

John K. Simpson, ISB #4242  
Travis L. Thompson, ISB #6168  
Abigail R. Bitzenburg, ISB #12198  
**MARTEN LAW LLP**  
163 Second Ave. West  
P.O. Box 63  
Twin Falls, Idaho 83303-0063  
Telephone: (208) 733-0700  
Email: [jsimpson@martenlaw.com](mailto:jsimpson@martenlaw.com)  
[tthompson@martenlaw.com](mailto:tthompson@martenlaw.com)  
[abitzenburg@martenlaw.com](mailto:abitzenburg@martenlaw.com)

W. Kent Fletcher, ISB #2248  
**FLETCHER LAW OFFICE**  
P.O. Box 248  
Burley, Idaho 83318  
Telephone: (208) 678-3250  
Email: [wkf@pmt.org](mailto:wkf@pmt.org)

*Attorneys for American Falls  
Reservoir District #2 and Minidoka  
Irrigation District*

*Attorneys for A&B Irrigation District, Burley  
Irrigation District, Milner Irrigation District,  
North Side Canal Company, and Twin Falls  
Canal Company*

**BEFORE THE DEPARTMENT OF WATER RESOURCES  
OF THE STATE OF IDAHO**

IN THE MATTER OF DISTRIBUTION OF )  
WATER TO VARIOUS WATER RIGHTS )  
HELD BY OR FOR THE BENEFIT OF )  
A&B IRRIGATION DISTRICT, )  
AMERICAN FALLS RESERVOIR )  
DISTRICT #2, BURLEY IRRIGATION )  
DISTRICT, MILNER IRRIGATION )  
DISTRICT, MINIDOKA IRRIGATION )  
DISTRICT, NORTH SIDE CANAL )  
COMPANY, AND TWIN FALLS )  
CANAL COMPANY )

~~Docket No. CM-DC-2010-001~~  
Docket No. CM-MP-2016-001

**SURFACE WATER COALITION'S  
WITNESS LIST**

\_\_\_\_\_)  
IN THE MATTER OF IGWA'S )  
SETTLEMENT AGREEMENT )  
MITIGATION PLAN )  
\_\_\_\_\_)

**TO: HEARING OFFICER & PARTIES' COUNSEL OF RECORD**

COME NOW, A&B IRRIGATION DISTRICT ET AL. (collectively "Surface Water Coalition"), by and through its counsel of record, MARTEN LAW LLP and FLETCHER LAW

OFFICE and pursuant to the Hearing Officer’s *Scheduling Order* (Dec. 29, 2023) hereby provides the following list of witnesses and exhibits that may be called at the hearing in the above-referenced matter:

**Lay Witnesses:**

Any witness called by IDWR or any other party to this matter

The following persons that were identified as providing information in response to the Coalition’s discovery requests:

- Alan Jackson – Bingham Ground Water District (manager)
- Bob Turner – Bonneville-Jefferson Ground Water District (former manager); IGWA (current executive director)
- Brad Butters – Bonneville-Jefferson Ground Water District (manager)
- Kirk Schweider – Bonneville-Jefferson Ground Water District
- Stephanie Mickelson – Bonneville-Jefferson Ground Water District
- Car Tyler – Bonneville-Jefferson Ground Water District

Any witnesses identified by Jefferson-Clark Ground Water District that provided information or any responses to the Coalition’s discovery requests (names presently unknown)

The Coalition further reserves the right to call rebuttal witnesses as necessary.

**Expert Witness:**

David Colvin, P.G., LRE Water  
1221 Auraria Pkwy  
Denver, Colorado 80204  
Attachment A (updated CV)

DATED this 31<sup>st</sup> day of January, 2024.

**MARTEN LAW LLP**

/s/ TRAVIS L. THOMPSON  
Travis L. Thompson  
*Attorneys for A&B Irrigation District,  
Burley Irrigation District, Milner Irrigation  
District, NSCC and TFCC*

**FLETCHER LAW OFFICE**

/s/ KENT FLETCHER  
W. Kent Fletcher  
*Attorneys for Minidoka Irrigation  
District and American Falls  
Reservoir District #2*

## CERTIFICATE OF SERVICE

I hereby certify that on this 31<sup>st</sup> day of January, 2024, I served a true and correct copy of the foregoing *Surface Water Coalition's Witness List* on the following by the method indicated:

<p>Hearing Officer Roger S. Burdick Garrick Baxter Sarah Tschohl State of Idaho Dept. of Water Resources 322 E Front St. Boise, ID 83720-0098 *** service by electronic mail <a href="mailto:roburd47@gmail.com">roburd47@gmail.com</a> <a href="mailto:garrick.baxter@idwr.idaho.gov">garrick.baxter@idwr.idaho.gov</a> <a href="mailto:sarah.tschohl@idwr.idaho.gov">sarah.tschohl@idwr.idaho.gov</a> <a href="mailto:file@idwr.idaho.gov">file@idwr.idaho.gov</a></p>	<p>Matt Howard U.S. Bureau of Reclamation 1150 N. Curtis Rd. Boise, ID 83706-1234 *** service by electronic mail only <a href="mailto:mhoward@usbr.gov">mhoward@usbr.gov</a></p>	<p>Tony Olenichak IDWR – Eastern Region 900 N. Skyline Dr., Ste. A Idaho Falls, ID 83402-1718 *** service by electronic mail only <a href="mailto:tony.olenichak@idwr.idaho.gov">tony.olenichak@idwr.idaho.gov</a></p>
<p>T.J. Budge Elisheva Patterson Racine Olson P.O. Box 1391 Pocatello, ID 83204-1391 *** service by electronic mail only <a href="mailto:tj@racineolson.com">tj@racineolson.com</a> <a href="mailto:elisheva@racineolson.com">elisheva@racineolson.com</a></p>	<p>Sarah A. Klahn Max C. Bricker Diane Thompson Somach Simmons &amp; Dunn 2033 11th St., Ste. 5 Boulder, CO 80302 *** service by electronic mail only <a href="mailto:sklahn@somachlaw.com">sklahn@somachlaw.com</a> <a href="mailto:mbricker@somachlaw.com">mbricker@somachlaw.com</a> <a href="mailto:dthompson@somachlaw.com">dthompson@somachlaw.com</a></p>	<p>David Gehlert ENRD – DOJ 999 18th St. South Terrace, Ste. 370 Denver, CO 80202 *** service by electronic mail only <a href="mailto:david.gehlert@usdoj.gov">david.gehlert@usdoj.gov</a></p>
<p>Rich Diehl City of Pocatello P.O. Box 4169 Pocatello, ID 83201 *** service by electronic mail only <a href="mailto:rdiehl@pocatello.us">rdiehl@pocatello.us</a></p>	<p>William A. Parsons Parsons, Smith &amp; Stone LLP P.O. Box 910 Burley, ID 83318 *** service by electronic mail only <a href="mailto:wparsons@pmt.org">wparsons@pmt.org</a></p>	<p>Corey Skinner IDWR – Southern Region 650 Addison Ave W, Ste. 500 Twin Falls, ID 83301-5858 *** service by electronic mail only <a href="mailto:corey.skinner@idwr.idaho.gov">corey.skinner@idwr.idaho.gov</a></p>
<p>W. Kent Fletcher Fletcher Law Offices P.O. Box 248 Burley, ID 83318 *** service by electronic mail only <a href="mailto:wkf@pmt.org">wkf@pmt.org</a></p>	<p>Kathleen Carr U.S. Dept. Interior, Office of Solicitor Pacific Northwest Region, Boise 960 Broadway, Ste. 400 Boise, ID 83706 *** service by electronic mail only <a href="mailto:kathleenmarion.carr@sol.doi.gov">kathleenmarion.carr@sol.doi.gov</a></p>	<p>Candice McHugh Chris M. Bromley McHugh Bromley, PLLC 380 South 4th Street, Ste. 103 Boise, ID 83702 *** service by electronic mail only <a href="mailto:cbromley@mchughbromley.com">cbromley@mchughbromley.com</a> <a href="mailto:cmchugh@mchughbromley.com">cmchugh@mchughbromley.com</a></p>
<p>Robert E. Williams Williams, Meservy &amp; Lothspeich, LLP P.O. Box 168 Jerome, ID 83338 *** service by electronic mail only <a href="mailto:rewilliams@wmlattys.com">rewilliams@wmlattys.com</a></p>	<p>Robert L. Harris Holden, Kidwell, Hahn &amp; Crapo, PLLC P.O. Box 50130 Idaho Falls, ID 83405 *** service by electronic mail only <a href="mailto:rharris@holdenlegal.com">rharris@holdenlegal.com</a></p>	<p>Randall D. Fife City Attorney, City of Idaho Falls P.O. Box 50220 Idaho Falls, ID 83405 *** service by electronic mail only <a href="mailto:rfife@idahofallsidaho.gov">rfife@idahofallsidaho.gov</a></p>

<p>Skyler Johns  Steven Taggart  Nathan Olsen  Olsen Taggart PLLC  P.O. Box 3005  Idaho Falls, ID 83403  *** service by electronic mail only  <a href="mailto:sjohns@olsentaggart.com">sjohns@olsentaggart.com</a>  <a href="mailto:staggart@olsentaggart.com">staggart@olsentaggart.com</a>  <a href="mailto:nolsen@olsentaggart.com">nolsen@olsentaggart.com</a></p>	<p>Dylan Anderson  Dylan Anderson Law PLLC  P.O. Box 35  Rexburg, ID 83440  *** service by electronic mail only  <a href="mailto:dylan@dylanandersonlaw.com">dylan@dylanandersonlaw.com</a></p>	
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/s/ Travis L. Thompson  
Travis L. Thompson

Attachment

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# DAVE COLVIN, PG, PMP

Groundwater Team Leader | Senior Project Manager | Principal

## EDUCATION

M.S. Environmental Science and Engineering, Colorado School of Mines, 2002  
 B.S. Geology, Syracuse University, 1996

## PROFESSIONAL REGISTRATION

Professional Geoscientist  
 AZ RG#68926  
 ID #PGL-1453  
 TX #11440  
 WY #PG-3602  
 KS #958  
 Project Management Professional (PMP) #1749472

## PROFESSIONAL ACTIVITIES

AWRA Colorado  
 2017/2018 Past President  
 Water Education Colorado  
 2012 Water Leaders Program  
 Colorado Groundwater Association  
 National Groundwater Association

Dave is a Principal Hydrogeologist and Senior Project Manager with over 25 years of experience in groundwater hydrology, water resources, and environmental sciences. He supervises teams of diverse subject matter experts and provides technical leadership to solve today's water resource challenges. Dave serves as the Groundwater Team Leader responsible for managing staff, resources, projects and clients for a group of hydrogeologists. His technical expertise subject areas include water supply development, groundwater management, groundwater governance/administration, surface water/groundwater interaction, riverbank filtration (RBF), soil aquifer treatment (SAT), managed aquifer recharge (MAR), aquifer storage and recovery (ASR), aquifer characterization, groundwater modeling, and subsidence caused by groundwater pumping.

## FEATURED PROGRAM & PROJECT EXPERIENCE

### Surface Water Coalition, Idaho (2019-ongoing)

Lead Hydrogeologist and Project Manager providing litigation support related to water management of the Eastern Snake Plain Aquifer. Provides protection of surface water flows and senior surface water rights from negative impacts due to junior groundwater pumping. Serves on the Eastern Snake Plain Hydrologic Modeling Committee supporting MODFLOW modeling activities related to complex surface water/groundwater management and water rights administration. Also serves as the SWC representative on technical working groups guiding the implementation and adaptation of a settlement agreement between the SWC and Idaho Ground Water Appropriators including monitoring/evaluation of hydrology, pumping reductions, consumptive use and planning for managed aquifer recharge.

### Salt River Project – Gila River Basin Adjudication, Arizona Superior Court Case W1-103, San Pedro Basin, AZ (2018 – ongoing)

Hydrogeologist providing groundwater analysis and modeling supporting adjudication of water rights in the San Pedro Basin. Tasks include oversight of groundwater model development, calibration and uncertainty analysis, and trial/litigation support. Provides protection of surface water flows, riparian habitat, and water rights from negative impacts due to groundwater pumping.

**City of Aurora – Horizontal Well Project; Weld County, CO (2019 – ongoing)**

Project Manager for feasibility evaluation and planning of two radial collector wells for the City's Prairie Waters System. The project targets increasing system yield while maximizing riverbank filtration water quality improvements. Investigation included hydrogeophysical surveys, exploratory drilling, aquifer testing, and groundwater modeling. Results included design of horizontal wells that maintain the existing system water quality while providing adaptable system operations that can increase yield during drought demands. Currently the Lead Hydrogeologist providing design phase services.

**City of Northglenn – ASR Feasibility Evaluation and Pilot Testing (2020 – ongoing)**

Lead hydrogeologist and Project Manager for feasibility investigation and pilot test system design services. Support includes ASR feasibility data analysis, water quality evaluation, DWR and EPA UIC permitting, pilot system design and test planning. The project will provide pilot storage of the City's fully consumable water rights, providing more surface storage space for other supplies. If recovered water quality is compatible, the pilot system will be converted into permanent infrastructure as the first phase of a larger ASR system.

**Riverence Holdings LLC – Snake River Spring Supply Support (2022-ongoing)**

Project Manager and lead hydrogeologist supporting multiple fish hatcheries throughout Idaho's Magic Valley. Provides hydrogeologic planning of spring fed aquaculture focusing on upgradient aquifer pumping and recharge impacts on water rights, water quality, and water supply reliability.

**City of Aurora – Box Elder Basin Aquifer Storage and Recover (ASR) Feasibility Investigation and Pilot Testing (2018 – Ongoing)**

Project Manager and lead hydrogeologist investigating the feasibility of recharging and storing water in the Box Elder alluvial aquifer at the Aurora Center for Renewable Energy (ACRE). Tasks included hydrogeophysical surveys, exploratory drilling/test pits, and infiltration testing. The project identified recharge as a viable option for innovative storage opportunities and has moved into a pilot test planning phase. Current services include recharge source water characterization, water rights and permitting planning, water quality evaluation, groundwater modeling, and pilot system design.

**Dominion Water and Sanitation District – Groundwater Support; Douglas County, CO (2015-ongoing)**

Lead Hydrogeologist providing Denver Basin and South Platte alluvial aquifer groundwater resources planning services including water rights evaluation, water quality assessment, well field yield estimation and project planning. Provided hydrogeologic and contractor management support during Denver Basin well site design, construction, testing, aquifer characterization, and sampling. Additional technical support included documentation for County hearings, interactions with local water agencies, and groundwater transaction due diligence.

**Town of Erie – Water Supply Planning Support (2018 – ongoing)**

Lead hydrogeologist and Project Manager providing groundwater support related to water supply planning. Services include aquifer characterization, water quality studies, horizontal directionally drilled well field design, ASR feasibility analysis, and water rights. Prepared Colorado Water Conservation Board and Division of Local Affairs grant applications to obtain project funding. The project will provide a 3,000 GPM expansion of the Town's water supplies.

**Town of Castle Rock – Groundwater Support; Douglas County, CO (2015-ongoing)**

Project Manager providing comprehensive groundwater support. Projects have included:

- Denver Basin Well Drilling, Testing, and Aquifer Storage and Recovery (ASR) – Support includes Denver Basin ASR planning/permitting, bidding services, contractor management, construction oversight, well/pump design, aquifer testing, and groundwater regulatory support.
- Alluvial Well Field Expansion and Rehabilitation – Project Manager for two projects aimed at improving yields in well fields affected by biofouling and performance issues. Oversaw construction and testing of six horizontal directional drilled (HDD) wells installed to increase yield, performance, and sustainability.
- City of Aurora and Town of Castle Rock – Lost Creek Underground Storage Pilot Project; Lost Creek Designated Basin, CO (2017-2018)
- Project Manager for aquifer characterization and evaluation of recharge potential for underground water storage pilot project. Obtained grant funding and facilitated multiple stakeholder project planning and implementation. The project identified important field investigation methods and results for storage related aquifer characteristics previously overlooked in desktop studies.

**City of Aurora – Prairie Waters North Campus Master Plan; Adams and Weld Counties, CO (2017-2019)**

Lead hydrogeologist providing master planning services for approximately 20 MGD expansion of the Prairie Waters Project – North Campus over the next 20 years. Facility expansion included riverbank filtration well field, pipelines, and storage reservoirs. Led facilities operational planning, supported water resource planning, gap analysis, and capital improvements planning.

**Denver Water – Aquifer Storage and Recovery (ASR) Pilot Project, City and County of Denver, CO (2016-current)**

Groundwater technical support and project management for ASR feasibility investigation. Provided Denver Basin aquifer characterization including exploratory borehole drilling, hydrogeophysical investigation (Nuclear Magnetic Resonance and conventional methods), and 3-D geologic modeling. Current services include an advisory role for installation of a multi-aquifer Westbay Denver Basin monitoring well.

**City of Greeley – ASR Feasibility Evaluation (2019-2021)**

Senior Technical Advisor for a project evaluating the feasibility of new and existing ASR projects in multiple bedrock aquifers. Includes evaluation of water quality, aquifer characteristics, well construction/testing, project planning, and regulatory support, including negotiating an EPA UIC Rule Authorization in less than two months.

**Colorado Water Conservation Board - HB16-1256 South Platte Storage Study; CO (2018)**

Lead hydrogeologist providing evaluation of underground water storage options for the Lower South Platte alluvial aquifer. Provided alluvial storage site evaluation, conceptual design, cost estimates, and comparison to surface storage options.

**Aurora Prairie Waters Project – North Campus; Weld County, CO (2008)**

Supported City of Aurora's Prairie Waters project near the South Platte River, CO. Acted as team liaison for multi-consultant, multi-disciplinary project team. Field investigation and construction tasks included field



oversight of drilling, well construction, pump/motor installation, aquifer testing, system start up testing, well field yield optimization, and geotechnical investigations. Support also included the design, construction, and operation of alluvial recharge and riverbank filtration pilot test facilities. Developed and implemented pilot test procedures, including tracer studies to assess flow paths, travel times, and stream/aquifer interaction. MODFLOW modeling support for the Prairie Waters Project included development of regional groundwater model for Colorado Division 1 case 2006CW104. Performed parallel processing model calibration using UCODE. Prepared expert and rebuttal reports, exhibits and materials used in settlement negotiations.

### **Eagle River Water and Sanitation District and Upper Eagle Regional Water Authority – Groundwater Support; Eagle County, CO (2010-ongoing)**

Project Manager and lead Hydrogeologist for alluvial well field groundwater support. Projects have included:

- GWUDI Evaluation – Regulatory support, groundwater modeling and operational monitoring of alluvial well fields in support of CDPHE GWUDI evaluation
- Lake Creek Well Field Planning – Services included groundwater modeling, well drilling, aquifer testing, source water quality characterization, regulatory support for Eagle County 1041, CDPHE, and DWR permitting
- Well field maintenance and rehabilitation support – well rehabilitation in response to well issues including pump issues, casing holes, and water quality contamination

### **Dominion Water and Sanitation District – Groundwater Support; Douglas County, CO (2015-ongoing)**

Denver Basin groundwater supply planning services including water rights evaluation, water quality assessment, well field yield estimation and project planning. Technical support included documentation for County hearings, interactions with local water agencies, and groundwater sale transactions.

### **City of Steamboat Springs – Infiltration Gallery System Expansion; Routt County, CO (2018-ongoing)**

Project Manager for feasibility evaluation of alluvial groundwater supply expansion alternatives. Expansion options being considered include vertical and horizontal well options. Tasks included exploratory drilling, aquifer testing, groundwater modeling and conceptual expansion system design. Modeling was performed to optimize well siting to maximize yield, maintain water quality, and to minimize pipeline costs.

### **Texas Water Development Board – Statewide Subsidence Risk Evaluation (2018)**

Technical advisor for risk evaluation of subsidence due to groundwater pumping in all Texas major and minor aquifers. The project used well lithology data with model predicted water level declines to create a statewide risk map and prioritized table. Recommended follow up actions for identified areas of risk. The project provided important subsidence risk information for statewide planning and local user considerations.

### **Village at Taos Ski Valley – Spring Water Supply Expansion; Taos County, NM (2018-ongoing)**

Senior Technical Advisor providing groundwater evaluation into the management, protection and expansion of spring water supplies.

**City of Phoenix – ASR Tracer Test Design; Maricopa County, AZ (2017)**

Provided MT3D groundwater modeling to assist in aquifer characterization, travel time estimates, and the design of an ASR tracer injection test for feasibility. The testing was in support of the Northeast Phoenix Reclaimed Water Recharge and Recovery Study. The system is intended to create a potable water resource through Indirect Potable Reuse (IPR), provide additional non-potable supplies, and to mitigate land subsidence issues.

**Groundwater Relief – Kutupalong Refugee Camp Groundwater Supplies; Cox’s Bazaar, Bangladesh (2019)**

Volunteer hydrogeologist providing well testing and water quality support to field geologists. The project is developing emergency water supplies for nearly 1 million Rohingya refugees who have fled religious persecution in Myanmar.

**City of San Angelo – Riverbank Filtration Feasibility Evaluation; Tom Green County, TX (2018)**

Provided feasibility evaluation, preliminary siting, design and costs for a potential riverbank filtration (RBF) well field near the Concho River. This information was used to evaluate RBF as an alternative for expansion of the City’s water supply.

**Tarrant Regional Water District – Cedar Creek Wetlands; Kaufman County, TX (2013)**

Project manager and lead Hydrogeologist for riverbank filtration feasibility investigation along the Trinity River. Project tasks include geotechnical, hydrogeologic, and surface geophysical surveys, groundwater modeling, and design, construction and testing of riverbank filtration pilot test sites.

**Rangen, Inc. – Water Rights Support; Gooding County, ID (2010-2016)**

Expert witness providing testimony and trial support for a water rights hearing (IDWR Case No. CM-DC-2011-004) involving springs and complex surface water/groundwater interaction of the Eastern Snake Plain Aquifer. Represented a fish hatchery reliant on spring flow that was being impacted by groundwater pumping. Served on the Eastern Snake Plain Hydrologic Modeling Committee supporting MODFLOW modeling activities in the Eastern Snake Plain of Idaho.

**Overturf, McGath, and Hull, P.C. – Stewart No. 1 Ditch Company; Pitkin County, CO (2017)**

Expert witness support including expert and rebuttal reports, depositions, and settlement negotiations for a civil case involving alleged roadway water damage from ditch operations.

**Fredrickson Law Offices – In-Play Golf; Weld County, CO (2017)**

Expert witness providing expert and rebuttal reports, depositions, and trial support for a civil case involving alleged water damages from golf course irrigation.

**Boulder Valley School District – Douglass Elementary Non-Tributary Well Support; Boulder County, CO (2018)**

Project Manager for a non-tributary well application in the Boulder Complex Area of the Denver Basin Aquifers. Provided aquifer characterization and regulatory support leading to a non-tributary determination and permit approval.

**Boulder County Parks and Recreation – Kenosha Ponds Groundwater Evaluation; Boulder County, CO (2016)**

Expert witness providing hydrogeology water rights support for a Boulder County Parks and Recreation augmentation pond. Technical support included expert report writing and trial exhibit preparation for the hydrologic characterization of a recharge pond between two streams where the pond bottom was below the water table.

**City of Burkburnett, Texas – Alluvial Well Field Evaluation; Wichita County, TX (2016)**

Project Manager and groundwater lead for evaluation of underperforming well fields near the Red River. Wells ranged from 3-50 years old with a variety of issues causing low yields. Project tasks included well operational data integration, analysis, and development of alternatives to improve well yields.

**Penrose Water District – Arkansas River Alluvial Well Field; Fremont County, CO (2016)**

Groundwater technical management for planning, design, and construction of an alluvial well field for diversion of Arkansas River water rights. Tasks included aquifer characterization, water rights support, groundwater modeling, contractor management, well drilling, construction and testing.

**Salt River Project – New River Agua Fria Underground Storage Project; Phoenix, AZ (2013)**

Project involved optimization and in-channel expansion design for an existing recharge facility. Support included evaluation of operational data and adaptation of an existing MODFLOW model for operational optimization and feasibility testing.

**City of San Marcos, Texas – Well Performance Investigation and Replacement Plan; Hays County, TX (2015)**

Project Manager and groundwater lead for investigation into reduced yield problems for a well in the Edwards Aquifer. Well construction and operational data were analyzed to test viability of rehabilitation or equipment replacement. Provided ultimate solution of siting a replacement well in a more productive aquifer area.

**Oakwood Homes – Neighborhood Scale Dewatering Systems and Water Rights; CO (2016)**

Project Manager and groundwater lead for planning, design, and permitting of neighborhood scale dewatering systems. Managed project work including groundwater modeling, system design, data analysis, contractor coordination, DWR and CDPHE permitting, and water rights evaluations.

**Winkler Services – Well Field Siting and Design; Wink County, Texas (2017)**

Technical advisor for well field siting in the Pecos Valley Alluvium and Upper Dockum Aquifer. Support included project planning, aquifer characterization, and geologic modeling.

**Donala Water and Sanitation District – Reuse Evaluation; El Paso County, CO (2015)**

Preliminary feasibility investigation into riverbank filtration alternatives for indirect potable reuse. Evaluated hydrogeologic conditions for permitting, cost, and performance feasibility considerations.

**Confidential Client; Groundwater Supply and Subsidence Analysis; AZ (2011)**

Development of regional MODFLOW models used to estimate well field yield and land subsidence due to groundwater pumping in Arizona. Work included statewide study of subsidence-related empirical

relationships and prediction methods, aquifer characterization, 3-D geologic and groundwater flow modeling, automated model calibration and predictive uncertainty analysis using PEST, and numerical MODFLOW subsidence modeling.

**City of Scottsbluff – Well Field Uranium Investigation and Monitoring; Scotts Bluff County, NE (2016)**

Technical advisor for a project aimed at reducing uranium concentrations in an alluvial groundwater supply. Provided aquifer characterization and uranium monitoring data analysis.

**Confidential Client - Oilfield Produced Water Infiltration Modeling, San Luis Obispo County, CA(2010)**

Lead Hydrogeologist for the development of an engineering design MODFLOW-SURFACT model with the goal of infiltrating 13 acre-feet of water per day into the subsurface of a 200 acre alluvial site. Performed model calibration using PEST software in a parallel processing environment utilized 50 geologic conceptualizations for stochastic predictions of system performance.

**CDPHE – Summitville Superfund Site; Summitville, CO (2008)**

Provided support for abandoned mine hydrology and geochemistry, field sampling, monitoring and mine facility inspection, and database support. The project goal was to monitor and minimize mine waste impacts on the Alamosa River.

**Various Mines – Groundwater Modeling and Analysis; Basin and Range Province; NV (2010)**

Provided MODFLOW modeling and water balance studies in support of mine water management and regulatory reporting. Analyses included point flow surface water modeling to evaluate stream gain/loss; detailed water balance quantifications; well inventories and pumping estimates; groundwater underflow assessments.

**Miron Construction - Laramie-Fox Hills Well; Hudson, Colorado (2008)**

Assisted in design and field engineering for the construction and testing of a 960-foot deep, large capacity, municipal/industrial, Laramie-Fox Hills water supply well at the Hudson Correctional Facility.

**Perini/US Army Corps of Engineers – Groundwater System Design and Optimization; Baghdad, Iraq (2007)**

MODFLOW modeling support for the U.S. Agency for International Development in Baghdad, Iraq. Developed a numerical groundwater model for the optimization of water supply well locations and pumping operations. Main objectives were to maximize well yields while minimizing differential land subsidence across newly constructed East End Barracks.

**Colorado Haiti Project (Volunteer Position); Petit Trou de Nippes, Haiti (2013)**

Technical advisor for groundwater development, management, and protection in a rural, developing area of Haiti.

**Water For People Groundwater Management Project (Volunteer Position); San Pedro Sula, Honduras (2008)**

Technical advisor for development of a scope of work for a participatory groundwater management plan aimed at restoring and protecting an over utilized alluvial aquifer in a developing region.

**ASARCO - California Gulch Superfund Site; Leadville, Colorado (2000-2005)**

Conducted environmental sampling for the Kids First Program to identify and address sources of lead exposure for children in residential areas. Provided statistical analysis and reporting for evaluation of program effectiveness. Designed sampling plan and performed soil sampling and analysis to delineate extent of metals contamination at the Arkansas Valley Smelter Operable Unit. Provided technical support for hydrogeological and geochemical characterization of the Apache Tailings site; and implemented the surface water and groundwater performance monitoring program to assess the effectiveness of the remedial action. Conducted synoptic surface water flow measurement and water quality sampling.

**Asarco - Omaha Lead Site, Omaha, Nebraska (2003)**

Assisted in the development of program to identify sources of lead exposure for children in residential areas.

**Mine Waste and Tailings Pile Sites, Various Locations (2000-2004)**

Performed hydrologic evaluation of remedial alternatives for repository evaluation using Hydrologic Evaluation of Landfill Performance (HELP) model.

**Industrial Groundwater Contamination Sites, Various Locations (2000-2005)**

Performed groundwater modeling to assist design of groundwater extraction remediation wells using MODFLOW modeling code.

**EPA - Vasquez Boulevard and Interstate 70 Superfund Site, Denver, Colorado (2002)**

Designed, directed, and performed environmental sampling for project intended to identify sources of lead and arsenic exposure for children in residential areas.

**Hertz Rent-a-Car - Former Underground Storage Tank, Colorado Springs, Colorado (2002)**

Project Hydrogeologist and technical lead for the characterization, monitoring, and remediation of hydrocarbon contaminated soils and groundwater at a former underground storage tank site. Performed quarterly monitoring and reporting; developed and implemented an in-situ chemical oxidation remediation program.

**R&R Super Service - Former Underground Storage Tank, Arvada, Colorado (2002)**

Project Manager and technical lead for the characterization and remediation of soils and groundwater contaminated by petroleum hydrocarbons at a former service station. Responsibilities included client and regulatory interaction; site characterization activities to delineate the nature and extent of contamination in soil and groundwater; modeling of vapor and mass extraction rates using VENT2D; respirometry testing to quantify biodegradation rates in vadose zone soils; startup testing; operating, maintaining, and monitoring of an air sparge/soil vapor extraction system.

**City and County of Denver - Former Stapleton International Airport Remediation; Denver, Colorado (2000)**

Served as a hydrogeologist conducting field investigations to define nature and extent of hydrocarbon contamination and to determine remediation. Field tasks included lithologic logging with a hollow-stem auger and direct-push drilling rigs; soil, groundwater, and soil vapor testing, remediation system construction/operation/maintenance, data evaluation and reporting.

**National Park Service – Mt. Rainier National Park, Longmire, Washington (1996-1997)**

Biologist and crew leader for aquatic ecosystem studies in Mt. Rainier National Park. Conducted field surveys and sub-alpine wetland monitoring. Performed aquatic field sampling, wetland classification, biological species identification, and aquatic laboratory analyses.

**PRESENTATIONS & PUBLICATIONS**

Colvin, Dave, 2020. "Moving from Conflict to Collaboration: The Role of MAR in Mitigating Groundwater Pumping Impacts to Surface Water" 17th Biennial Symposium on Managed Aquifer Recharge. *Tempe, AZ*.

Colvin, Dave, 2020. "Drawing the Line in the Sand between Underground Water Storage and Augmentation Recharge." American Water Resources Association – Colorado Chapter & Colorado Groundwater Association *Joint Annual Symposium. Denver, CO*

Colvin, Dave, 2019. "Demonstrating Dominion and Control – Moving from Black Magic to Understandable Science." American Groundwater Trust Annual Colorado *Groundwater Conference. Denver, CO*.

Colvin, Dave, 2019. "Now We Know What We Don't Know: An ASR Regulatory Update". Colorado Groundwater Association *September Meeting. Denver, CO*.

Colvin, Dave, 2019. "The Evolution of Colorado Underground Water Storage Administration". American Water Resource Association / Colorado Groundwater Association 2019 *Joint Annual Symposium. Denver, CO*.

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Colvin, Dave, 2014. "Groundwater Solutions for Indirect Potable Reuse." 2014 Rocky Mountain Water Reuse Workshop, Golden, CO.

Colvin, Dave, Bauer, Jacob, and Noack, Tim, 2013. "Effective Tools and Project Planning for Riverbank Filtration Feasibility Investigation" Poster session at 2014 Texas Water, Dallas, TX. ([http://s3.amazonaws.com/eventmobi-assets/events/txwater14/documents/person/1366969/201404\\_RBF\\_Feasibility\\_Poster\\_Final.pdf](http://s3.amazonaws.com/eventmobi-assets/events/txwater14/documents/person/1366969/201404_RBF_Feasibility_Poster_Final.pdf))

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Colvin, David C., 2012. "Comparison of One and Three Dimensional MODFLOW Subsidence Results." 2012 Groundwater Summit, National Groundwater Association, Westerville, OH.

Colvin, David C., 2012. "One Dimensional MODFLOW Modeling of Land Subsidence Due to Fluid withdrawal." GSA 2012 Cordilleran Section Meeting, Vol. 44, No. 3. Geological Society of America. Boulder, CO.

## EXPERT TESTIMONY

Dave has provided expert testimony in trial or depositions in the following cases:

**Idaho Surface Water Coalition; Idaho Department of Water Resources Docket No. AA-GWMA-2016-001**, Order Designating the Eastern Snake Plain Aquifer Groundwater Management Area, February 2020

**Stewart No. 1 Ditch Company; Pitkin County Case No: 2014CV30084**, Pitkin County Board of County Commissioners v. Brothers, et. al., September, 2015.

**In-Play Golf, Inc; Weld County Case 12CV727**, Helen Hawkins et. al. v. Vista Ridge Development Corporation et. al., August, 2015.

**Rangen, Inc.; In the Matter of Application for Water Rights Permit No., 36-17011**, February, 2015.

**Rangen, Inc.; Idaho Department of Water Resources Case No. CM-DC-2011-004**, Distribution of Water To Water Right Nos. 36-02551 and 36-07694, May, 2013.

## EXPERT REPORTS

Dave has performed groundwater analysis, provided assistance in settlement negotiations, and authored or contributed to reports in the following cases.

**Idaho Surface Water Coalition; Idaho Department of Water Resources Docket No. AA-GWMA-2016-001**, Order Designating the Eastern Snake Plain Aquifer Groundwater Management Area, February 2020

**Town of Erie; CO Division 1 Case Nos. 2019CW3063 and 2019CW3064**, Application for Underground Water Rights and Plan for Augmentation, 2020.

**Salt River Project; AZ Big Chino Cooperative Agreement #1**, Evaluation of Big Chino Water Ranch impacts on Upper Verde Springs discharge, 2016 - ongoing.

**Salt River Project; AZ Gila River Adjudication Contested Case No. W1-103**, Groundwater adjudication and subflow depletion evaluation, 2017 – ongoing.

**In-Play Golf, Inc; Weld County Case 12CV727**, Helen Hawkins et. al. v. Vista Ridge Development Corporation et. al., August, 2015.

**Stewart No. 1 Ditch Company; Pitkin County Case No: 2014CV30084**, Pitkin County Board of County Commissioners v. Brothers, et. al., September, 2015.

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**Rangen, Inc.; Idaho Department of Water Resources Case No. CM-DC-2011-004**, Distribution of Water To Water Right Nos. 36-02551 and 36-07694, May, 2013.

**Boulder County Parks and Open Space; CO Division 1 Case No. 2010CW320**, Change of Use and Plan for Augmentation for Kenosha Ponds Open Space, 2013.

**City of Aurora; CO Division 1 Case No. 2006CW104**, Aurora's Prairie Waters Project, 2007.