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*Attorneys for the Sun Valley Company*

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

IN THE MATTER OF BASIN 37  
ADMINISTRATIVE PROCEEDING

Docket No. AA-WRA-2021-001

**SUN VALLEY COMPANY  
SUPPLEMENTAL EXHIBIT  
DISCLOSURE**

COMES NOW the Sun Valley Company by and through its attorneys of record and hereby supplements its June 2, 2021 exhibit submission with the following attached exhibit it may offer into evidence at the hearing:

6. Resume of Gregory K. Sullivan, P.E.

DATED this 3<sup>rd</sup> day of June, 2021.



Chris M. McHugh  
*Attorney for Sun Valley Company*

## CERTIFICATE OF SERVICE

I HEREBY CERTIFY that on this 3<sup>rd</sup> day of June, 2021, I served a true and correct copy of the foregoing document on the person(s) whose names and addresses appear below by the method indicated:

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# Gregory K. Sullivan, P.E.

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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 #26802, Idaho #8387, Nevada #10868, and New Mexico #22620

## Professional Experience:

1990 - Present: [Spronk Water Engineers, Inc., Principal 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 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 maybe 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.

## Description of Representative Projects:

### [Change of Water Rights, City of Loveland](#)

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.



[Water Supply Yield Modeling, City of Loveland](#)

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](#)

Mr. Sullivan has provided water resources and water rights consulting for the Arapahoe County Water and Wastewater Authority ("ACWWA") for almost 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](#)

Mr. Sullivan led 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 area of the member wells.

[Cherry Creek Aquifer Modeling Project](#)

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 the all of the 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 Delivery Calls, City of Pocatello, 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.

[ESPA Cities Mitigation Plan, Idaho](#)

Mr. provided technical expertise and analysis to develop a mitigation plan for Pocatello, Idaho Falls, and more than a dozen other cities to mitigate the impacts of pumping ground water 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.



[Administration of Rocky Hill Seepage and Overflow Ditch, Rio Grande Basin, Colorado](#)

Mr. Sullivan represented a majority owner of the Rocky Hill Seepage and Overflow Ditch in the northwestern portion of the San Luis Valley in an action brought to overturn a change in administration by the Division 3 Engineer that curtailed use of the ditch on the basis that the source of water for the ditch that has been used for almost 100 years is not described in the decree for the ditch. Mr. Sullivan's work involved research of historical documents related to adjudication of the water right and historical disputes among water users in the vicinity, compilation and analysis of historical hydrologic data, and development of opinions on the decreed source of the water for the ditch. Mr. Sullivan provided expert testimony in a trial over the dispute in the Division 3 Water Court.

[Texas v. New Mexico and Colorado](#)

Mr. Sullivan is assisting the State of New Mexico in technical analyses of the claims and counter-claims filed by parties to an active lawsuit in the U.S. Supreme Court concerning alleged violations of the 1938 Rio Grande Compact. This work includes compilation and analysis of historical data, development of farm budget models of the irrigation systems of the Rio Grande Project in New Mexico and Texas, and coordination of development of linked surface water and ground water models of the Lower Rio Grande area from Elephant Butte Reservoir to Fort Quitman, Texas, including the operation of the Rio Grande Project.

[Surface and Ground Water Modeling, Kansas v. Colorado](#)

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](#)

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 during 1950 - 1994 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](#)

In order to continue their use of post-compact Arkansas River alluvial wells, the well owners 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.

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.

