Supply.

- **Hassayampa Wash Sub-Basin**, Arizona, Professional Peer Review of a MODFLOW Model.
- **Wadsworth Aggregate Pit Dewatering Model** using MODFLOW, Lower Truckee River, Washoe County, Nevada.
- **Stampmill Estates** MODFLOW Modeling for Water Quality (Nitrate) Management, Wadsworth, Nevada.
- **Steamboat Creek Drop Structure** Seepage and Hydrostatic Uplift Analysis (SEEP2D) - Washoe County Regional Transportation Commission.

### Well Drilling, Design and Aquifer Testing

- **Silver Spring Mutual Water Company** - Deodar Replace Well Design, Drilling, Well Construction Inspection, and Pumping Tests, Lyon County, Nevada.
- **Squaw Valley Public Services District** - PlumpJack Municipal Well, Design, Drilling, Well Construction Inspection, and Pumping Tests, Placer County, CA.
- **NDOW Mason Valley Fish Hatchery** - New domestic well, and replacement fish hatchery water supply Well R1; plugging and abandonment of old hatchery supply Wells A1, A2, and C2.
- **Lander County Public Works** - Battle Mountain Wells 7 and 8 pumping assessment, review of casing collapse issues, and exploration drilling program development for a new municipal well.
- **Lander County Public Works** - Mountain View Gold Course, Exploration Well 9-A and 4-A zone water quality testing, new irrigation well 9-A design, construction inspection, and pumping tests.
- **Northern Nevada Industrial Center** - Exploratory drilling program, industrial water supply wells, and aquifer testing, Lyon County, Nevada.
- **NV-Reno Industrial**, Carson River induction test wells, Lyon County, Nevada.
- **Grizzly Lake Community Services District** - Delleker Test Well, Dual Zone Water Quality and Yield Testing, Portola, CA.
- **Sierra County Water Works District No. 1** - Calpine Test Wells, Dual Zone Water Quality and Yield Testing, and Municipal Well No. 3 Design, Sierra Valley, CA.
- **Sierra Brooks** - Municipal Well No. 3, Drilling and Construction Inspection, Loyalton, CA
- **Cascade Project** – Earth Heat System, Pumping and Injection Wells Evaluations, New Injection Well, Wellfield testing and operations evaluations, Incline Village, Nevada.
- **Resort at Squaw Creek** - Golf Course Irrigation Well 18-4; rehab and inspection of Wells 18-1, 18-2, and 18-3R; rehab and testing of Perini and Fourth Fairway test wells.
- **City of Tonopah Public Utilities** - Exploration and test well drilling, aquifer testing, and new municipal Wells 9 and 10 design and construction supervision for development of a low arsenic content municipal water source in Ralston Valley, Nye County, Nevada.
- **City of Tonopah Public Utilities** - Wells 5 to 8 rehabilitation, Ralston Valley, Nye County, Nevada.
- **Sadler Ranch** - Shipley Hot Spring Impact Mitigation Well, exploration, test well drilling, and high-capacity production well design for an augmentation source of geothermal water to hot springs, Diamond Valley, Eureka County, Nevada.



- **C-Punch Ranch** – Test well in Granite Springs Valley, followed by design, inspection and testing for six new high-capacity irrigation wells.
- **Esmeralda County Public Works/Utilities** – Community of Goldfield Klondike Wellfield, Municipal Well Rehabilitation and Wellfield Sustainable Yield Testing.
- **Esmeralda County Public Works/Utilities** – Community of Dyer well design and construction inspection.
- **General Moly - Mt Hope Project** - Well field exploration, test wells, and aquifer testing program in Kobeh Valley for a mining and milling water supply, Eureka County, Nevada.
- **Martis Valley West Parcel** - Exploratory drilling and test well program, Placer County, CA
- **Squaw Valley Mutual Water Company** - Wells No. 1 and 2 Rehabilitation and Testing, Placer County, CA
- **Mt. Rose Ski Area** - Snowmaking Wells No. 1 and 2, well siting, design, development and testing, Washoe County, Nevada.
- **Sugar Bowl Ski Area** - Snowmaking test well drilling, Placer County, CA.
- **Royal Gorge Ski Area** - Exploration and Test Wells Program for new water supply development, Placer and Nevada Counties, CA.
- **Big Chief Lodge** - Well pumping tests for dependable water supply analyses, Placer County, CA.
- **Duraflex International Corporation** - Industrial well rehabilitation, Washoe County, Nevada.
- **Ancil Hoffman Golf Course**, Sacramento County Parks & Recreation, Well Performance and Well Yield.
- **Deule Vocation Facility**, CA Department of Corrections, Well Performance Evaluation -.
- **Community of Imlay** - Municipal Well Siting, Design, Construction Inspection and Testing.
- **City of Fallon** - Municipal Well No. 4 Design, Construction Supervision, and Testing.
- **Shadow Creek Golf Course** – Exploration Drilling and Wells 1-5 Design, Drilling Supervision and Pumping Tests, Las Vegas, Nevada.
- **Bellagio Resort and Casino** - Production Wells Design, Construction Inspection and Testing for Resort Water Features, Las Vegas, Nevada.
- **Pyramid Lake Paiute Tribe** - High School Municipal and Irrigation Well.
- **University of Nevada** - Carlin Fire Training Academy Facility and Training Water Supply Wells.
- **NDOT** - Washoe Lake wetlands test wells, and production well.
- **NDOT** - Facility wells at Montgomery Pass, Sunnyside and Lund.
- **Intermountain Water Supply** - Dry Valley Test Well Drilling Program, Washoe County, Nevada.
- **Sempra Energy** - Smoke Creek Desert Exploration Drilling and Test Wells Program including long-term aquifer tests, Washoe County, Nevada.
- **Alpine Springs County Water District** - Performance Evaluation of Horizontal Wells, Placer County, CA.
- **Pine Ridge** - Exploration and Production Wells Drilling and Testing, Portola, CA.
- **Gold Mountain Community Services District** - Well Performance Evaluations and New Well Construction, Portola, CA.

- **Incline Village General Improvement District** - Exploration Wells Program, Lake Tahoe, Nevada.
- **Kaiser Micromill** - Well Construction and Aquifer Testing, Storey County, Nevada.
- **Kal Kan Dry Food** - Well Construction and Aquifer Testing, Washoe County, Nevada.
- **Tonopah Resources** - Industrial Water Supply Well, and facility water quality monitoring wells.
- **Las Vegas Water Pollution Control Facility** - Dewatering Well System, Clark County Sanitation District.
- **Glenshire Mutual Water Company** - Well Designs and Standard Specifications, Truckee, CA.
- **City of Corona** - Municipal Well Design, Construction Supervision, and Testing.
- **City of Simi Valley** - Municipal Well Drilling Supervision.
- **City of Big Bear Lake** - Municipal Well Drilling Supervision.
- **Holcomb Valley Ranch** - Test Well Drilling Program.
- **Community of Coto de Caza** - Test Well Drilling Program for Groundwater Development, Golf Course Irrigation, and Shallow Groundwater Suppression.

#### **Watershed Scale Hydrogeologic Studies**

- Evaluation of the occurrence and presence of naturally occurring elevated arsenic in shallow ground being intercepted by the sewer collection system in the South Truckee Meadows, Washoe County, Nevada, including installation of a 32-well shallow groundwater monitoring network.
- Evaluation of potential construction water supply well locations for a proposed 45 turbine wind farm on the Walker Ridge, Lake County, CA.
- Groundwater sources and occurrence in the West Martis Creek watershed and at a localized development area with shallow and surfacing groundwater concerns, Placer County, CA.
- Geothermal well and Truckee River interaction investigation at the River Inn property, Washoe County, Nevada.
- Well performance and hydrogeologic evaluation for new well locations for the Gold Mountain Community Service District, Plumas County, CA.
- Hydrogeologic evaluation for the Meadow Ranch Project EIS near Calpine, including surface water and groundwater resources, Sierra County, CA.
- Appraisal of groundwater development potential near the Great Basin Ready Mix Plant, Mustang, Washoe County, Nevada.
- Hydrogeologic evaluation of Alpine Meadows for new horizontal and/or vertical well development, Placer County, CA.
- Hydrogeologic evaluation of a portion of Hungry Valley for a proposed industrial facility, Washoe County, Nevada.
- Sierra Highlands water resources development and hydrogeologic evaluation for an EIS, Portola, CA.

### Surface Water Gaging and Hydrologic Studies

- Walker River flow system evaluations, including quantification of flows through the Walker River Paiute Tribe Reservation, hydrologic effects of Weber Reservoir, and technical evaluations of options to account and manage conveyance of water rights through the Lower Walker River, Nevada.
- Walker River evaluations of flows, storage and decreed/permitted water rights on the system, in support of water right litigation settlement discussions, CA and Nevada.
- Little Truckee River - preliminary assessment of Perazzo Meadows restoration effects to stream flows and down-stream water rights diversions to Sierra Valley, Sierra County, CA.
- Inventory of springs and streams in four hydrographic basins (Newark, Ruby, Huntington and Long Valleys) for compliance with inter-basin place of use for water rights.
- Inventory of springs and streams in Kobeh Valley for for compliance with inter-basin place of use for water rights.
- Characterization of water-righted springs in the Roberts Mountains, including geologic interpretations of spring controls.
- Dixie Valley stream flow gaging network - operation of a 22 gage network to collect data on ephemeral and perennial runoff and stream flows in Dixie Valley, Churchill and Pershing Counties, Nevada.
- Warm Springs Creek, Spring and Stream Flow Gaging Network operation and management, and technical evaluations of the feasibility of proposed artificial recharge of stream flows, Washoe County, Nevada.
- Kobeh, Pine and Antelope Valley Regional Stream and Spring Flow Monitoring - assisted with installation of stream gages, conducted miscellaneous stream and spring discharge monitoring for regional baseline data collection, conducted a comprehensive inventory of spring and stream flows in Kobeh Valley for submittal to the Nevada Division of Water Resources, Eureka and Lander Counties, Nevada.
- Truckee River and Martis Valley Tributaries Surface Water - Groundwater Interaction Study for tributaries to the Upper Truckee River, including base flow stream measurements, chemistry data collection, and historic gage data interpretations, Placer and Nevada Counties, CA.
- Virgin River seepage run stream flow measurements in assistance to multiple public agencies - Clark County, Nevada.
- Truckee River Infiltration Gallery Assessment - Kal Kan Foods, Storey County, Nevada.
- Galena Creek Surface Water Diversion – Infiltration Collector, Montreux Development, Washoe County, Nevada.
- Granite Creek stream flow measurements and diversion locations review for non-potable water uses, Washoe County, Nevada.
- Duck Lake Valley, Reconnaissance Surface Water Resources Assessment, Washoe County, Nevada.
- Ophir Lake Project, Surface Water Resources and Potential for Artificial Recharge, Washoe Valley, Nevada.
- Hamilton Canyon Dam Feasibility, Sonoma County, CA.



- Dixie Valley intermediate and high altitude precipitation gage network (9 gages) installation and operation assistance, including precipitation water chemistry sample collection, Churchill County, Nevada.
- Granite Springs and Kumiva Valley precipitation gage network (6 gages) installation and operation, Pershing County, Nevada.

### Water Rights Management and Research

- Abstracting of active surface water rights and spring rights in the Walker River tributary watershed, CA and Nevada□
- Comprehensive research of Water Rights in 10 Hydrographic Basins in Eastern Nevada and Western Utah - Southern Nevada Water Authority.
- Detailed Water Rights Research and Committed Water Rights Assessment for Spring Valley – Southern Nevada Water Authority.
- Research and Committed Water Rights Assessment for the Tracy Segment Hydrographic Area – Gland Slam Enterprises.
- Truckee River Water Rights Availability Assessment - Washoe County Regional Water Planning Commission.
- Truckee River Water Rights Recovery Program - Truckee Meadows Water Authority.
- University of Nevada, Reno, Main Station Farm and Valley Road Farm Water Rights Consulting.
- Kiley Ranch, Reno, Water Rights Research, Surveying and TMWA Banking.
- MGM Resorts International, Las Vegas - Water Rights Development, Management, and Proofs for all MGM properties in Las Vegas Valley, including Shadow Creek Golf Course and Bellagio Casino.
- Operating Engineers JAC, Wadsworth, Nevada - Water Rights Management and Proofs.
- Midas Joint Venture, Water Rights Research, Northern Nevada.
- Marshall Ranch, Washoe County, Nevada, Water Rights Appropriations, Vested Claims, Artificial Recharge, and Proof of Beneficial Use.

### Environmental-Contaminant Evaluations

- High Salinity Agricultural Irrigation Evaluation as a Groundwater Mitigation Alternative - Buffalo Valley & Lower Reese River, Nevada.
- Warm Springs Valley Groundwater Quality Management Plan, Washoe County, Nevada.
- Mining Site Soil and Groundwater Contamination Characterization and Monitoring Network - Northeastern Nevada.
- Environmental Characterization of Soil and Groundwater Contamination at the Mountain Warfare Training Center, CA – US Department of Defense.
- Environmental Remediation of Fuel Contaminants in Soil and Groundwater - Lassen Union High School, Susanville, CA.
- Silver Lake Landfill Remediation, Reno, Nevada.
- Solid Waste Assessment Testing (SWAT) Evaluations and Groundwater Quality Monitoring Networks at approximately 12 Landfill Facilities, Riverside and San Bernardino Counties, CA.

**Publications & Seminar/Conference Presentations**

Smith, D.L., 2019, **Lower White River Flow System of Southern Nevada: Technical Challenges of a Regionally Connected Aquifer and Opportunities for Conjunctive Use of Water Resources**; USCID 12<sup>th</sup> International Conference on Irrigation and Drainage, Reno, NV, invited speaker.

Smith, D.L., 2018, **Nevada Water Supply Status Update - Rural Basins**, Nevada Water Law Seminar, Reno, NV, invited speaker.

Smith, D.L., 2018, **Groundwater: A Brief Overview of Concepts and Issues**, speaker for the Sierra Nevada College summer naturalist program, Sagehen Creek Field Station, CA.

Smith, D.L., 2017, **Perennial Yield versus Sustainable Yield**, invited speaker for the Nevada Water Resources Association 2017 Annual Conference, Reno, NV.

Smith, D.L., 2016, **Tools for measuring water supply and quality impacts; tips for effectively presenting complicated concepts for judges and juries and for demonstrating specific impacts in courts and before the State Engineer**, invited speaker for Law Seminars International, *Water Resource Management, Science and the Law*, Reno, NV.

Smith, D.L., 2014, **Connection and Interrelationship between Stream Flow and Groundwater, and Methods for Characterization and Determination**, invited speaker for Law Seminars International, *Hydrology and the Law*, Reno, NV.

Smith, D.L., and Childress, J.M., 2012, **Observations of Elevated Chloride and Bromide Contents in Bulk Precipitation and Mountain Block Spring Samples in Dixie Valley, Churchill and Pershing Counties, Nevada**, 2012 *NWRA Nevada Water Conference*, Las Vegas, NV, abstract and presentation.

Childress, J.M., and Smith, D.L., 2012, **Arsenic Distribution in Groundwater of Ralston Valley, Nevada and Identification of Alternative Groundwater Sources for the Town of Tonopah**, 2012 *NWRA Nevada Water Conference*, Las Vegas, NV, abstract and presentation.

Blazer, D.J., Barter, H.W., and Smith, D.L., 2011, **Development of a Coupled Pit-Dewatering and Post-Closure Lake-Development Model for Projections of Long-Term Mining Impacts**, paper and abstract presentation to the 2011 MODFLOW and More Conference, International Center for Groundwater Modeling, Golden, Colorado.

Smith, D.L., 2010, **Diamond Valley Numeric Flow Modeling and Observed Responses to Four Decades of Agricultural Pumping above the Estimated Perennial Yield**, 2010 *NWRA Nevada Water Conference*, Las Vegas, NV, abstract and presentation.

Childress, J.M., Smith, D.L., and Katzer, T.K., 2010, **Hydrogeology of Granite Springs Valley, Nevada & Geochemical Evidence for Pleistocene-Age Recharge Waters in a Closed-Basin Valley-Fill Aquifer**, 2010 *NWRA Nevada Water Conference*, Las Vegas, NV, abstract and presentation.

- Smith, D.L., 2008, **Hydrogeology of Martis Valley, Placer and Nevada Counties, CA**, public seminar sponsored by the Truckee River Watershed Council, Watershed Issues Forum.
- Ayoub, A., Collier, S., and Smith, D.L., 2008, **Review of Climate Variation and Hydrologic Responses at the Muddy River Springs, Clark County, Nevada - Comparison of Climate Indices for use in Partitioning Climate and Pumping Influences**, 2008 NWR A Nevada Water Conference, Mesquite, NV, abstract and presentation.
- Smith, D.L., 2007, **Utility of Numeric Flow Models in Administration of Nevada Water Rights**, Association of Engineering Geologist 2007 Annual Conference, Los Angeles, CA, abstract and presentation.
- Smith, D.L., 2006, **Groundwater & Surface Water Management – Technical Issues**, in *Water Rights Management: Use and Shared Use Agreements in Nevada*, Lorman Education Services seminar, Reno, Nevada.
- Smith, D.L., Johnson, J., Kistingner, G., and Donovan, D., Burns, A., 2004, **“Climate and Barometric Pressure Influences on Pederson Spring Discharge and the Carbonate Aquifer near the Muddy Springs, Southern Nevada”**. *Journal of the Nevada Water Resources Association*, Fall 2004, Vol. 1, No. 1, pp. 76 – 103.
- Smith, D.L., Johnson, J., Kistingner, G., and Donovan, D., 2004, **“Implications of Barometric Pressure and EH-5B Water Levels to Discharge of Pederson Spring, Clark County, Nevada”**, 2004 NWR A Nevada Water Conference, abstract and presentation.
- Smith, D.L., Albright, C.A., and Smitherman, J., 2003, **“Availability of Decreed Truckee River Water Rights and Projections of Future Water Demands in the Truckee Meadows Area, Southern Washoe County, Nevada”**, 2003 NWR A Nevada Water Conference, abstract and presentation.
- Johnson, J., Smith, D.L., and Katzer T., 2002, **“Regional Carbonate Aquifer - A Hypothesis of Terminal Groundwater Outflow to the Colorado River”**, 2002 NWR A Annual Nevada Water Conference, abstract and presentation.
- Smith, D.L. and Guitjens, J.C., 1999, **“Characterization of Urban Surfacing Groundwater in Northwest Henderson, Clark County, Nevada”**, *Environmental and Engineering Geosciences*, Vol. IV, No. 4, pp. 455 - 478.
- Smith, D.L. and Katzer, T., 1998, **“Lemmon Valley Water Resources Project - Marshall Ranch Alternative, Proposed Development of a Supplemental Water Supply for the North Valleys Area of Reno”**, 1998 NWR A Nevada Water Conference, abstract and presentation.
- Smith, D.L. and Guitjens, J.C., 1996, **“Shallow and Surfacing Groundwater in an Arid Urban Environment”**, *Proceedings of the ASCE North American Water and Water Environment Congress of 1996*.