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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 **AMERICAN FALLS-ABERDEEN GROUND WATER DISTRICT'S DISCLOSURE OF EXPERT WITNESS AND NOTICE OF SERVICE OF EXPERT REPORT**

COME NOW American Falls-Aberdeen Ground Water District ("AFA"), by and through undersigned counsel of record, and hereby files this *Disclosure of Expert Witness and Notice of Service of Expert Report* in accordance with the *Order on Intervention, Authorizing Discovery, Email Service, and Scheduling; Order Granting Motion for Subpoena; Notice of Hearing* issued by the Hearing Officer on October 7, 2025. In addition to disclosing AFA's expert witnesses in this matter, AFA provides notice that it has served upon the parties to this matter an *Expert Report for Aberdeen-American Falls Ground Water District* prepared by the expert witnesses identified below.

DISCLOSURE OF EXPERT WITNESSES

AFA identifies the following expert witnesses for purposes of this matter:

Gregory K. Sullivan, P.E.
Nathan Horesh, P.E.
Spronk Water Engineers, Inc.
1000 Logan Street
Denver, CO 80203
(303) 861-9700

Curricula vitae for these individuals are attached hereto.

DATED this 7th day of November 2025.

SOMACH SIMMONS & DUNN

By _____
Sarah A. Klahn, ISB # 7928

Attorneys for American Falls-Aberdeen Ground Water District

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that on this 7th day of November 2025, I caused a true and correct copy of the foregoing document to be filed and served via electronic mail to the following:

Hearing Officer Gerald F. Schroeder Director Mathew Weaver Garrick Baxter Sarah Tschohl IDAHO DEPARTMENT OF WATER RESOURCES 322 E Front St. Boise, ID 83720 gerald_23107@msn.com mat.weaver@idwr.idaho.gov garrick.baxter@idwr.idaho.gov sarah.tschohl@idwr.idaho.gov file@idwr.idaho.gov
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Sarah A. Klahn, ISB #7928

Gregory K. Sullivan, P.E.

President and Senior Water Resources Engineer

Education: M.S., Civil Engineering, 1990, University of Colorado - Denver
B.S., Civil Engineering, 1985, Colorado State University

Professional Registration: Professional Engineer in Colorado, Idaho, and New Mexico

Professional Experience:

1990 - Present: ***Spronk Water Engineers, Inc., President and Senior Water Resources Engineer***

Mr. Sullivan has over thirty-five years of experience completing a wide variety of water resources engineering projects. Mr. Sullivan has extensive experience performing historical consumptive use analyses, stream depletions analyses, and reservoir operations studies. Mr. Sullivan serves as the primary consultant to numerous water providers for water supply planning and water rights engineering. In that role, he has been responsible for technical analyses in supporting applications for adjudication of water rights, changes of water rights, exchanges, augmentation plans, and other water right matters. He has led the development of complex surface water operations models that simulate municipal water demands and how those demands may be met by available water supplies and water rights. Mr. Sullivan has served on the Eastern Snake Hydrologic Modeling Committee that guides the development and use of a regional ground water model of the Eastern Snake River Plain Aquifer since 1996. Mr. Sullivan has provided expert testimony in the U.S. Supreme Court, Colorado Water Courts, Snake River Basin Adjudication Court (Idaho), and in administrative hearings before the Idaho Department of Water Resources.

Representative Projects:

Water Supply Modeling - Texas v. New Mexico and Colorado – Rio Grande Basin

Mr. Sullivan is the lead modeling expert for the State of New Mexico in an active lawsuit filed by the State of Texas in the U.S. Supreme Court concerning alleged violations of the 1938 Rio Grande Compact. Mr. Sullivan is leading a multidisciplinary team of renowned experts from across the country that is analyzing and modeling the historical operation of the Rio Grande Project and the effects of alleged compact violations asserted in the claims and counterclaims of the parties. The ongoing work includes compilation and analysis of historical data from before the time of the

compact to the present, and development of farm budget models of large irrigation systems in New Mexico, Texas, and Mexico. In addition, Mr. Sullivan is coordinating development and use of a linked surface water (RiverWare) and ground water (MODFLOW) models of the Lower Rio Grande area from Elephant Butte Reservoir in New Mexico to Fort Quitman, Texas. The Integrated Lower Rio Grande Model simulates the essential hydrologic and institutional/management processes associated with irrigation and municipal water systems in the study area, including the allocation, operation, and accounting mechanisms of the Rio Grande Project.

Water Supply Modeling - Kansas v. Colorado – Arkansas River Basin

Mr. Sullivan was involved in the refinement and use of the H-I Model of the Arkansas River system in Colorado that was developed to support claims by the State of Kansas that Colorado was violating the terms of the 1948 Arkansas River Compact. The model simulates daily operation of irrigation water uses under approximately two dozen canal systems along the Arkansas River in Colorado between the City of Pueblo and the Colorado-Kansas from 1950 to the present. In addition, the model simulates the operation of sole-source and supplemental irrigation wells, and the impact of those wells on the flow of the Arkansas River. Mr. Sullivan provided expert testimony before a Special Master appointed by the U.S. Supreme Court regarding the use of the H-I Model to evaluate the effects on state line flows resulting from post-compact well development in Colorado.

Injury Analysis - Kansas v. Colorado – Arkansas River Basin

Mr. Sullivan developed a model that was used as part of an analysis to compute the economic impacts and monetary damages to Kansas resulting from the compact violations by Colorado that were determined in the Kansas v. Colorado lawsuit. The model was used to translate monthly depletions to usable stateline flows over a 45-year period into impacts to (a) surface water users in Kansas, (b) to supplemental pumping demands in Kansas and (c) to recharge of the regional ground water system. Mr. Sullivan testified before the Special Master regarding the model development, operation, and results.

Analysis of Replacement Plans - Kansas v. Colorado – Arkansas River Basin

To continue use of post-compact Arkansas River alluvial wells, the well owners in Colorado were required to develop Replacement Plans to offset the impacts of pumping on senior surface water rights in Colorado and on usable stateline flows to Kansas. Mr. Sullivan analyzed the adequacy of these replacement plans through preparation of historical use analyses, water

budgets, and other analyses. In addition, Mr. Sullivan used the H-I Model to simulate the effectiveness of the replacement plans in meeting Colorado's delivery obligations under the Arkansas River Compact. Mr. Sullivan provided expert testimony before the Special Master concerning his analyses of the Colorado Replacement Plans.

Change of Water Rights - City of Loveland, Colorado

Mr. Sullivan was the principal investigator for ditch-wide historical use analyses of the major Big Thompson River irrigation ditches that serve lands in and around the City of Loveland. These analyses served as the basis for successful changes of water rights that were approved by the Division 1 Water Court to allow the City to divert its ditch shares at the City's municipal water intakes to help meet its water supply needs. He also guided development of detailed water rights accounting for the City to Mr. Sullivan provided expert testimony in support of the changes of water rights in a contested trial.

Water Supply Yield Modeling - City of Loveland, Colorado

Mr. Sullivan led the development of a model to simulate the daily water supply and demand of the City of Loveland over a study period from 1950 - 2017. The water supplies that are simulated in the model include the ditch shares that have been changed to municipal use, Colorado-Big Thompson Project units, Windy Gap Project units, and the operation of the City's Green Ridge Glade Reservoir. The model is used by the City to evaluate the firm yield of its water supply, and how that yield can be increased through acquisition of additional supplies, development of additional storage, changes in water supply operations and other actions.

Water Supply Planning – ACWWA, Colorado

Mr. Sullivan has provided water resources and water rights consulting for the Arapahoe County Water and Wastewater Authority for over 30 years. ACWWA serves lands in the Cherry Creek basin south of Denver through a combination of shallow alluvial wells and deep nontributary Denver Basin wells. Water use from these sources is integrated and optimized through operation of a complex plan for augmentation that provides for replacement of out-of-priority depletions to Cherry Creek to protect downstream senior water users. Mr. Sullivan has performed numerous analyses to evaluate the yield of ACWWA's water supplies, including completion of a raw water master plan in 2018.

Plan for Augmentation - Upper Cherry Creek Water Association, Colorado

Mr. Sullivan was instrumental in the development of an umbrella plan for augmentation for five major water users in the Cherry Creek Basin upstream of Cherry Creek Reservoir. The members have pooled their augmentation sources to replace the combined out-of-priority depletions resulting from alluvial well pumping and out-of-priority storage in Cherry Creek Reservoir. The plan includes an innovative method of computing depletions that considers times when Cherry Creek is dry in the vicinity of the member wells.

Cherry Creek Aquifer Modeling Project – Colorado

Mr. Sullivan led the development of a basin-wide simulation model of the hydrology and water use in the Cherry Creek basin upstream of Cherry Creek Reservoir. The model simulates the water supplies and water rights of all municipal water providers in the study area and optimizes the alluvial pumping of the water users and the use of Denver Basin ground water replacement supplies. The model also simulates the operation of Cherry Creek Reservoir and Rueter-Hess Reservoir. The model is used by the study participants to evaluate changes in water supply operations and acquisition of new water supplies.

Snake River Basin Adjudication - Idaho

Mr. Sullivan assisted the City of Pocatello in filing claims to adjudicate water rights as part of the SRBA. This work included historical research of facilities and water uses to document historical flow rates, volumes, and priority dates to assign to the claimed water rights. Mr. Sullivan provided expert testimony before the SRBA Court to help defend the City's claims that were disputed by others.

Snake River Delivery Calls - Idaho

Mr. Sullivan has provided technical analysis and expert testimony to the City of Pocatello in their participation in complex litigation involving water right delivery calls by senior surface water users on the Snake River in Idaho. Pocatello's water supply is derived primarily from junior priority wells that are tributary to the Snake River, and its water supply is threatened by the delivery calls. Mr. Sullivan analyzed the historical operation of seven major irrigation districts that placed the delivery calls to assess the extent of their claimed irrigation water shortages. The irrigation districts serve a combined area of 560,000 acres with annual diversions averaging 3.2 million acre-feet per year. Mr. Sullivan provided expert testimony in several hearings before the Idaho Depart of Water Resources.

ESPA Cities Mitigation Plan – Snake River Basin, Idaho

Mr. provided technical expertise and analysis in development of a mitigation plan for Pocatello, Idaho Falls, and more than a dozen other cities to mitigate the impacts of municipal groundwater pumping from the Eastern Snake Plain Aquifer in Idaho. The plan relies largely on aquifer recharge to mitigate the impacts of aquifer depletions from pumping that is projected to increase from about 60,000 acre-feet per year to over 120,000 acre-feet per year over the next 50 years.

Division 3 Rules Case - Rio Grande Basin, Colorado

Mr. Sullivan represented a group of surface water right owners that opposed the enactment of administrative rules governing the withdrawal and use of ground water in the Rio Grande Basin in Colorado (Water Division 3). The primary basis for their opposition was that the rules did not provide for mitigation of impacts to a large spring that was the source of their surface water rights and which dried up in conjunction with the large-scale development of ground water irrigation in the area. Mr. Sullivan's work included analysis of the historical irrigation water use by his clients, review of hydrologic data and records, and review of a ground water modeling of the San Luis Valley performed by the State of Colorado. Mr. Sullivan provided expert testimony on behalf of his clients in a trial before the Division 3 Water Court.

Ground Water Administrative Proceeding – Wood River Basin, Idaho

Mr. Sullivan represented the Sun Valley Company and the Cities of Ketchum, Hailey, and Bellevue in an administrative proceeding in the Wood River Valley in Idaho. Holders of senior surface water rights are seeking curtailment of junior ground water rights based on allegations of injury being suffered by the seniors, and the Idaho Department of Water Resources is proposing to implement conjunctive administration of groundwater rights and surface water rights to address the injury claims. A groundwater model of the Wood River Valley developed by IDWR with input from stakeholders is being used in the dispute to assess impacts from pumping on surface water supplies. Mr. Sullivan provided expert testimony on behalf of SVC and the Cities in a contested administrative hearing before the IDWR Director. Mr. Sullivan is also a member of a technical working group that has been assembled to develop a groundwater management plan that is hoped to settle the ongoing dispute.

1985 – 1990: ***J. W. Patterson & Associates, Inc., Water Resources Engineer***

Performed water supply, hydraulic and hydrologic analyses for agricultural, industrial, commercial, and municipal developments. Managed yield and impact analyses of water rights adjudications, transfers, exchanges and plans for augmentation. Conducted ground water studies including aquifer testing, project dewatering and water well design and construction monitoring.

Continuing Education:

Applied Ground-Water Flow Modeling. International Ground Water Modeling Center, Colorado School of Mines, Golden, CO. March 1993.

Introduction to Simulation Training in RiverWare, Center for Advanced Decision Support for Water and Environmental Systems, University of Colorado, May 2016.

Nathan M. Horesh, P.E.

Water Resources Engineer

Education: B.S., Environmental Engineering, 2016, University of Colorado - Boulder

Professional Registration: Professional Engineer in Colorado (#62280)

Professional Experience:

2019 - Present: ***Spronk Water Engineers, Inc., Water Resources Engineer***

Responsible for compilation and analysis of water resources, water rights and hydrologic data including climatological data, streamflow and diversion records, cropping patterns, water rights tabulations and decrees. Performs hydrologic analyses, groundwater modeling, and surface water modeling. Responsible for GIS mapping including delineation of irrigated area and preparation of exhibits.

Representative Projects:

Replacement Plan Application Review – Upper Black Squirrel Creek Designated Groundwater Basin

Mr. Horesh provided expert opinions to oppose a replacement plan application in the Upper Black Squirrel Creek Designated Groundwater Basin on behalf of the basin board. This project included review of applicant's historical use analysis, review and analysis of rapid infiltration basin operation and performance, and review of applicant's groundwater model.

Water Supply Modeling - Texas v. New Mexico and Colorado – Rio Grande Basin

Mr. Horesh assisted in the development and use of the RiverWare component of the Integrated Lower Rio Grande Model that is being used to support New Mexico's analysis of claims and counterclaims in a lawsuit filed by the State of Texas against the State of New Mexico in the U.S. Supreme Court. The case centers on alleged violations of the 1938 Rio Grande Compact. In addition, Mr. Horesh developed tools to post-process model output into visually appealing tables, graphs, and charts that were used in expert reports and exhibits submitted to the parties in the case.

Groundwater Administration Proceeding and Technical Working Group – Wood River Basin, Idaho

As part of an administrative proceeding in the Wood River Valley in Idaho, Mr. Horesh reviewed and analyzed municipal groundwater uses and how those uses are simulated in the Wood River Valley Groundwater Model. This included review of historical diversion records and model outputs. Mr. Horesh performed model simulations to estimate the impacts from municipal pumping using the Wood River Valley model and presented those runs to the Wood River Valley Technical Working Group.

Surface Water Delivery Call and other matters – Eastern Snake Plain Aquifer, Idaho

Mr. Horesh has reviewed and analyzed the Eastern Snake Plain Aquifer model and various model runs as part of the Surface Water Delivery Call and other matters. Mr. Horesh has also reviewed and analyzed ESPA and Snake River hydrologic data.

Water Rights Consulting, Burro Mesa Ranch

As part of due diligence in the ranch purchase, Mr. Horesh assisted the current ranch owner in analyzing the historical use of water rights associated with the 9,000-acre property and removing certain rights from the State Engineer's abandonment list. This work included extensive historical research using decrees, filing maps and statements, and aerial imagery.

Water Rights Consulting, Tri Lazy W Ranch

Mr. Horesh assisted the ranch owner in changing the point of diversion of a senior surface water right. Work included mapping the alternate and original diversion points, reviewing and analyzing historical documents, delineating historical irrigated area, and assisting with development of terms and conditions to prevent expanded use and prevent injury to other water users.

Groundwater Modeling – Treasure Valley, Idaho

Mr. Horesh reviewed the calibration, model development, and input and output files of the 2023 Treasure Valley Groundwater Model. Mr. Horesh performed a series of scenarios with the model for planning purposes.

2017-2019: ***AquAeTer Inc, Staff Engineer***

Performed various engineering and compliance services in the environmental field. Projects included field work and analysis for groundwater investigations and surface water investigations.

Professional Memberships:

American Water Resources Association (AWRA)