Electronically Filed
9/15/2026 1:37 PM
Seventh Judicial District, Bingham County
Pamela W. Eckhardt, Clerk of the Court
By: Brandee Cammack, Deputy Clerk

Reed W. Larsen (3427)
Cooper & Larsen Chartered
151 N. 3rd Ave., Suite 200
Pocatello, Idaho 83201
Telephone: (208) 235-1145
Facsimile: (208) 235-1182
reed@cooper-larsen.com

Bradley R. Cahoon (8558)
Dentons Durham Jones Pinegar P.C.
111 S. Main St., Suite 2400
Salt Lake City, Utah 84111
Telephone: (801) 375-6600
brad.cahoon@dentons.com

Damien M. Schiff* (Cal. Bar No. 235101)
Pacific Legal Foundation
555 Capitol Mall, Suite 1290
Sacramento, California 95814
916.419.7111
dschiff@pacificlegal.org

**Pro hac vice pending*

Attorneys for Petitioners

Simpson, Darren B.

DISTRICT COURT OF THE STATE OF IDAHO

SEVENTH JUDICIAL DISTRICT

BINGHAM COUNTY

JERRY D. BINGHAM and VALERIE H. BINGHAM, Petitioners, vs. IDAHO DEPARTMENT OF WATER RESOURCES, Respondent.	Case No. CV06-26-1801 **DECLARATION OF R. JEFFREY DAVIS IN SUPPORT OF MOTION TO STAY RESPONDENT'S FINAL ORDER PENDING JUDICIAL REVIEW**

1. I, R. Jeffrey Davis, am over the age of 18 and competent to execute this declaration. I make this declaration based upon my knowledge, skill, experience, training, and education, as set forth below. The expert opinions contained within this declaration are my own, and I could and would competently testify to the same in court if called upon to do so.

Summary of Opinions

2. In this declaration, I provide the following opinions, based on the materials listed in Attachment A, concerning Petitioners' motion to stay Respondent's curtailment order:

a. A stay of the curtailment order would result in Petitioners consumptively using approximately 220 acre-feet ("AF") of water before the conclusion of the 2026 irrigation season.

b. Petitioners' anticipated late-season groundwater use would result in an estimated additional depletion of approximately 39 AF to the Near Blackfoot-to-Minidoka reach of the Snake River.

c. A representative average Snake River discharge of approximately 2,600 cubic feet per second ("cfs") was used to evaluate the practical magnitude of the estimated late-season depletion.

d. The estimated additional depletion attributable to Petitioners' anticipated late-season consumptive use is equivalent to an average flow effect of approximately 0.39 cfs over the 51-day period from September 11 through October 31, 2026. This represents approximately 0.015 percent of the representative 2,600-cfs Snake River discharge used in the analysis.

e. The anticipated depletive effect on the Snake River's rate of flow, caused by Petitioners' pumping, is within the margin of error for stream-discharge measurements rated as "Excellent" in accuracy by the U.S. Geological Survey ("USGS").

Summary of Education and Qualifications

3. I am a Principal with Integral Consulting Inc. and a licensed civil and environmental engineer and hydrogeologist with nearly 30 years of experience evaluating groundwater resources. I hold a Bachelor of Science degree in Civil and Environmental Engineering and a Master of Science degree in Civil and Environmental Engineering from Brigham Young University. I am a licensed Professional Engineer in Idaho and several other states, a Certified Groundwater Professional, and a Certified Water Rights Examiner.

4. My professional experience includes hydrogeologic investigations, groundwater-flow and transport modeling, evaluation of groundwater-surface water interactions, water-supply and water-rights investigations, aquifer recharge and storage assessments, groundwater-management planning, and technical support for water-resource disputes and legal proceedings. I have served as a principal investigator and technical lead on projects involving groundwater availability, declining groundwater levels, aquifer sustainability, competing water demands, and the effects of groundwater withdrawals on connected surface-water systems. My work has included developing conceptual hydrogeologic models, evaluating and applying numerical groundwater models, interpreting hydrologic and water-use data, and assessing groundwater-management alternatives for state agencies, municipalities, water districts, agricultural interests, industrial facilities, and other water users.

5. In connection with this matter, I participated in the technical evaluation of Petitioners' groundwater rights and proposed mitigation plans. That work included evaluation of the irrigated acreage, crop-water requirements, groundwater diversions, consumptive use, and the modeled effects of groundwater use on the Snake River. For this declaration, I reviewed the prior technical analysis and the additional late-season calculations described below, including the assumptions concerning remaining irrigation demand, the distribution of consumptive use among the applicable Eastern Snake Plain Aquifer Model ("ESPAM") cells, and the transient ESPAM Transfer Spreadsheet ("ETRAN") response. I have reviewed and I adopt the technical opinions stated in this declaration.

Explanation of Opinions

6. **Estimated Remaining 2026 Irrigation Demand and Consumptive Use.** To estimate the groundwater consumptive use that could occur if Petitioners are permitted to resume irrigation on approximately September 11, 2026, I estimated the remaining irrigation demand through October 31, 2026, using planning-level crop-water-demand information from Evapotranspiration-Idaho Department of Water Resources ("ET-IDWR") for the Taber station. For this analysis, I used approximately 1,043 irrigated acres and a representative crop mix of approximately one-third alfalfa, one-third irrigated grain, and one-third potatoes. These acreage and cropping assumptions are consistent with those used in a previous Expert Report submitted on behalf of Petitioners. *See* Attachment B (Expert Report of R. Jeffrey Davis, P.E., and Eric C. Miller In Support of Jerry D. Bingham and Valerie H. Bingham's Fifth Mitigation and Curtailment Plan, Doc. No. CM-MP-2026-004, Aug. 14, 2026; ET-IDWR, Taber Station).

7. The ET-IDWR monthly values used in this analysis represent net consumptive irrigation requirements (net irrigation requirements). Accordingly, these values represent crop-water requirements after accounting for effective precipitation and do not include irrigation-system inefficiency.

8. For the present late-season analysis, I assumed that approximately two-thirds of the September irrigation requirement and all of the October irrigation requirement would remain if pumping were to resume on approximately September 11, 2026. The applicable September and October planning values are 0.31 and 0.01 feet per month for potatoes, respectively; 0.38 and 0.16 feet per month for alfalfa, respectively; and 0.00197 and 0.00203 feet per month for winter grain, respectively. For purposes of the 2026 late-season calculation, the grain component was represented by winter grain rather than "spring grain" as used in the previous Expert Report. Applying two-thirds of the September value and all of the October value results in estimated remaining irrigation requirements of approximately 0.217 feet for potatoes, 0.413 feet for alfalfa, and 0.003 feet for irrigated winter grain.

9. Assuming that each crop represents approximately one-third of the irrigated acreage, the acreage-weighted average remaining irrigation requirement is:

(0.217 + 0.413 + 0.003) ÷ 3 = approximately 0.211 feet

Applied to approximately 1,043 irrigated acres, this results in an estimated CU requirement of:

0.211 feet × 1,043 acres = approximately 220 acre-feet (AF)

10. I therefore estimate that resumption of irrigation on approximately September 11, 2026, could result in approximately 220 AF of groundwater consumptive use through October 31, 2026. This is a planning-level estimate of remaining late-season irrigation demand under the assumptions described above. Actual consumptive use may be less depending upon weather, precipitation, crop maturity and harvest, soil-moisture conditions, and the date irrigation actually ceases. For purposes of the hydrologic analysis that follows, we use 220 AF of consumptive use ("CU") as the estimated late-season CU associated with hypothetical resumed pumping.

11. **Estimated Stream Depletion Associated with Remaining 2026 Consumptive Use.** To estimate the additional Snake River depletion that could occur if Petitioners are granted a stay of the current Curtailment Order, I modeled long-term river depletion from Spring 1952 through the present assuming annual CU of 2,464 AF for 1952 through 2024, total CU of 1,338 AF in 2025 following the July 22, 2025 curtailment, and 0 AF of CU in 2026 if curtailment remains in place. *See* Attachment C. This simulation is termed Scenario A (continued curtailment). Under Scenario A, no additional 2026 CU was applied because Petitioners' pumping remains curtailed.

12. The Eastern Snake Plain Aquifer Model Transfer (ETRAN) analysis presented here addresses a different hydrologic question than the ETRAN analysis presented in the August 14, 2026 Expert Report. The earlier Expert Report evaluated the modeled stream response associated with full 2026 curtailment of Petitioners' baseline consumptive use and then proportionally applied those modeled responses to the consumptive-use reductions proposed under the proposed Fifth Mitigation Plan. The present analysis does not revise or replace that analysis. Instead, it evaluates the additional stream depletion that would result from a limited resumption of Petitioners' groundwater pumping from approximately September 11 through October 31, 2026, compared with continued curtailment during that same period. Accordingly, the present analysis uses a new paired ETRAN comparison specifically designed to evaluate these two hydrologic scenarios.

13. Although Petitioners' groundwater pumping is distributed among five Eastern Snake Plain Aquifer Model (ESPAM) model cells, for purposes of this conservative analysis all modeled CU was assigned to ESPAM Cell 1072126. Of the five ESPAM cells associated with Petitioners' groundwater use, Cell 1072126 produces the greatest Near Blackfoot-to-Minidoka reach depletion per unit of CU stress. Assigning the modeled CU to that cell therefore produces a conservative estimate of the additional reach depletion.

14. ETRAN allows CU stresses to be inputted by trimester and similarly reports modeled transient reach depletion by trimester. The ETRAN Spring trimester consists of March, April, May, and June, whereas the Summer trimester consists of July, August, September, and October. Under Scenario A, in which curtailment remains in place, the modeled Near Blackfoot-to-Minidoka reach depletion was 263.40 AF for the Summer 2026 trimester. ETRAN outputs for Scenario A are located in Attachment C.

15. I also completed a Scenario B, representing the hypothetical condition in which the Curtailment Order is stayed and Petitioners resume pumping from approximately September 11 through October 31, 2026. Under Scenario B, the approximately 220 AF of anticipated late-season 2026 CU described above was applied as a Summer 2026 trimester stress. The period from September 11 through October 31 is shorter than the full ETRAN Summer trimester. ETRAN does not temporally limit the Summer-trimester stress in this analysis to the final approximately 51 days of that trimester. For purposes of this analysis, the full 220 AF of anticipated late-season CU was therefore represented within the Summer 2026 trimester. This treatment is intended to be conservative for evaluating the September 11 through October 31 period. Under Scenario B, the modeled Near Blackfoot-to-Minidoka reach depletion was 302.31 AF for the Summer 2026 trimester. ETRAN outputs for Scenario B are located in Attachment D.

16. Because Scenarios A and B are identical before September 11, 2026, the difference between the modeled Summer 2026 reach depletions represents the additional effect of the 220 AF of late-season consumptive use represented in Scenario B. Any effects from earlier pumping occur in both scenarios and therefore cancel out in the comparison.

17. The difference between the modeled Summer 2026 reach depletions under Scenarios A and B is: **302.31 AF (Scenario B) − 263.40 AF (Scenario A) = 38.91 AF**. The

approximately 38.91 AF difference therefore represents the additional modeled Summer 2026 Near Blackfoot-to-Minidoka reach depletion attributable to the additional 220 AF of late-season CU represented in Scenario B. This analysis does not identify the specific groundwater rights that could be administered to address that effect or calculate the timing and location of the stream response attributable to curtailment of any particular junior groundwater right.

18. **Comparison of Estimated Stream Depletion to Measured Snake River Discharge.** As discussed above, the paired ETRAN simulations produce an additional Summer 2026 Near Blackfoot-to-Minidoka reach depletion of approximately 38.91 AF, rounded to 39 AF. For purposes of evaluating the proposed September 11 through October 31 Stay period, I conservatively attribute that entire additional modeled depletion to the approximately 51-day evaluation period. Distributed over 51 days, 39 AF is equivalent to an average reduction in Snake River discharge of approximately 0.39 cfs.

19. A useful location for evaluating the practical magnitude of this additional change is U.S. Geological Survey ("USGS") Gaging Station 13069500, Snake River, near Blackfoot, Idaho. This station is in Bingham County, has a contributing drainage area of approximately 11,310 square miles, and is operated in cooperation with Water District No. 1 and the U.S. Bureau of Reclamation. USGS data indicate that Snake River discharge at this station has been higher during early September 2026 than the long-term historical average for the corresponding period. Because the September–October 2026 period was not complete at the time of this analysis, a representative average discharge was estimated using observed 2026 flows for the completed portion of September (*i.e.*, September 1–10) and historical USGS discharge statistics for the remainder of the period. Observed discharge during the first 10 days of September averaged about 3,023 cfs. For the remaining 20 days of September and 31 days of October, the historical mean discharges of 2,219 cfs and 2,754 cfs, respectively, were applied. Weighting these values over the 61-day September–October period results in an estimated average discharge of approximately 2,623 cfs, which I reduced in this analysis to 2,600 cfs to be conservative. This approach assumes that flows during the remainder of September and October return to historical average conditions rather than remaining at the higher levels observed during early September 2026 and therefore provides

a conservative and reasonable estimate of late-season Snake River discharge for purposes of this analysis.

20. At the approximately 2,600-cfs discharge used for this comparison, the estimated 0.39-cfs average effect associated with Petitioners' pumping represents approximately 0.015 percent of measured Snake River flow, or approximately one part in 6,700. Stated another way, the average hydrologic difference being evaluated is approximately the difference between a river flowing at 2,600.00 cfs and 2,599.61 cfs.

21. This difference can also be compared with USGS standards for evaluating individual stream-discharge measurements. USGS classifies an individual discharge measurement as "Excellent" when it should be within 2 percent of actual flow, "Good" when within 5 percent, and "Fair" when within 8 percent. At 2,600 cfs, these percentages correspond to approximately 52 cfs, 130 cfs, and 208 cfs, respectively. Thus, even compared with the USGS "Excellent" 2-percent benchmark, the approximately 0.39-cfs average effect estimated from Petitioners' pumping is approximately 133 times smaller than 52 cfs and represents only about 0.75 percent of that 52-cfs benchmark. (USGS, Stream Discharge Measurement Quality.)

22. This comparison does not establish a threshold for material injury and does not mean that modeled depletion below measurement resolution is zero. It does, however, provide context regarding whether the additional change caused by Petitioners' pumping would be observable as a distinct change in measured river discharge. For purposes of this analysis, I assume that the approximately 39 AF of additional modeled depletion occurs as estimated by ETRAN and conservatively attribute that amount to the 51-day evaluation period. In my professional opinion as a hydrologist, an average change of approximately 0.39 cfs in a river carrying approximately 2,600 cfs would not produce a functionally distinguishable change in measured Snake River discharge using the existing stream-gaging system. The Snake River as measured would therefore be functionally indistinguishable with or without the estimated additional effect associated with Petitioners' resumed late-season pumping.

23. Idaho conjunctive-management decisions also recognize that modeled groundwater effects and measurement limitations must be considered in context. In *Clear*

Springs Foods, Inc. v. Spackman, the Idaho Supreme Court upheld the Idaho Department of Water Resources Director's use of an established model-application margin that reflected, among other things, uncertainty associated with stream-gage measurements, and observed that Idaho law does not require 100-percent accuracy in measuring devices or in determining material injury. 150 Idaho 790, 816–17, 252 P.3d 71, 97–98 (2011). I do not use *Clear Springs* to establish a *de minimis* threshold; I cite it only as relevant authority recognizing the practical role of measurement and model limitations in conjunctive administration.

24. **Late-Season Water Availability to Surface Water Coalition Members**. In its *Order Revising April 2026 Forecast Supply and Continuing May 14, 2026 Curtailment Order (Methodology Steps 5 & 6)* ("*July 21 Order*"), the Department incorporated preliminary storage allocations for Surface Water Coalition ("SWC") members of approximately 106,223 AF for A&B Irrigation District, 363,260 AF for American Falls Reservoir District No. 2, 197,196 AF for Burley Irrigation District, 71,870 AF for Milner Irrigation District, 273,676 AF for Minidoka Irrigation District, 793,715 AF for North Side Canal Company, and 227,002 AF for Twin Falls Canal Company. Collectively, these allocations total approximately 2.03 million acre-feet of storage water. The Department also projected approximately 409,683 AF of additional natural-flow supply from July 1 through October 31, principally to North Side Canal Company and Twin Falls Canal Company. *See* Petitioners' Appendix ("App.") 173–175 (*July 21 Order* at 6–8.)

25. These quantities provide important context for evaluating conditions in mid-September. The Department expressly calculated remaining Reasonable In-Season Demand ("RISD") using the July-through-October demand from the 2018 baseline year and calculated RISD on a monthly time step. The *July 21 Order* therefore incorporated approximately 1.94 million AF of projected July-through-October demand among the seven SWC members. By approximately September 11, however, all of July and August and approximately one-third of September will have passed, including much of the period of greatest crop-water demand. The irrigation requirement remaining through October 31 consequently represents only the declining late-season portion of the demand incorporated into the Department's July analysis. App. 170, 172–175 (*July 21 Order* at 3, 5–8.)

26. The quantities identified in the Department's *July 21 Order* provide scale context for the estimated 39-AF additional depletion. I have not calculated the current storage balance, natural-flow entitlement, diversion requirement, remaining demand, or carryover requirement of each SWC member. Accordingly, I do not offer an opinion regarding the precise quantity of water currently available to any individual SWC member. The referenced quantities are presented solely to place the estimated near-term depletion attributable to resumed pumping by Petitioners in the context of the overall volumes evaluated in the Department's *July 21 Order*.

I declare under penalty of perjury pursuant to the law of the State of Idaho that the foregoing is true and correct.

Dated 9/14/2026 ____________________________.

Signed by:
R. Jeffrey Davis
568663F94E3C49D...

R. JEFFREY DAVIS

Attachment A

Attachment A

References and Authorities

1. Miller, Eric. *Expert Report — Fifth Mitigation Plan*, Version 1.7, August 14, 2026. Referenced for background concerning the Bingham irrigated acreage, representative crop mix, historical consumptive-use assumptions, and the crop-water-demand methodology previously applied using ET-IDWR planning data. The stream-depletion estimates presented in this Declaration are based upon the ETRAN simulations described herein and are not derived from or scaled from the stream-depletion estimates presented in the August 14, 2026 Expert Report.

2. Idaho Department of Water Resources. *ET-IDWR — Evapotranspiration and Consumptive Irrigation Water Requirements for Idaho.* Online evapotranspiration and crop-water-requirement database; Taber Station (TABI) planning data utilized to estimate the remaining September and October 2026 consumptive irrigation requirements for the representative Bingham crop mix.

3. Idaho Department of Water Resources. *ESPA Model Transfer Spreadsheet (ETRAN 3.4)* and *ESPA Model Transfer User's Manual*. ETRAN 3.4 provides an interface for evaluating effects of groundwater use within the Eastern Snake Plain Aquifer using ESPAM Version 2.2. Used in this analysis to conduct the paired transient simulations of the Near Blackfoot-to-Minidoka reach under Scenario A (continued curtailment) and Scenario B (curtailment stayed) which assumed approximately 220 AF of additional Summer 2026 CU. These ETRAN runs assume only pumping from ESPAM Cell 1072126 used as a conservative modeling location because it produces the greatest modeled Near Blackfoot-to-Minidoka reach depletion per unit CU among the five Bingham-associated ESPAM cells. The difference between the paired simulations provides the estimated incremental depletion attributable to the additional late-season 2026 CU.

4. U.S. Geological Survey. *Stream Discharge Measurement Quality*, Surface Water User Group. Individual discharge-measurement quality qualifiers: Excellent—within 2 percent of actual flow; Good—within 5 percent; Fair—within 8 percent; Poor—more than 8 percent.

5. U.S. Geological Survey. *Gaging Station 13069500, Snake River near Blackfoot, Idaho*, Water Data for the Nation. Station metadata and September 2026 discharge data; contributing drainage area approximately 11,310 square miles; station operated in cooperation with Water District No. 1 and the U.S. Bureau of Reclamation.

6. Idaho Department of Water Resources. *Order Revising April 2026 Forecast Supply and Continuing May 14, 2026 Curtailment Order (Methodology Steps 5 & 6)*, Docket No. CM-DC-2010-001 (July 21, 2026), pp. 3, 5–8. Page 3 describes the monthly Reasonable In-Season Demand ("RISD") methodology; pages 5–6 identify July-through-October baseline demand and forecast-supply methodology; and pages 7–8 report preliminary storage allocations, predicted July-through-October natural-flow supply, forecast supply, and predicted shortfalls.

7. *Clear Springs Foods, Inc. v. Spackman*, 150 Idaho 790, 816–17, 252 P.3d 71, 97–98 (2011). Discusses the Director's use of an established model-application margin reflecting uncertainty, including stream-gage measurement limitations, and recognizes that Idaho law does not require 100-percent accuracy in measuring devices or in determining material injury.

8. *American Falls Reservoir District No. 2 v. Idaho Department of Water Resources*, 143 Idaho 862, 868, 154 P.3d 433, 439 (2007). Recognizes that depletion does not necessarily equate to material injury; material injury turns on interference with the senior's exercise of its water right for authorized beneficial use, and reasonable carryover storage is protected.

Attachment B

Attachment B

EXPERT REPORT OF R. JEFFREY DAVIS, P.E., and ERIC C. MILLER

IN SUPPORT OF JERRY D. BINGHAM AND VALERIE H. BINGHAM'S FIFTH MITIGATION AND CURTAILMENT PLAN

IDWR Docket No. CM-MP-2026-004

1. INTRODUCTION AND PURPOSE

We have been retained on behalf of Jerry D. Bingham and Valerie H. Bingham ("Binghams") to evaluate the technical basis and magnitude of mitigation associated with their Fifth Mitigation and Curtailment Plan ("Fifth Mitigation Plan"), filed with the Idaho Department of Water Resources ("IDWR") on May 28, 2026.

This report evaluates the following: (1) mitigation realized following curtailment beginning on approximately July 22, 2025; (2) mitigation proposed for the 2026 irrigation season as part of the Fifth Mitigation Plan; and (3) whether that mitigation is functionally equivalent to or greater than the proportional mitigation obligations that would have been attributable to the Binghams' Water Rights under the conservation and storage framework of the 2024 Stipulated Mitigation Plan ("2024 Mitigation Plan").

The 2024 Mitigation Plan is used as a comparative technical benchmark.

Our qualifications are provided in Appendix A.

2. TECHNICAL APPROACH

The 2024 Mitigation Plan employs two mitigation mechanisms relevant to this analysis:

1. **Conservation.** Appendix A measures conservation as reductions from baseline groundwater diversion. (2024 Mitigation Plan, § 4; Appendix A)
2. **Storage.** Appendix B allocates storage responsibility according to each Ground Water District's relative modeled steady-state impact to the Near Blackfoot-to-Minidoka reach. (2024 Mitigation Plan, § 6; Appendix B)

We therefore evaluate the two mitigation components separately and using the units appropriate to each component. Appendix A establishes conservation obligations in terms of reductions in groundwater diversion. Accordingly, the estimated volume of groundwater diversion avoided as a result of the July 22, 2025, curtailment through the end of the 2025 irrigation season is compared directly with the proportional Appendix A conservation obligation for the evaluation period extending from July 22, 2025, through the end of the 2026 irrigation season. Because Appendix A measures conservation as reduced diversion, no conversion of the 2025 diversion reduction to consumptive use (CU) is necessary for that comparison.

Appendix B, by contrast, establishes an obligation to provide storage water to offset the hydrologic effects of groundwater depletion on the Near Blackfoot-to-Minidoka reach. Accordingly, the proposed 2026 diversion reductions and curtailments are first converted to avoided CU, representing the reduction in groundwater depletion attributable to those measures. ETRANS is then used to translate that avoided CU into the resulting 2026 reach benefit. The modeled reach benefit—not the avoided CU itself—is then compared with the proportional Appendix B storage obligation. Thus, the use of diversion reduction for the Appendix A comparison and avoided CU for the ETRANS analysis reflects the fundamentally different quantities being evaluated under the two components of the 2024 Mitigation Plan.

These separate analyses and comparisons are then jointly evaluated to determine if the total curtailments and reductions subsequent to July 22, 2025, and through the end of the 2026 irrigation season are commensurate with proportional obligations hypothetically assigned in the 2024 Mitigation Plan.

3. BASELINE AND COMPARISON PERIOD

Evaluation of groundwater conservation requires an estimate of the water use that would reasonably be expected in the absence of mitigation. This baseline provides the reference condition against which reductions in groundwater diversion and CU can be quantified and compared with the mitigation requirements evaluated in this report.

The Binghams' baseline is estimated at approximately 2,933 acre-feet annual (AFA) of groundwater diversion and 2,464 AFA of CU. These values represent planning-level estimates of expected irrigation demand rather than water use associated with the conditions of any single irrigation year. The estimates were developed using crop-specific planning evapotranspiration (ET) and irrigation-demand information for the Taber station (TABI) from *ET-IDWR — Evapotranspiration and Consumptive Irrigation Water Requirements for Idaho*, maintained by the IDWR, together with representative cropping and irrigation-efficiency assumptions for the Binghams' acreage. The ET-IDWR website provides estimates of ET, net irrigation requirements (NIR), and effective precipitation supporting ET and related precipitation deficit (PDef).

The baseline was developed using:

- approximately 1,039 irrigated acres, recognizing that although Water Rights 35-2266 and 35-2269G have individual acreage limits of 155 and 240 acres, respectively, their combined use is limited to irrigation of 391 acres in a single irrigation season;
- a representative crop mix of approximately one-third alfalfa (frequent cuttings), one-third spring grain (irrigated), and one-third potatoes (late harvest);
- the corresponding ET-IDWR planning crop-water-demand (PDef) values;
- approximately 90% center-pivot irrigation at 85% efficiency and 10% wheel-line irrigation at 70% efficiency; and
- a blended irrigation efficiency of approximately 84%, corresponding closely to the baseline consumptive-use fraction described below.

Application of the crop-specific ET-IDWR planning values to the representative crop mix results in approximately 2,464 AFA of CU, or approximately 2.37 acre-feet per acre (AF/ac). The representative irrigation-efficiency assumptions are used to relate crop consumptive demand to groundwater diversion. For the calculations presented herein, that relationship is expressed as the baseline consumptive-use fraction (CU fraction), defined as annual CU divided by annual groundwater diversion:

2,464 AF CU ÷ 2,933 AF diversion = 0.840095 CU fraction.

The corresponding annual groundwater-diversion baseline is approximately 2,933 AF. Thus, the approximately 84% irrigation-efficiency assumption and the 0.840095 CU fraction are closely related but are not treated as mathematically identical; the unrounded CU fraction is used when converting changes in diversion to avoided CU.

On the corrected 1,039-acre basis, the annual diversion rate is approximately 2.82 AF/ac.

Baseline Measure	Annual Volume	AF/ac
Groundwater Diversion	2,933 AF	2.82
Consumptive Use	2,464 AF	2.37

Monthly data describing the PDef throughout an average irrigation season for the three crop types is provided in Appendix B. These same data are also used to evaluate the seasonal distribution of crop-water demand and the percentage of annual demand remaining after the July 22, 2025, curtailment date for the 2025 irrigation year.

Use of Planning-Level ET. Planning-level ET is appropriate for establishing a prospective, multi-year mitigation baseline because the objective is to estimate reasonably expected crop-water demand over the mitigation period rather than conditions unique to any single irrigation year. ET-IDWR's long-term planning values provide a consistent basis for estimating both baseline CU and the seasonal distribution of irrigation demand.

Use of ET-Based Estimates Rather Than WMIS. The ET-based baseline was used rather than relying exclusively upon historical Water Measurement Information System (WMIS) diversion records because the available WMIS record for the Binghams' Water Rights is incomplete across individual points of diversion and years. Reliance upon those records alone would therefore make the calculated baseline dependent upon the availability and completeness of historical measurement data. The ET-IDWR approach instead provides a complete and internally consistent planning estimate across the entire irrigated acreage, from which corresponding groundwater diversion can be estimated using representative irrigation efficiencies. A cursory review of available WMIS records for Mr. Bingham's diversions from 2011-2025 confirmed the highly variable nature and general inadequacy of water volumes needed for healthy crop maturation.

Comparison Period

For purposes of this analysis, the appropriate comparison period extends from July 22, 2025, when curtailment of the Binghams' Water Rights began, through the end of the 2026 irrigation season, thereby encompassing both the realized mitigation resulting from the 2025 curtailment and the mitigation proposed under the Fifth Mitigation Plan for 2026. The Fifth Mitigation Plan expressly proposes mitigation for the 2026 irrigation season.

Because the July 22, 2025, curtailment occurred partway through the irrigation season, the 2025 portion of the comparison period was adjusted to reflect the remaining irrigation demand rather than simply elapsed calendar time. Based upon the seasonal distribution of planning ET for the representative crop mix, approximately 46% of annual ET remained after July 22, 2025, through the end of the 2025 irrigation season. The 46% factor was calculated by determining, for each representative crop, the proportion of annual planning PDef occurring after July 22, including a prorated portion of July, and then weighting those crop-specific percentages according to the representative crop distribution described above. Appendix B provides the underlying monthly values and calculation.

The comparison period therefore consists of:

0.46 irrigation-year equivalent (2025) + 1.00 irrigation year (2026) = 1.46 irrigation-year equivalents

The 1.46 value is not based upon calendar time; it represents the irrigation-demand-equivalent period associated with the remaining 2025 planning ET plus the complete 2026 irrigation season.

4. BINGHAMS' 2025 MITIGATION COMPARED TO APPENDIX A OBLIGATIONS

Binghams' 2025 Mitigation

The Binghams' Water Rights were curtailed beginning July 22, 2025, through the end of the 2025 irrigation season. Based on the seasonal distribution of planning ET for the representative crop mix of approximately one-third alfalfa (frequent cuttings), one-third spring grain (irrigated), and one-third potatoes (late harvest), approximately 46% of the annual irrigation demand remained after July 22. This percentage represents the crop-weighted portion of annual planning ET occurring after the curtailment date. Applying this percentage to the established annual diversion baseline of 2,933 AF:

2,933 AF × 0.46 = 1,349.18 AF

Accordingly, estimated realized conservation resulting from the 2025 curtailment is estimated at approximately 1,349.18 AF of reduced groundwater diversion.

Proportional Appendix A Conservation Obligation

To evaluate the magnitude of this conservation, we compared it with the proportional conservation requirement established by Appendix A of the 2024 Mitigation Plan. The Bingham Ground Water District (BGWD) values were selected because they provide the most directly comparable geographic basis for estimating the proportional conservation obligation applicable to the Binghams' Water Rights.

Appendix A identifies 276,522 AF of baseline annual groundwater diversion and 32,958 AF of required annual conservation for BGWD. The corresponding conservation percentage is:

32,958 AF ÷ 276,522 AF = 11.91876%

Applying this percentage to Binghams' 2,933-AF annual diversion baseline yields:

2,933 AF × 11.91876% = 349.58 AF/year

Thus, the proportional Appendix A conservation obligation for the Binghams' Water Rights is approximately 349.58 AF on an average annual basis.

Importantly, the 2024 Mitigation Plan does not require this conservation to occur uniformly each year. Section 4 requires conservation on an "average annual basis," while §4.1 establishes 4-year compliance periods. Section 4.3 further provides that Districts are not restricted to one-fourth of their compliance-period allocation in any individual year and may instead divert more or less in a particular year, provided that total diversion over the 4-year compliance period remains within the applicable allocation.

Accordingly, the 349.58 AF/year value is properly treated as an average annual conservation benchmark rather than a maximum amount of conservation recognizable in a single year. Consistent with the accounting structure of the 2024 Mitigation Plan, conservation greater than the average annual requirement in any one year may offset lower conservation in another year within the applicable multiyear compliance period. However, this comparison is offered as a technical measure of proportionality and hydrologic sufficiency. We understand that the Director will separately determine whether the Fifth Mitigation Plan satisfies the applicable legal and administrative criteria of Rule 43.

For the 1.46 irrigation-year-equivalent comparison period evaluated in this report, the proportional conservation obligation is:

349.5773 AF/year × 1.46 = 510.38 AF

Comparison

Appendix A Conservation Comparison	**AF Reduced Diversion**
Estimated 2025 diversion reduction attributable to curtailment	1,349.18 AF
Proportional 1.46-year obligation	510.38 AF
Amount above obligation	838.80 AF

Realized curtailment-based conservation, estimated using the planning baseline, therefore represents approximately 264% of the proportional Appendix A conservation obligation for the 1.46-year comparison period and exceeds that obligation by approximately 838.80 AF of reduced groundwater diversion.

Using the established relationship between Binghams' CU and diversion baselines, the excess diversion reduction corresponds to:

838.80 AF × (2,464 AF CU ÷ 2,933 AF diversion) = 704.67 AF of avoided CU

This approximately 704.67 AF of excess avoided CU would also be expected to produce additional hydrologic benefit to the Near Blackfoot-to-Minidoka reach during the latter portion of the 2025 irrigation season, throughout the 2026 irrigation season, and thereafter. However, no mitigation credit is taken in this analysis for the hydrologic benefit associated with this excess 2025 conservation, because this specific scenario was not explicitly modeled in ETRANS at the time of this report.

Moreover, the approximately 838.80 AF of excess 2025 diversion reduction is not required to satisfy the Appendix A conservation obligation for the period evaluated. Consistent with the multi-year conservation accounting structure of the 2024 Mitigation Plan, this excess conservation could alternatively be reserved for application against conservation obligations in subsequent years within an applicable multi-year compliance period, rather than being assigned any hydrologic mitigation credit in the present analysis. Thus, neither the additional reach benefit associated with the excess 2025 conservation nor its potential value toward future conservation obligations is necessary to the conclusions presented herein.

5. BINGHAMS 2026 MITIGATION COMPARED TO APPENDIX B OBLIGATIONS

The Fifth Mitigation Plan does not propose storage water as a separate mitigation measure. Consequently, in the analysis, the proposed 2026 reductions and curtailments are viewed as CU reductions that produce in-stream benefits to the Near Blackfoot-to-Minidoka reach functionally equivalent to storage water.

In our opinion, these conservation-derived reach gain benefits are functionally equivalent to, and in some respects preferable to, storage-water mitigation for a variety of reasons. Appendix B allocates storage responsibility according to each District's modeled steady-state impact to the Near Blackfoot-to-Minidoka reach, directly relating the storage requirement to groundwater effects on that reach. Storage replaces water depleted from the system; conservation reduces the depletion itself. Moreover, modeled conservation-derived reach gains accrue directly to the affected reach at the time and location of the groundwater-depletion response represented in ETRANS. In addition, storage water secured from a distance source (e.g., Palisades Reservoir) would technically meet the requirements of Appendix B obligations but its physical conveyance would typically—depending upon the source, delivery location, and timing— result in significant physical losses through streambed/ditch percolation and to a lesser extent ET losses. For these reasons, we consider an acre-foot of modeled conservation-derived reach gain within the affected reach to provide at least an equivalent hydrologic benefit to an acre-foot of storage water used as replacement mitigation. (2024 Mitigation Plan, § 6 and Appendix B)

Binghams' 2026 Proposed Mitigation—Functionally Equivalent Storage

The Fifth Mitigation Plan proposes reduced diversion on three water rights totaling 613 acres and complete curtailment on the remaining 426 acres during the 2026 irrigation season. Water Rights 35-2266 and 35-2269G have individual acreage limits of 155 and 240 acres, respectively, but their combined use is limited to 391 acres in a single irrigation season; together with the 35 acres under Water Right 35-12226, the fully curtailed acreage is therefore 426 acres.

The proposed diversion limits of 1.70 AF/ac for Water Rights 35-2202B and 35-2205E and 1.72 AF/ac for Water Right 35-2183D represent the maximum 2026 diversion volumes proposed in the Fifth Mitigation Plan, expressed on a per-acre basis. The avoided-diversion calculation therefore represents the difference between the planning baseline diversion rate and the proposed 2026 diversion limit for each right. For the three reduced-diversion rights, avoided CU was calculated by applying the baseline CU fraction to the reduction in diversion. Equivalently: Avoided CU = Acres × [(Baseline diversion rate × baseline CU fraction) − (2026 diversion limit × baseline CU fraction)] = Acres × (Baseline diversion rate − 2026 diversion limit) × baseline CU fraction.

Calculations were performed using the unrounded baseline diversion rate of 2.822906641 AF/ac and the unrounded baseline CU fraction of 0.840095465; values shown below are rounded for presentation.

35-2202B:
250 acres × (2.822907 − 1.70) AF/ac × 0.840095 = 235.84 AF CU

35-2205E:
207 acres × (2.822907 − 1.70) AF/ac × 0.840095 = 195.27 AF CU

35-2183D:
156 acres × (2.822907 − 1.72) AF/ac × 0.840095 = 144.54 AF CU

For the three fully curtailed rights, CU mitigation was calculated using the baseline CU rate:

2,464 AF CU ÷ 1,039 acres = 2.371511 AF/ac

That unrounded rate was then applied to the 391-acre combined limit for Water Rights 35-2266 and 35-2269G and to the 35 acres associated with Water Right 35-12226:

35-2266 and 35-2269G (combined):
391 acres × 2.371511 AF/ac = 927.26 AF CU

35-12226:
35 acres × 2.371511 AF/ac = 83.00 AF CU

The resulting proposed 2026 CU mitigation is therefore:

Water Right	Acres	Baseline → 2026 Diversion	CU Mitigation
35-2202B	250	2.82 → 1.70 AF/ac	235.84 AF
35-2205E	207	2.82 → 1.70 AF/ac	195.27 AF
35-2183D	156	2.82 → 1.72 AF/ac	144.54 AF
35-2266 / 35-2269G	391 combined	Fully curtailed	927.26 AF
35-12226	35	Fully curtailed	83.00 AF
Total	1,039		1,585.92 AF

Thus, using unrounded values, the proposed 2026 reductions and curtailments are estimated to avoid approximately 1,585.92 AF of CU. Minor differences in summing displayed component values are attributable to rounding.

ETRANS Model Runs

To predict the in-season benefit to the Near Blackfoot-to-Minidoka reach from CU reductions, the IDWR ETRANS model was used. Rather than explicitly modeling the estimated 1,585.92 AF of proposed 2026 avoided CU, the ETRANS analysis first evaluated a hypothetical 100% reduction of the 2,464-AF baseline CU, spatially distributed among the five ESPAM model cells associated with the Binghams' Water Rights. Separate cell-specific model results were then used to estimate the reach benefit associated with the magnitude and spatial distribution of the proposed 1,585.92-AF CU reduction.

The estimated 2,464-AFA baseline CU was spatially allocated among the five ESPAM model cells associated with the Binghams' Water Rights: 282 AF in cell 1070130, 282 AF in cell 1070131, 352 AF in cell 1072126, 445 AF in cell 1072127, and 1,103 AF in cell 1072128. Separate Baseline and Mitigation ETRANS simulations were completed for each model cell over the period from spring 1952 through summer 2026. For the baseline runs, the applicable cell-specific CU was applied during the spring and summer trimesters throughout the simulation period, with no CU stress during the winter trimester. The corresponding mitigation runs were identical except that the spring 2026 and summer 2026 CU stresses were set to zero. Thus, antecedent stresses were held constant between the paired simulations, and the modeled difference isolates the hydrologic response attributable to elimination of the 2026 CU.

For each model cell, the 2026 mitigation benefit to the Near Blackfoot-to-Minidoka reach was calculated as the difference between the average spring and summer 2026 reach response from the baseline run and the corresponding average from the mitigation run:

2026 Reach Benefit = Average (Spring 2026 + Summer 2026) Baseline Response − Average (Spring 2026 + Summer 2026) Mitigation Response

The resulting reach benefits were calculated separately for each of the five model cells and then summed to obtain the total modeled 2026 benefit attributable to elimination of the 2,464-AF CU baseline. The individual modeled cell responses were 57.95, 56.24, 81.85, 101.54, and 246.26 AF, respectively, totaling 543.84 AF of estimated 2026 Near Blackfoot-to-Minidoka reach benefit.

The proposed 2026 mitigation differs from this modeled condition in two respects: (1) total avoided CU is 1,585.92 AF rather than 2,464 AF; and (2) the avoided CU is distributed differently among the five model cells. Accordingly, the modeled cell responses were scaled individually to account for both the reduced magnitude and changed spatial distribution of the proposed mitigation. Applying a single aggregate ratio of 1,585.92 AF to 2,464 AF would account for the difference in total CU but would not account for the different spatial distribution of that CU reduction.

For each model cell, the modeled reach response associated with elimination of its baseline 2026 CU was divided by the baseline CU assigned to that cell to derive a cell-specific response factor. That response factor was then applied to the proposed avoided CU occurring within the same model cell:

Proposed Cell Reach Benefit = Proposed Avoided CU × (Modeled Cell Reach Response ÷ Baseline Cell CU)

This calculation preserves the spatial distribution of the proposed mitigation while proportionally adjusting the modeled response for the smaller CU reduction within each cell.

ETRANS Cell-Specific Reach-Benefit Calculation

ESPAM Model Cell	Baseline CU (AF)	Modeled Cell Response (AF)	Proposed 2026 Avoided CU (AF)	Proposed 2026 Reach Benefit (AF)
1070130	282	57.95	117.92	**24.23**
1070131	282	56.24	117.92	**23.52**
1072126	352	81.85	144.54	**33.61**
1072127	445	101.54	463.63	**105.79**
1072128	1,103	246.26	741.90	**165.64**
Total	**2,464**	**543.84**	**1,585.92**	**352.79**

For example, the calculation for ESPAM model cell 1070130 is:

117.92 AF × (57.95 AF ÷ 282 AF) ≈ 24.23 AF of 2026 reach benefit

The same calculation was performed for each of the remaining four model cells.

The individual Modeled Cell Responses in the above table are the modeled ETRANs in-stream benefits discussed previously for each individual cell based on the cells corresponding Baseline CU. For example, given a 282 AF CU reduction in grid cell 1070130 there is an associated in-stream benefit of approximately 57.95 AF.

The values in the “Proposed 2026 Avoided CU” column represent the CU reductions proposed in the Fifth Mitigation Plan distributed to each of the five ESPAM Model Cells.

The resulting cell-specific reach benefits sum to approximately 352.79 AF of estimated 2026 Near Blackfoot-to-Minidoka reach benefit under the proposed actions of the Fifth Mitigation Plan.

Basis for Proportional Scaling

We reasonably assume that the modeled response for the 2,464-AF CU reduction can be proportionally scaled to the smaller 1,585.92-AF reduction based on ESPAM’s linear formulation. IDWR expressly recognizes that ESPAM model “is a linear approximation of a non-linear system” and concludes that the model provides a reasonable approximation of the response to groundwater-pumping curtailment (IDWR, 2013, p. 29).

Accordingly, within a fixed ESPAM model cell and simulation period, the modeled response resulting from elimination of the baseline CU provides a reasonable basis for proportionally estimating the response to a smaller CU reduction in that same cell. The proportional adjustment therefore addresses the change in magnitude from the modeled baseline CU to the proposed CU reduction, while performing that adjustment independently for each of the five cells accounts for the different spatial distribution of the proposed mitigation. On this basis, the estimated 2026 Near Blackfoot-to-Minidoka reach benefit associated with the proposed 1,585.92 AF of avoided CU is approximately 352.79 AF.

The proposed 2026 mitigation is therefore estimated to provide approximately 352.79 AF of Near Blackfoot-to-Minidoka reach benefit.

Proportional Appendix B Storage Obligation

The BGWD Appendix B allocation was selected as the most directly comparable geographic basis for estimating a proportional storage obligation for the Binghams' Water Rights. Appendix B assigns BGWD 17,715 AF of the collective storage obligation. Relative to BGWD's 276,522-AF baseline diversion, this represents:

17,715 ÷ 276,522 = 6.40636%

Applying this proportion to Binghams' 2,933-AF annual diversion baseline:

2,933 × 6.40636% = 187.90 AF/year

For the 1.46 irrigation-year-equivalent comparison period:

187.90 × 1.46 = 274.33 AF

The proportional Appendix B storage obligation is therefore approximately 274.33 AF. (2024 Mitigation Plan, Appendices A and B).

Appendix B Comparison	**AF**
Proposed 2026 Binghams' reach-gain mitigation	352.79
Proportional storage obligation	274.33
Amount above obligation	78.46

The proposed 2026 conservation-derived reach benefit therefore represents approximately 129% of the proportional Appendix B storage obligation, exceeding that obligation by approximately 78.46 AF. Although the modeled reach benefit used in this comparison is limited to the 2026 irrigation season, the proportional storage benchmark was conservatively calculated over the entire 1.46-irrigation-year comparison period, including the post-July 22 portion of 2025. No modeled reach benefit from the 2025 curtailment was included. This convention therefore understates, rather than overstates, the relative magnitude of Bingham's hydrologic mitigation.

6. OVERALL MITIGATION COMPARISON

The analysis can be summarized as follows:

2024 Plan Component	Binghams Mitigation	Proportional Binghams' Obligation	Amount above Obligation
Appendix A — Conservation	1,349.18 AF estimated 2025 diversion reduction attributable to curtailment	510.38 AF reduced diversion	+838.80 AF
Appendix B — Storage/Hydrologic Benefit	352.79 AF modeled 2026 reach benefit	274.33 AF storage	+78.46 AF

Allocation of Mitigation for Comparison Purposes. The assignment of the estimated 2025 diversion reduction attributable to curtailment to the Appendix A comparison and proposed 2026 mitigation to the Appendix B comparison is an analytical convention adopted to avoid assigning hydrologic credit to effects that were not explicitly modeled. The 2025 curtailment provides a directly quantifiable reduction in groundwater diversion and was therefore compared with the Appendix A conservation obligation. The ETRANS simulations explicitly modeled the hydrologic response to the proposed 2026 CU reductions, and that modeled reach benefit was therefore compared with the Appendix B storage obligation. This approach provides a conservative, non-overlapping comparison and avoids reliance upon an unmodeled 2025 aquifer response.

The allocation does not imply that 2025 mitigation is limited to conservation or that 2026 mitigation is limited to hydrologic benefit. Conservation in both years reduces groundwater diversion and CU and produces associated hydrologic benefits. Conversely, the proposed 2026 diversion reductions could also be credited toward an Appendix A conservation obligation. The selected allocation simply uses the most directly quantifiable measure from each year and avoids double counting. Accordingly, the choice to compare 2025 mitigation with Appendix A and 2026 mitigation with Appendix B is a methodological accounting convention and does not control the overall mitigation comparison.

7. RESPONSE TO IDAHO GROUND WATER APPROPRIATORS (IGWA) PROTEST

IGWA raises three principal objections to the Fifth Mitigation Plan: (1) the proposed reductions rely upon generalized assumptions and do not demonstrate that Binghams' depletive effects will be fully offset; (2) the Plan provides only short-term or partial mitigation rather than sustained mitigation comparable to other approved plans; and (3) Binghams should obtain mitigation through BGWD rather than through an individual mitigation plan. (IGWA Protest, 2026)

The technical analysis presented herein directly addresses the first two concerns. The 2025 diversion reduction attributable to curtailment is estimated at 1,349.18 AF of reduced diversion, exceeding the proportional Appendix A obligation of 510.38 AF by 838.80 AF. Separately, the proposed 1,585.92 AF of avoided CU in 2026 was evaluated using ETRANS and is estimated to produce approximately 352.79 AF of Near Blackfoot-to-Minidoka reach benefit, exceeding the proportional Appendix B storage obligation of 274.33 AF by 78.46 AF. Thus, both the magnitude of conservation and the resulting hydrologic benefit have been independently quantified.

The comparison is conservative and avoids double counting. No quantified reach benefit is assigned to the approximately 704.67 AF of excess avoided CU associated with the 2025 conservation, and no portion of the proposed 2026 diversion reduction is credited toward the Appendix A obligation. The analysis therefore does not depend upon an unmodeled 2025 aquifer response or application of the same mitigation to both obligations.

IGWA's remaining objection concerns the legal availability and administrative propriety of an individual mitigation plan rather than a hydrogeologic calculation. We offer no legal opinion on that issue. From a technical perspective, the availability of another mitigation mechanism does not change the quantities or modeled hydrologic responses evaluated in this report.

In our opinion, the technical analysis does not support IGWA's characterization of the Fifth Mitigation Plan as providing partial or inadequately demonstrated mitigation. The realized curtailment-based conservation, estimated using the planning baseline, together with the proposed 2026 mitigation is functionally equivalent to or greater than the proportional conservation and storage mitigation that would have been attributable to the Binghams' Water Rights under the 2024 Mitigation Plan.

8. OPINIONS AND CONCLUSIONS

Based upon the information reviewed and analyses described herein, we offer the following technical opinions:

1. In our opinion, the Binghams' planning baseline of approximately 2,933 AFA of groundwater diversion and 2,464 AFA of CU, developed using ET-IDWR planning data, provides a reasonable basis for evaluating mitigation.

2. In our opinion, the ET-IDWR planning-level approach used to establish the Binghams' baseline is not only reasonable, but preferable to reliance upon the available historical WMIS record for this analysis. It provides a complete and internally consistent estimate of expected crop-water demand across the Binghams' acreage for a prospective, multi-year mitigation period, while avoiding uncertainties associated with incomplete WMIS records, estimated diversion volumes, historical measurement methods, and year-specific irrigation conditions.

3. In our opinion, conservation-derived reach gains are functionally equivalent to, and hydrologically preferable to, storage-water mitigation. It provides water at the time and location of the groundwater depletion, is not subject to conveyance losses, and does not depend upon storage availability, which may be limited during very dry years. Accordingly, an acre-foot of modeled reach gain provides at least an equivalent, and in these respects superior, hydrologic benefit to an acre-foot of replacement storage water.

4. In our opinion, proportional scaling of the modeled ETRANS response within each ESPAM model cell is technically appropriate and consistent with the ESPAM2.2 superposition framework. Applying the cell-specific modeled response relationships to the magnitude and spatial distribution of the proposed 1,585.92 AF of avoided CU results in an estimated 2026 Near Blackfoot-to-Minidoka reach benefit of approximately 352.79 AF.

5. Based upon our professional judgment and the relevant ETRANS response information generated for the 2026 irrigation season, the approximately 704.67 AF of excess avoided CU associated with the 2025 conservation would be expected to provide additional benefit to the Near Blackfoot-to-Minidoka reach during the latter portion of the 2025 irrigation season and the 2026 irrigation season. These benefits were not taken credit for in this analysis.

6. In our opinion, the combination of realized curtailment-based conservation, estimated using the planning baseline, and proposed 2026 mitigation associated with the Fifth Mitigation Plan is substantially equivalent to, or greater than, the proportional conservation and storage mitigation obligations that would have been attributable to the Binghams' Water Rights under the 2024 Stipulated Mitigation Plan for the period evaluated.

We reserve the right to supplement the analyses and opinions presented herein based upon additional ETRANS modeling, or other information developed during this proceeding. In particular, additional ETRANS simulations may be performed prior to the contested case hearing to quantify the timing and magnitude of the reach benefits attributable to the excess 2025 conservation identified herein.

R. Jeffrey Davis, P.E.

Principal/ Integral Consulting Inc.
August 14, 2026

Eric C. Miller

Eric C. Miller

Principal Earth Scientist/Yellowstone Earth Science
August 14, 2026

BIBLIOGRAPHY

Binghams' Fifth Mitigation and Curtailment Plan. Jerry D. Bingham and Valerie H. Bingham. *Binghams' Fifth Mitigation and Curtailment Plan.* Idaho Department of Water Resources, Docket No. CM-MP-2026-004, filed May 28, 2026.

ET-IDWR. Idaho Department of Water Resources. *ET-IDWR — Evapotranspiration and Consumptive Irrigation Water Requirements for Idaho.* Online evapotranspiration and crop-water-requirement database. Taber Station (TABI) planning data utilized in this analysis. Accessed 2026.

ETRANS. Idaho Department of Water Resources. *ETRANS.* Groundwater-depletion modeling application used to evaluate effects of groundwater consumptive use on the Near Blackfoot-to-Minidoka reach. Model simulations performed 2026.

IGWA Protest. Idaho Ground Water Appropriators, Inc. *IGWA's Notice of Protest to Binghams' Fifth Mitigation and Curtailment Plan.* Idaho Department of Water Resources, Docket No. CM-MP-2026-004, 2026.

2024 Stipulated Mitigation Plan. Surface Water Coalition and Participating Ground Water Districts. *2024 Stipulated Mitigation Plan*, including Appendices A–D, October 29, 2024.

Idaho Department of Water Resources (IDWR). 2013. *Staff Memorandum in Response to Expert Reports Submitted for Rangen Delivery Call*. In the Matter of Distribution of Water to Water Right Nos. 36-02551 & 36-07694, CM-DC-2011-004. February 27, 2013, p. 29

APPENDICES

Appendix A—Curricula Vitae

Appendix B—ET Idaho Data Sheets

Appendix A—Curricula Vitae

R. Jeffrey Davis, P.E., CGWP, CWRE

Principal, Water Resources

Salt Lake City, UT

(385) 955-5184

jdavis@integral-corp.com

EDUCATION & CREDENTIALS

M.S., Civil & Environmental Engineering, Brigham Young University, Provo, Utah, 1998

B.S, Civil & Environmental Engineering, Brigham Young University, Provo, Utah, 1993

Professional Engineer, Utah (License No. 189690-2202), Texas (License No. 125406), Florida (License No. 74838), Colorado (License No. 0051575), Alabama (License No. PE52096), Idaho (License No. P-21839), Oregon (License No. 104270PE), Wyoming (License No. PE 20790)

Certified Groundwater Professional, NGWA (2023)

Certified Water Rights Examiner, Oregon (License No. 104270)

CONTINUING EDUCATION

Certificate of Specialization in Leadership and Management, Harvard Business School Online (2023)

MSHA certified (2020)

First Aid/CPR/AED Certified

PROFESSIONAL AFFILIATIONS

National Ground Water Association

Utah Groundwater Association

Groundwater Resources Association

Mr. Jeff Davis is a licensed civil and environmental engineer, hydrogeologist, and certified groundwater professional with almost 30 years of global experience working on every continent except Antarctica. He currently serves on the Board of Directors for the National Ground Water Association. Mr. Davis has supported numerous litigation cases involving groundwater impacts and has experience as an expert witness. He has spent much of his career solving complicated water problems involving mining, oil and gas, and water resources. These projects include the clean water supply side as well as the remediation of contaminated sites. The contaminated sites include coal combustion residual (CCR) landfills and other waste impoundments, mining remediation sites, and industrial cleanup sites—both RCRA and CERCLA sites. In working with per- and polyfluoroalkyl substance (PFAS) compounds, MTBE, chlorinated solvents, hydrocarbons, nitrates, and road salt, he has developed and used numerous groundwater models for the mining, energy, chemical, and agricultural industries. Other projects have involved environmental impact statements, environmental assessments, sea level rise and groundwater intrusion, water management, groundwater–surface water contamination, dewatering, natural resource damage assessment, and water supply and treatment. He has extensive knowledge of groundwater flow-and-transport principles and has taught numerous workshops and classes in the U.S. and around the world. His current focus is on water and groundwater sustainability and drought resiliency. Mr. Davis has extensive experience in the design and implementation of aquifer storage and recovery (ASR) projects across the country.

Relevant Experience

WATER MANAGEMENT

Water Supply and ASR Feasibility, Sacramento County, California — Served as principal investigator for a proposed land development project that evaluated the feasibility of developing a reliable water supply and implementing an ASR program. Key tasks included constructing a conceptual hydrogeologic model and conducting a geophysical survey to characterize the subsurface. The study provided critical insights into sustainable water management options to support the development while ensuring long-term resource stability.

Water Rights and Supply Analysis, Umatilla County, Oregon — Served as principal investigator for a project that involved a water rights and water supply study for an industrial client in eastern Oregon. The client was facing curtailment of groundwater withdrawals by the Oregon Water Resources Department. The department alleged that the client's pumping was impacting nearby stream flows, prompting a detailed analysis of hydrogeologic data and monitoring records. The study demonstrated minimal to no connection between the groundwater pumping and river flows, providing critical evidence to support the client's continued water use.

ASR Feasibility, Ada County, Idaho — Served as principal investigator for a feasibility study for an ASR project. Ada County owns and operates Hubbard Reservoir, which receives irrigation water from the New York Canal. The project included building a conceptual model of the site and refining an existing groundwater model to analyze the effects of recharge from the reservoir.

ASR Feasibility and Piloting, Utah County, Utah — Served as principal investigator for a feasibility study for an ASR project. During the spring runoff of 2023, the team measured the runoff in several rivers, creeks, and ditches, and constructed a new infiltration basin, all in an effort to advance aquifer storage projects within the county. The project has continued with permitting and the implementation of a pilot project for the constructed infiltration basin.

of California

ASR Feasibility, Utah County, Utah — Served as principal for a feasibility study for an ASR project. Former agricultural water rights were converted for industrial use and the effluent was being considered for aquifer replenishment. Both infiltration and direct injection of the treated water were considered as part of the feasibility study.

Provo ASR, Provo, Utah — Served as the project manager and engineer of record for the current Provo ASR project. Five sites (three infiltration and two direct injection) are currently permitted for pilot studies that have been ongoing since 2020. Final engineering design and permitting have been completed for all five sites.

Water Reuse and Aquifer Sustainability, Eagle Mountain, Utah — Served as the client manager and engineer of record for the current Eagle Mountain City, Utah, water-reuse planning and aquifer sustainability project. Water rights for Eagle Mountain were evaluated along with the groundwater system to understand aquifer sustainability for the city, which is expecting tremendous future growth, including large industrial water demands.

ASR Evaluation, Weber County, Utah — Served as the project manager and engineer of record for the current evaluation of the Weber Basin Water Conservancy District, Utah, ASR project. This project has been actively operating for more than 10 years. Hired to evaluate the storage capacity of the program and obtain greater recovery volumes from the system, working with the Utah Division of Water Rights.

Drainage Reuse Initiative, Harris County, Texas — Served as part of a team for the development of the Drainage Reuse Initiative for Harris County Flood Control District in Harris County, Texas. The project investigated the feasibility of alternative methods of flood mitigation by conveying stormwater to the subsurface, including natural infiltration to groundwater, enhanced infiltration or injection into aquifers, and mechanical injection to deep aquifers.

Roseville ASR, Roseville, California — Served as one of the groundwater leads for the development of an ASR program for the city of Roseville, California. Initial efforts involved developing a regional-scale conceptualization for the major portion of the Central Valley area. Developed a subsequent regional multilayer groundwater model, followed by a number of local-scale transport models to simulate pilot tests and understand the ASR process.

COAL COMBUSTION FACILITIES

Coal Combustion Residual Waste and Disposal, Bonanza, Utah — Served as the engineer of record for a coal power plant. Oversaw all efforts related to the monitoring and compliance of the facility's CCR waste and disposal. This included semiannual reporting, development of alternative source demonstrations, and annual groundwater monitoring reports.

Hexavalent Chromium Investigation, United States — Served as the principal investigator for a study to understand and evaluate the proposed EPA changes to hexavalent chromium (Cr(VI)) as it would apply to the monitoring and management of CCR landfill facilities. The work included examining potential regulatory levels from a human health perspective.

Alternate Water Sources Investigation, United States — Served as the principal investigator for a study to understand and evaluate differences at CCR facilities between upgradient and downgradient sources and locate potential evidence of alternate sources using isotopes, microbial fingerprinting, and historical sampling data. After development of a sampling and analysis plan, advanced statistical and multivariate methods and machine language were used to document analyses that show potential for distinguishing source water from alternate sources.

OIL AND GAS WASTE MANAGEMENT

Oil and Gas Waste Facility, De Beque, Colorado — Served as the principal engineer for the permitting and operating of an 800-acre oil-and-gas waste-disposal facility southeast of De Beque, Colorado. Involved in several aspects of the permitting process, including the hydrogeological study and groundwater investigations; stormwater design; pond liner design and construction; closure certification; and submittal of the revised engineering design and operation plan.

Remedial Investigation, Billings, Montana — Served as the groundwater lead for the Yale Oil of South Dakota Facility in Billings, Montana. The Superfund site facility is in the remedial investigation phase; the risk-assessment work plan has been submitted to the Montana Department of Environmental Quality, and the client is waiting for comments before proceeding with the risk assessment.

EPA Study, Washington, DC — Served as participant and technical reviewer for EPA's "Study of Hydraulic Fracturing for Oil and Gas and Its Potential Impact on Drinking Water Resources." Participated in technical roundtables and technical workshops and completed a peer review of the EPA's five retrospective case studies.

Fate and Transport Modeling, Texas — Served as groundwater lead for fate-and-transport modeling and analysis of chloride contamination in southern Texas near the Gulf of Mexico. As part of the site mitigation phase, modeling was used to determine the potential migration of the chloride through the shallow aquifer system and nearby receptors.

Lockwood Solvent Groundwater Plume Site, Billings, Montana — Served as one of the groundwater leads performing groundwater modeling for the Lockwood Solvent Groundwater Plume site, an EPA Superfund site in Billings, Montana. The site spans 580 acres, and much of the groundwater there is contaminated with volatile organic compounds, including tetrachloroethene, trichloroethene, *cis*-1,2-dichloroethene, and vinyl chloride.

PLANNING AND PERMITTING

Biotechnology Facility, Salt Lake City, Utah — Served as principal investigator leading a privileged and confidential waste stream characterization engagement for a biotechnology facility. Worked closely with legal counsel and client technical staff to design defensible sampling protocols, evaluate analytical detection limits, and prepare technical memoranda supporting nonhazardous waste classification for state regulatory review.

Beverage Can Manufacturing and Filling, Salt Lake City, Utah — Served as principal investigator for wastewater, stormwater, and Utah Pollutant Discharge Elimination System permitting, monitoring, and compliance for an aluminum can manufacturing and filling facility. Worked closely with the client, its operations team, and state and municipal regulators to regularly monitor and report all discharges from the facility.

Ely Energy Center EIS, White Pine County, Nevada — Served as principal lead for the development of a regional groundwater model for Steptoe Valley in White Pine County, Nevada. The investigation and model were part of the EIS for construction of the Ely Energy Center.

Haile Gold Mine EIS, Kershaw, South Carolina — Served as groundwater lead as the third-party contractor developing an EIS for the proposed Haile Gold Mine near Kershaw, South Carolina. The EIS analyzed the potential direct, indirect, and cumulative environmental effects of the proposed project and its alternatives. Work included project-team coordination for geology, groundwater, and surface water resources areas; review of applicant-supplied information; agency coordination; and public involvement.

Four Corners Power Plant EIS, Farmington, New Mexico — Served as groundwater lead as the third-party contractor in developing an EIS for the Four Corners Power Plant and Navajo coal mine in Farmington, New Mexico. The EIS analyzed the potential direct, indirect, and cumulative environmental effects of the proposed project and its alternatives. The groundwater portion included analyzing field investigations, pump tests, conceptual and numerical modeling of the project and surrounding area, and remediation and reclamation activities.

Iron Ore Operations Cumulative Impact Assessment, Pilbara, Western Australia — Served as one of the groundwater leads for a cumulative impact assessment for a proposed expansion of iron ore operations in the Pilbara in Western Australia. Work included identifying the methodology and developing the conceptual models to perform the assessment. The groundwater modeling included both quantitative and qualitative approaches.

LITIGATION SUPPORT

Bulk Fuel Storage Facility Litigation, Honolulu County, Hawaii — Served as a technical expert in support of a bulk fuel storage facility litigation, providing independent evaluation of groundwater and drinking water distribution system impacts following a fuel release. Led detailed review and critique of contaminant fate and transport modeling, including assessment of mass-balance and hydraulic modeling approaches used to characterize migration within the public water system and evaluation of the design and effectiveness of post-release flushing programs. Synthesized large and diverse data sets—including sampling results, complaint records, Department of Health reports, and expert declarations—to assess exposure pathways and the extent of systemwide contamination. Authored a sworn expert declaration grounded in case-specific technical review and professional judgment, contributing defensible, science-based opinions to complex environmental litigation.

Road Salt Contamination Litigation, Boise County, Idaho — Served as the principal lead to support litigation related to road salt contamination of a drinking water aquifer serving private wells in Lowman, Idaho. The contamination was traced to negligent storage practices by the Idaho Department of Transportation, with a conceptual model developed to demonstrate the source and migration of the salt into the aquifer. Provided recommendations to mitigate the contamination, restore groundwater quality, and prevent future impacts to the community's drinking water supply.

PCE Contamination Litigation, Onslow County, North Carolina — Served as a testifying expert for a project involving PCE-contaminated groundwater impacting a public water supply. Performed a post-audit of an existing groundwater fate and transport model to assess its accuracy and reliability and extended the model's time domain to evaluate its performance against updated concentration data from multiple monitoring wells.

ASR Well Design and Construction Litigation, Washington County, Oregon — Served as a testifying expert in a litigation case involving allegations of design and construction failures in an ASR well. The client, accused of lacking standard of care in its engineering services, required a technical review of the well design, construction practices, and operational performance. The analysis provided an expert evaluation of the ASR well's deficiencies and clarified the extent of liability and adherence to professional standards.

Stormwater Pipeline Litigation, Sweetwater County, Wyoming — Served as the engineering expert for a litigation case involving the failure of a stormwater pipeline at a trona ore mining and processing facility, where the client, a construction company, faced accusations of negligence. The work included multiple site visits to assess pipeline conditions and a detailed review of engineering plans to evaluate construction practices and compliance with design specifications. The findings provided critical insights into potential causes of failure and helped clarify the client's responsibilities under standard construction practices.

Expert Witness for PFAS Litigation, Martin County, Florida — Served as the groundwater expert witness for a litigation case in Martin County. The multidistrict litigation bellwether case involved PFAS contamination of groundwater affecting public drinking water. Opinions were given regarding PFAS sourcing, and fate and transport in groundwater, and regarding public water supply planning.

Water Resources Litigation, Grand County, Colorado — Served as principal investigator for a litigation case involving flooding damages caused by a canal breach. Surface water modeling was used to determine amount and extent of erosion and sedimentation from the flooding.

Water Resources Litigation, Northwest Minnesota — Served as principal investigator and expert witness for a litigation case involving agricultural water rights and pumping near tribal lands. Developed a conceptual model to understand the hydrogeological conditions and constructed a groundwater model to determine possible impacts due to the agriculture activities.

Groundwater Litigation, Ventura County, California — Served as the groundwater expert for a litigation case in Ventura County. The case includes the development of a basin-wide groundwater–surface water model, not only for purposes of litigation but also for compliance with Sustainable Groundwater Management Act requirements. The groundwater basin in question is currently listed as a priority basin by the State of California.

Pipeline Spill Litigation, Williston, North Dakota — Provided litigation services for groundwater and surface water contamination from a pipeline spill in North Dakota. A large spill of produced water (brine) impacted surface streams as well as the shallow aquifer system. Work included groundwater modeling, field investigations, and remedial strategies.

Road Salt Contamination Litigation, Vandalia, Ohio — Performed fate-and-transport modeling and analysis of sodium chloride contamination of an aquifer in Vandalia, Ohio. Stored road salt caused limited contamination of a shallow aquifer that supplied drinking water to nearby residential homes. The groundwater model included the local domestic pumping wells, which helped determine the possible extent of chloride impacts. Largely due to the conceptual site model and transport modeling results, litigation was settled out of court to the satisfaction of the client.

CLIMATE IMPACT ASSESSMENT

Sea Level Rise Groundwater Intrusion Modeling, Alameda County, California — Served as the principal groundwater lead and engineer for a project that supported a climate adaptation initiative for the Port of Oakland addressing the impacts of sea level rise on subsurface conditions. The work involved detailed subsurface characterization and groundwater intrusion modeling to assess the potential for rising seawater to affect infrastructure and operations. The analysis provided critical data to inform resilience strategies and adaptation measures for long-term sustainability.

Sea Level Rise Groundwater Intrusion Monitoring, Ventura County, California — Served as the principal groundwater lead and engineer for a project that supported a climate adaptation program for the naval facility at Point Mugu by evaluating groundwater intrusion risks associated with sea level rise. Analyzed groundwater monitoring data to identify trends and data gaps critical for assessing potential impacts on infrastructure and operations as well as habitat. The results informed targeted monitoring and adaptation strategies to enhance the facility's resilience to future climate-related challenges.

Sea Level Rise Groundwater Intrusion Assessment, Santa Barbara County, California — Served as the principal groundwater lead and engineer for a proposed coastal hotel expansion in Santa Barbara County. The project involved reviewing technical studies to assess potential environmental and resource challenges. Critically evaluated key reports, including a sea level rise hazard study, water resource reports, and stormwater and drainage studies, to identify gaps and raise concerns about the feasibility and sustainability of the development. The analysis provided valuable insights to guide decision-making and ensure compliance with long-term coastal resilience and resource management goals.

GROUNDWATER MODELING

Subsidence Monitoring/Modeling, Fort Bend and Harris Counties, Texas — Served as the groundwater lead and engineer on several groundwater development projects in Fort Bend and Harris counties. Groundwater withdrawals are strictly curtailed due to historical subsidence. The Subsidence Districts have installed GPS Port-A-Measure (PAM) units and used InSAR mapping. Using this data plus the output from the models PRESS and MODFLOW-SUB to measure subsidence impacts.

Groundwater Model Development, New Jersey — Led a team of hydrogeologists to construct a groundwater flow and fate and transport model of perfluorononanoic acid and other contaminants. The model will be used to design a pump and treat system and possible aquifer replenishment with the treated groundwater.

Hydrogeological Services, Montgomery County, Texas — Provided modeling and hydrogeological consulting services for the Lone Star Ground-water Conservation District's (Montgomery County, Texas) update of its desired future conditions and groundwater management plans. Also provided litigation services for the district.

Groundwater Model Development, Havana, Florida — Provided consulting services for Northwest Florida Water Management District as it updated its regional groundwater model—an integrated groundwater–surface water model that provides regulatory control of the groundwater withdrawals and manages saltwater intrusion in the Floridan aquifer due to pumping.

Crop Production Services, Various Locations, U.S. — Served as the groundwater lead to provide modeling and hydrogeological consulting services for a number of crop production services legacy sites. The groundwater at the sites was contaminated with nitrates from long-term fertilizer use. Groundwater modeling was used to determine the fate and transport of the nitrates and to develop a remedial strategy for cleanup.

Legacy Way Tunnel Design, Brisbane, Australia — Provided senior oversight and technical review for all hydrogeologic assessments related to the Legacy Way tunnel design project, a 4.6 km underground tunnel in northern Brisbane, Australia. Work included evaluating field tests, preparing geotechnical and environmental reports, and modeling the entire project area.

Mercury Fate and Transport, Cincinnati, Ohio — Served as the groundwater lead for performing fate-and-transport modeling and analysis of a mercury spill at a municipal landfill in Cincinnati, Ohio. As part of the project management phase, modeling was used to determine the potential migration of mercury through the landfill to the leachate collection system. Modeling efforts examined both the spatial distribution and the temporal component of the mercury transport.

Due Diligence Environmental Review, Pascagoula, Mississippi — Served as the environmental lead for performing an environmental assessment at a chemical plant in Pascagoula, Mississippi, as part of a due diligence effort. A number of groundwater and surface water contamination issues due to spills, leaks, and storage of hazardous materials were addressed. The location of the plant on the Gulf of Mexico makes possible environmental impacts from operation of the chemical plant a sensitive issue.

MINING

Bingham Canyon Mine Closure Planning, Copperton, Utah — Completed an independent third-party audit for a closure-plan pit-lake study for Bingham Canyon Mine. Reviewed the consultant scope of work for the pit-lake study and discussed the study, methodology, and pathway to completion with consultant staff. An independent audit report was compiled and submitted to the client.

Hooker Prairie Mine, Bartow, Florida — Served as the model expert to develop a contaminant and water budget and management model for the Hookers Prairie Mine in Florida using the GoldSim modeling software. The purpose of the model was to evaluate the probabilities of the mine meeting its current and future nutrient NPDES loading limits for certain contaminants. The project also included an evaluation of current monitoring data within the mine operations and at discharge locations, and the development of a complete monitoring plan integrated into a GIS as part of the model calibration and validation.

Bridger Coal Mine Investigation, Rock Springs, Wyoming — Served on a technical team to reevaluate groundwater conditions, and treatment and discharge alternatives at the Bridger coal mine in southwest Wyoming. Previous studies' predicted maximum flows into the mine had been exceeded. Reassessed the situation and provided solutions.

EMERGENCY RESPONSE

Emergency Response to Battery Fire, New York — Served as the principal in charge leading a team of multidisciplinary scientists, engineers, toxicologists, and risk assessors for an environmental emergency response at a large-scale battery power storage unit at a solar farm. A thermal incident where several cargo container boxes caught fire and burned required immediate action to assess the environmental and human health impacts.

Emergency Response to Battery Fire, California — Served as the principal in charge leading a team of multidisciplinary scientists, engineers, toxicologists, and risk assessors for an environmental emergency response at a large-scale battery power storage facility. A thermal incident where several cargo container boxes caught fire and burned required immediate action to assess the environmental and human health impacts.

ECOLOGICAL RESTORATION

Ecological Restoration, Northeast Idaho — Serves as the principal in charge leading a team of scientists, engineers, and ecologists for an ecological restoration effort in northeast Idaho. The project has involved restoring flow to a creek and working with a number of state and federal agencies to develop and implement a conceptual restoration plan and a mitigation and monitoring plan. The project will also include obtaining the necessary permits and overseeing the restoration in an area of critical habitat.

PROJECT MANAGEMENT

GMS Software Development, Utah — Served as chief engineer for the original development of the software Groundwater Modeling System (GMS) at the Environmental Modeling Research Laboratory at Brigham Young University. A sophisticated graphical environment for groundwater model pre- and post-processing, 3-dimensional site characterization, and geostatistics, GMS is the official groundwater application of the U.S. Department of Defense and is also used by the U.S. Department of Energy, EPA, and thousands of users across the world.

NATURAL RESOURCE DAMAGE ASSESSMENT

Natural Resource Damage Assessment, Southeastern Idaho — Served as the groundwater expert determining groundwater damages in southeastern Idaho due to decades of phosphate mining. Led a team of hydrogeologists evaluating the impacts of selenium and other contaminants and changes in natural groundwater flows across the entire region. The damage assessment included a number of mining areas as well as the facilities where the phosphate material was processed.

Natural Resource Damage Assessment, Eastern Washington — Served as the groundwater expert determining groundwater damages in eastern Washington due to decades of groundwater contamination. For future development on the site, an ASR program is being considered as part of the restoration and long-term sustainability of the groundwater resources.

PRESENTATIONS / POSTERS

Davis, R.J. 2024. Assessing a social value of water in aquifer storage and recovery projects. National Ground Water Association Groundwater Week. December 9–12. Las Vegas, NV.

Davis, R.J. 2024. Assessing a social value of water in aquifer storage and recovery projects. Salt Lake County Watershed Symposium. November 20–21. Salt Lake City, UT.

Davis, R.J. 2024. Great Salt Lake of Utah: Watershed, legislative, and community issues surrounding it. Environmental Professional Industry Charities (EPIC). October 24. Salt Lake City, UT.

Davis, R.J. 2024. Assessing a social value of water in ASR projects. Groundwater Resources Association of California Western Groundwater Congress. October 7–9. Lake Tahoe, NV.

Davis, R.J. 2024. Assessing a social value of water in ASR projects. The Geological Society of America: Connects 2024. September 22–25. Anaheim, CA.

Davis, R.J. 2024. Water in Utah: Continuing to navigate the present and shaping our future water demands. American Groundwater Trust. August 6–7. Salt Lake City, UT.

Davis, R.J. 2024. Assessing a social value of water in ASR projects. Biennial Symposium on Managed Aquifer Recharge. April 4–5. Tucson, AZ.

Davis, R.J. 2023. Challenges limiting managed aquifer recharge (MAR) adoption in the West. National Ground Water Association Groundwater Summit. December 5–7. Las Vegas, NV.

Davis, R.J. 2023. Water, AI, and us: What does the future hold for solving Utah's water challenges. Hint: It can't be solved without you and me. Salt Lake County Watershed Symposium. November 15–16. Salt Lake City, UT.

Davis, R.J. 2023. Building climate resilience through sustainable remediation in the western region. Groundwater Resources Association of California Western Groundwater Congress. September 12–14. Burbank, CA.

Davis, R.J. 2023. Water in Utah: Navigating the present and shaping the future. American Groundwater Trust. August 14–15. Provo, Utah.

Davis, R.J. 2023. More managed aquifer recharge and saving the Great Salt Lake—A balancing act. Idaho Water Users Association. June 12–13. Sun Valley, ID.

Davis, R.J. 2023. More managed aquifer recharge: Deliberate resiliency to combat droughts and climate change in the West. Association for Environmental Health of Soils. March 20–23. San Diego, CA.

Davis, R.J. 2023. Resilient and sustainable remediation. ESG|Climate Resilient & Sustainable Remediation Symposium. Groundwater Resources Association of California Western Groundwater Congress. February 6–7. San Diego, CA.

Davis, R.J. 2022. More managed aquifer recharge: Solutions to combat droughts and climate change in the West. National Ground Water Association Groundwater Summit. December 6–8. Las Vegas, NV.

Davis, R.J. 2022. Saving our aquifers: Climate change and managed aquifer recharge. Salt Lake County Watershed Symposium. November 16–17. Salt Lake City, UT.

Davis, R.J. 2022. More managed aquifer recharge—A solution to combat droughts and climate change in the West. Groundwater Resources Association of California Western Groundwater Congress. September 21–23. Sacramento, CA.

Davis, R.J. 2022. Saving our aquifers—Climate change, sustainability, and managed aquifer recharge. International Water Holdings. August 24–25. Salt Lake City, UT.

Davis, R.J. 2022. More managed aquifer recharge (MMAR) a solution to combat droughts and climate change in the West. Groundwater Protection Council Annual Forum. June 21–23. Salt Lake City, UT.

Davis, R.J. 2022. Aquifer storage and recovery—Hydrogeologic considerations. American Water Resources Association. May 17. Salt Lake City, UT.

Davis, R.J. 2022. Utah hydrology—What you do and don't know about Utah hydrogeology. National Ground Water Association. May 4, 2022. Virtual.

Davis, R.J. and B. Lemon. 2022. Provo, Utah: From planning to pilot to a final aquifer storage and recovery (ASR) program. Utah Water Users Workshop. March 21–23. St. George, UT.

Davis, R.J. 2021. Provo, Utah, from planning to pilot to a final managed aquifer recharge (MAR) program. National Ground Water Association Groundwater Summit. December 7–8. Virtual.

Davis, R.J. 2021. Provo City aquifer storage and recovery project. Ground Water Protection Council Annual Forum, September 27–29. Virtual.

Davis, R.J. 2021. Provo, Utah, from planning to pilot to a final managed aquifer recharge (MAR) program. American Public Works Association Utah Section Annual Conference. September 21–22. Sandy, UT.

Davis, R.J. 2021. Provo City aquifer storage and recovery project. Utah Water Users Workshop. May 17–19. St. George, UT.

Davis, R.J. 2021. Provo, Utah: From planning to pilot to a final managed aquifer recharge (MAR) program. ASR for Texas, Virtual Webinar. May 4–5.

Davis, R.J. 2021. Provo aquifer storage and recovery—From planning to pilot. American Water Works Association Virtual Summit on Sustainable Water, PFAS, Waterborne Pathogens. February 10–11.

Davis, R.J. 2020. Update on Provo's aquifer storage and recovery program. American Water Works Association Virtual Intermountain Section Annual Conference. October 21–23. Sun Valley, ID.

Davis, R.J. 2020. Are you prepared for the new federal permit process for CCR facilities? Second Annual Coal Ash and Combustion Residual Management Webinar, October 7–8. Virtual.

INVITED PARTICIPANT, EXPERT PANELS, AND WORKSHOPS

Avoiding the Pitfalls in Engaging Expert Consultants, Holland & Hart, March 18, 2024, Salt Lake City, UT.

Managed Aquifer Recharge Guidance, Interstate Technology & Regulatory Council, Managed Aquifer Recharge Team. December 2023.

Bulk Water Innovation Partnership (BWIP): More managed aquifer recharge: Deliberate resiliency to combat droughts and climate change in the West. December 6, 2023. Virtual.

Rocky Mountain Association of Environmental Professionals (RMAEP): Great Salt Lake of Utah: watershed, legislative, and community issues surrounding it. September 20, 2023.

Salt Lake Chamber: Utah Water Outlook. April 13, 2022.

EDCUtah Webinar: Water: Constraints and Opportunities for Development in Utah panel. June 11, 2021.

ULI Utah: Trends Conference—Water: Constraints and Opportunities for Development in Utah panel. October 27, 2021.

CURRICULUM VITAE

ERIC C. MILLER, M.S.

Principal Earth Scientist
Water Resources & Environmental Scientist

Groundwater Hydrology | Water Rights | Conjunctive Management | Groundwater Modeling

Yellowstone Earth Science
2202 W 8200 S
Rexburg, Idaho 83440
208-816-2881 | eric.miller@yellowstoneearthscience.com

PROFESSIONAL SUMMARY

Water-resources and environmental scientist with more than 35 years of professional experience in groundwater hydrology, numerical groundwater modeling, water-resource evaluation, environmental science, regulatory compliance, and quantitative technical analysis. Experience includes the Eastern Snake Plain Aquifer and other groundwater systems, groundwater/surface-water interaction, aquifer response, and development, application, and interpretation of numerical groundwater models.

Recent professional practice has focused substantially on Idaho water rights and conjunctive management of hydraulically connected groundwater and surface-water resources. Currently serves as Lead Hydrologist for senior surface-water users in the Wood River Valley since 2018 and as a member of the Technical Working Group (TWG) associated with the Big Wood River Ground Water Management Area Management Plan. Has prepared expert reports and provided expert testimony in Idaho Department of Water Resources proceedings involving groundwater/surface-water interaction, water rights, groundwater curtailment, and mitigation.

AREAS OF TECHNICAL EXPERTISE

- Idaho groundwater and surface-water-right evaluation
- Groundwater/surface-water interaction
- Technical evaluation of conjunctive water-right administration
- Groundwater management and mitigation plans
- Groundwater curtailment, conservation, and mitigation

- Agricultural consumptive use, crop-water requirements, and irrigation efficiency
- Eastern Snake Plain Aquifer hydrology
- Numerical groundwater-flow modeling
- Groundwater response and delayed hydrologic effects
- Groundwater-flow and contaminant-transport modeling
- Hydrogeologic investigations
- Wastewater reuse permitting and land-application systems
- Environmental permitting and regulatory compliance

EDUCATION

Ph.D. Coursework (ABD), Applied Earth Science — University of Montana

M.S., Waste Management & Environmental Science — Idaho State University, 1999

B.A., Chemistry — Idaho State University, 1990

PROFESSIONAL EXPERIENCE

Yellowstone Earth Science | 2020–Present

Owner/Principal Earth Scientist

Provides water-resource, hydrogeologic, environmental, and regulatory consulting services, with substantial recent emphasis on Idaho groundwater and surface-water resources, water rights, conjunctive management, groundwater/surface-water interaction, groundwater management and mitigation plans, curtailment, consumptive-use analysis, and wastewater reuse permitting.

Serves as Lead Hydrologist for senior surface-water users in the Wood River Valley in matters involving groundwater management and conjunctive administration. Serves as a member of the Technical Working Group (TWG) associated with implementation of the Big Wood River Ground Water Management Area Management Plan, participating in technical evaluation of groundwater-management strategies, hydrologic conditions, consumptive-use reductions, groundwater/surface-water interaction, and related water-resource issues.

Has extensive experience preparing and supporting Idaho DEQ wastewater reuse permits for agricultural food-processing facilities, including potato fresh-pack and processing operations. Technical evaluations associated with these facilities include calculation of crop-water requirements, consumptive use, irrigation efficiencies, hydraulic loading, wastewater application rates, nutrient loading, and potential effects of land application on underlying groundwater.

Representative water-resource experience includes evaluation of Idaho groundwater and surface-water rights; groundwater pumping effects on hydraulically connected surface-water resources; consumptive-use reductions; delayed hydrologic effects of groundwater pumping, curtailment, and conservation; groundwater management and mitigation plans; and IDWR technical methodologies, administrative orders, water-right records, and supporting hydrologic analyses.

GeoEngineers LLC, Seattle, Washington | 2013–2020

Senior Hydrogeologist / Lead Numerical Groundwater Modeler

Served as a senior hydrogeologist and lead numerical groundwater modeler on groundwater, hydrogeologic, contaminant fate-and-transport, and environmental projects. Responsibilities included development, application, and interpretation of numerical groundwater-flow and contaminant-transport models and technical evaluation of complex groundwater systems.

Equus International Environmental | 2008–2013

Owner/Senior Scientist

Provided general environmental consulting services involving groundwater, wastewater, environmental permitting, environmental site assessment, and related environmental and regulatory matters.

Idaho National Laboratory and Predecessor Contractors | 1989–2008

Project Management & Senior Engineer/Scientist

Served in technical-lead, Principal Investigator, project-management, and engineering roles involving groundwater and vadose-zone investigations, groundwater modeling, contaminant fate and transport, environmental restoration, risk assessment, waste management, and regulatory compliance.

Selected experience included management of a project to develop a two-dimensional transient groundwater-flow simulation of the Snake River Plain Aquifer; groundwater and contaminant-transport modeling; management of the Hydrogeologic Data Repository; and technical leadership of multidisciplinary scientific and environmental investigations.

SELECTED GROUNDWATER MODELING & HYDROGEOLOGIC EXPERIENCE

Eastern Snake Plain Aquifer. Managed a groundwater-flow modeling project to develop a two-dimensional transient simulation of groundwater flow in the Snake River Plain Aquifer for potential use in contaminant fate-and-transport modeling. Performed MODFLOW and MT3D modeling to evaluate potential effects of wastewater land application on the Snake River Plain Aquifer.

Numerical Groundwater Modeling. Served as Lead Numerical Groundwater Modeler at GeoEngineers and performed groundwater-flow and contaminant fate-and-transport modeling using MODFLOW, SEAWAT, and MT3D. Additional modeling experience includes application of PHREEQC for aqueous geochemistry and TOUGH2 for contaminant mass-transport analysis.

Hydrogeologic Investigations. Conducted groundwater and vadose-zone investigations involving groundwater-flow direction and gradients, aquifer response, groundwater/surface-water interaction, contaminant migration, and environmental remediation.

RELEVANT EXPERT REPORTS AND TESTIMONY

Expert Reports

2025 — In the Matter of the Mitigation and Curtailment Plan of Jerry D. Bingham, Idaho Department of Water Resources, Docket No. CM-MP-2025-003. *Hydrologic Evaluation of the Adequacy and Proportionality of the 1-in-7 Curtailment Strategy in the August 19, 2025 Mitigation and Curtailment Plan (CM-MP-2025-003).* Expert Report, December 9, 2025.

2025 — Idaho Department of Water Resources v. Jerry D. Bingham and Valerie H. Bingham, Seventh Judicial District Court, Bingham County, Case No. CV06-25-1465. *Preliminary Estimate of Stream Replenishment from Curtailing Bingham Wells.* Expert Report/Affidavit, September 3, 2025.

2023 — In the Matter of the Big Wood River Ground Water Management Area and Consolidated Applications for Permit for the Diversion and Use of Surface and Ground Water Within the Snake River Basin, Idaho Department of Water Resources. *Response to "Big Wood Moratorium Silver Creek Impacts From Pumping."* Expert Report, August 9, 2023.

2021 — In the Matter of Basin 37 (Wood River Basin), Idaho Department of Water Resources, Docket No. AA-WRA-2021-001. *Impacts to Senior Surface Water Rights in the Little Wood-Silver Creek Drainage: Affects from Junior-Priority Ground Water Pumping in* *the Wood River Valley South of Bellevue, Idaho and Potential Benefits of Curtailment in the 2021 Irrigation Season.* Expert Report, June 1, 2021.

Expert Testimony

2021 — In the Matter of Basin 37 (Wood River Basin), Idaho Department of Water Resources, Docket No. AA-WRA-2021-001.

Served as sole expert witness for senior surface-water-right holders concerning effects of junior groundwater pumping in the Wood River Valley south of Bellevue (Bellevue Triangle) on senior surface-water rights in Silver Creek and its tributaries. Evaluated local and regional hydrogeologic conditions, several hundred Idaho water rights, groundwater/surface-water interaction, and potential hydrologic benefits of groundwater curtailment. Provided deposition testimony and expert testimony at the administrative hearing, including direct and cross-examination, June 2021.

Appendix B—ET Idaho Data Sheets

questions on water rights and F | ETRAN Tool in Idaho | ET-IDWR -- Evapotranspiration

et-idwr.idaho.gov/stcvrstats.py?station=2181&cover=2&stats=Deficit

IDAHO DEPARTMENT OF
WATER RESOURCES

ET-IDWR

Eva

Taber (AM/INL -- TABI)

Statistics based on thirty year normal spans 1997 to 2024 years

For a different land cover or crop click on the above link.

You can highlight this table and copy via the clipboard to a Mircosoft Excel or OpenOffice spreadsheet to plot or otherwise work with this data.

Alfalfa - frequent cuttings
Precipitation Deficit (Click here for a graph)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Growing Season[a]
Mean[j]	mm/day												
Monthly[c]	-0.19	0.01	0.15	0.52	3.78	6.00	7.03	6.35	3.86	1.59	-0.06	-0.26	893.8
15-Day Moving Average[d]	-0.21	0.00	0.20	0.41	3.79	6.13	7.45	6.73	3.77	1.67	-0.05	-0.25	
7-Day Moving Average[e]	-0.21	0.00	0.19	0.45	3.75	6.02	7.23	6.56	3.80	1.60	-0.06	-0.25	
3-Day Moving Average[f]	-0.19	0.01	0.17	0.48	3.76	6.00	7.08	6.42	3.84	1.57	-0.06	-0.25	
Standard Deviation[k]	mm/day												
Monthly[c]	0.28	0.33	0.22	0.75	1.48	1.26	0.85	1.15	1.00	0.78	0.30	0.30	104.3
15-Day Moving Average[d]	0.35	0.37	0.24	0.67	1.64	1.50	0.98	1.35	1.34	0.96	0.34	0.35	
7-Day Moving Average[e]	0.34	0.36	0.17	0.69	1.55	1.34	0.87	1.31	1.18	0.87	0.32	0.32	
3-Day Moving Average[f]	0.30	0.34	0.18	0.73	1.50	1.27	0.86	1.22	1.07	0.82	0.30	0.30	
90% Exceedance[l]	mm/day												

Docusign Envelope ID: DD139328-95D7-8DBC-8378-6AC00A21C707

questions on water rights and F × | ETRAN Tool in Idaho × | ET-IDWR -- Evapotranspiration × +

et-idwr.idaho.gov/stcvrstats.py?station=2181&cover=30&stats=Deficit

IDAHO DEPARTMENT OF WATER RESOURCES

ET-IDWR

Eva

Taber (AM/INL -- TABI)

Statistics based on thirty year normal spans 1997 to 2024 years

For a different land cover or crop click on the above link.

You can highlight this table and copy via the clipboard to a Mircosoft Excel or OpenOffice spreadsheet to plot or otherwise work with this data.

Potatoes - (late harvest)
Precipitation Deficit (Click here for a graph)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Growing Season[a]
Mean[j]	mm/day												
Monthly[c]	-0.11	0.08	0.16	0.05	0.39	2.88	6.92	6.42	3.15	0.13	-0.12	-0.23	608.2
15-Day Moving Average[d]	-0.14	0.07	0.21	0.05	0.33	2.82	7.01	6.44	3.13	0.13	-0.11	-0.21	
7-Day Moving Average[e]	-0.13	0.07	0.21	0.05	0.34	2.81	6.98	6.42	3.15	0.11	-0.12	-0.22	
3-Day Moving Average[f]	-0.11	0.08	0.18	0.05	0.37	2.84	6.93	6.42	3.17	0.11	-0.12	-0.22	
Standard Deviation[k]	mm/day												
Monthly[c]	0.18	0.22	0.23	0.18	0.25	1.14	1.02	1.08	1.19	0.30	0.19	0.25	72.6
15-Day Moving Average[d]	0.26	0.27	0.24	0.12	0.37	1.33	0.94	1.13	1.39	0.26	0.21	0.26	
7-Day Moving Average[e]	0.22	0.25	0.18	0.14	0.31	1.25	0.95	1.14	1.32	0.25	0.21	0.25	
3-Day Moving Average[f]	0.20	0.23	0.18	0.16	0.27	1.17	1.03	1.12	1.26	0.28	0.19	0.24	
90% Exceedance[l]	mm/day												

Inbox (80) - eric.miller@yellows | Expert Report Outline IDWR | ET-IDWR -- Evapotranspiration

et-idwr.idaho.gov/stcvrstats.py?station=2181&cover=11&stats=Deficit

IDAHO DEPARTMENT OF WATER RESOURCES

ET-IDWR

Taber (AM/INL -- TABI)

Statistics based on thirty year normal spans 1997 to 2024 years

For a different land cover or crop click on the above link.
You can highlight this table and copy via the clipboard to a Mircosoft Excel or OpenOffice spreadsheet to plot or otherwise work with this data.

Spring Grain - Irrigated
Precipitation Deficit (Click here for a graph)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Growing Season[a]
Mean[j]	mm/day												
Monthly[c]	-0.20	-0.04	0.09	0.42	1.91	6.50	8.77	3.02	-0.12	-0.17	-0.18	-0.32	62
15-Day Moving Average[d]	-0.21	-0.04	0.13	0.40	1.86	6.49	8.85	2.73	-0.17	-0.11	-0.15	-0.30	
7-Day Moving Average[e]	-0.21	-0.03	0.13	0.40	1.84	6.50	8.81	2.85	-0.13	-0.16	-0.17	-0.30	
3-Day Moving Average[f]	-0.21	-0.03	0.11	0.41	1.86	6.51	8.76	2.95	-0.12	-0.18	-0.17	-0.30	
Standard Deviation[k]	mm/day												
Monthly[c]	0.23	0.30	0.26	0.30	1.02	1.78	1.11	1.78	0.28	0.26	0.23	0.33	7
15-Day Moving Average[d]	0.26	0.31	0.24	0.25	1.14	2.04	1.04	2.19	0.44	0.19	0.21	0.38	
7-Day Moving Average[e]	0.24	0.29	0.20	0.25	1.09	1.92	1.05	2.02	0.34	0.23	0.23	0.34	
3-Day Moving Average[f]	0.23	0.29	0.22	0.28	1.04	1.83	1.13	1.87	0.31	0.26	0.22	0.32	
20% Exceedance[l]	mm/day												
Monthly[c]	-0.02	0.17	0.33	0.65	2.71	8.24	9.54	4.67	0.06	-0.01	0.00	-0.06	68
15-Day Moving Average[d]	0.01	0.15	0.32	0.61	2.83	8.47	9.72	4.80	0.06	0.02	0.03	-0.04	
7-Day Moving Average[e]	0.00	0.16	0.31	0.59	2.69	8.32	9.62	4.66	0.06	0.02	0.01	-0.06	
3-Day Moving Average[f]	-0.03	0.16	0.33	0.61	2.67	8.24	9.49	4.66	0.06	-0.02	0.01	-0.05	
80% Exceedance[m]	mm/day												
Monthly[c]	-0.33	-0.21	-0.06	0.22	0.88	5.12	8.41	1.31	-0.27	-0.27	-0.36	-0.56	58

Attachment C

Scenario A - Curtailment Order Remains

TRIMESTER	Consumptive Use (AF)		Nr Blackfoot to Neeley Depletions (AF)	Neeley to Minidoka Depletions (AF)	Total Nr Blackfoot to Minidoka Depletions (AF)
SPR 1952	792		139.74	0.33	140.07
SUM 1952	1672		382.71	1.20	383.91
WIN 1952			242.87	1.57	244.44
SPR 1953	792		302.81	1.90	304.72
SUM 1953	1672		500.91	2.61	503.52
WIN 1953			333.24	2.79	336.04
SPR 1954	792		374.51	2.94	377.45
SUM 1954	1672		559.30	3.50	562.80
WIN 1954			381.74	3.55	385.29
SPR 1955	792		415.39	3.60	419.00
SUM 1955	1672		594.19	4.08	598.27
WIN 1955			411.80	4.07	415.87
SPR 1956	792		441.51	4.06	445.58
SUM 1956	1672		617.04	4.49	621.53
WIN 1956			431.92	4.45	436.36
SPR 1957	792		459.31	4.41	463.72
SUM 1957	1672		632.87	4.82	637.68
WIN 1957			446.05	4.75	450.80
SPR 1958	792		471.98	4.70	476.68
SUM 1958	1672		644.26	5.09	649.35
WIN 1958			456.34	5.01	461.34
SPR 1959	792		481.31	4.94	486.25
SUM 1959	1672		652.74	5.32	658.06
WIN 1959			464.07	5.23	469.30
SPR 1960	792		488.38	5.15	493.53
SUM 1960	1672		659.23	5.52	664.75
WIN 1960			470.04	5.42	475.46
SPR 1961	792		493.88	5.34	499.22
SUM 1961	1672		664.32	5.70	670.02
WIN 1961			474.76	5.60	480.36
SPR 1962	792		498.27	5.51	503.78
SUM 1962	1672		668.41	5.87	674.28
WIN 1962			478.58	5.76	484.34
SPR 1963	792		501.85	5.67	507.51
SUM 1963	1672		671.76	6.02	677.79
WIN 1963			481.73	5.91	487.64
SPR 1964	792		504.82	5.81	510.63
SUM 1964	1672		674.57	6.16	680.73
WIN 1964			484.39	6.04	490.43
SPR 1965	792		507.33	5.94	513.28
SUM 1965	1672		676.96	6.29	683.25
WIN 1965			486.65	6.17	492.82
SPR 1966	792		509.49	6.07	515.56
SUM 1966	1672		679.01	6.41	685.42
WIN 1966			488.62	6.29	494.90
SPR 1967	792		511.37	6.18	517.54
SUM 1967	1672		680.81	6.52	687.33
WIN 1967			490.33	6.39	496.73
SPR 1968	792		513.01	6.29	519.30
SUM 1968	1672		682.38	6.62	689.01
WIN 1968			491.85	6.50	498.34
SPR 1969	792		514.47	6.38	520.85
SUM 1969	1672		683.78	6.72	690.50
WIN 1969			493.19	6.59	499.78
SPR 1970	792		515.76	6.48	522.24
SUM 1970	1672		685.03	6.81	691.84
WIN 1970			494.40	6.68	501.08
SPR 1971	792		516.92	6.56	523.49
SUM 1971	1672		686.15	6.89	693.05
WIN 1971			495.48	6.76	502.24
SPR 1972	792		517.97	6.64	524.61
SUM 1972	1672		687.16	6.97	694.14
WIN 1972			496.46	6.84	503.29
SPR 1973	792		518.92	6.72	525.63
SUM 1973	1672		688.08	7.05	695.12
WIN 1973			497.34	6.91	504.25
SPR 1974	792		519.77	6.79	526.56
SUM 1974	1672		688.91	7.11	696.02
WIN 1974			498.15	6.97	505.12
SPR 1975	792		520.55	6.85	527.40
SUM 1975	1672		689.66	7.18	696.84

WIN 1975			498.88	7.04	505.92
SPR 1976	792		521.26	6.91	528.17
SUM 1976	1672		690.35	7.24	697.59
WIN 1976			499.55	7.09	506.64
SPR 1977	792		521.91	6.97	528.88
SUM 1977	1672		690.98	7.29	698.27
WIN 1977			500.16	7.15	507.31
SPR 1978	792		522.50	7.02	529.52
SUM 1978	1672		691.56	7.34	698.90
WIN 1978			500.72	7.20	507.91
SPR 1979	792		523.04	7.07	530.12
SUM 1979	1672		692.08	7.39	699.48
WIN 1979			501.23	7.25	508.47
SPR 1980	792		523.54	7.12	530.66
SUM 1980	1672		692.57	7.44	700.00
WIN 1980			501.70	7.29	508.99
SPR 1981	792		524.00	7.16	531.16
SUM 1981	1672		693.01	7.48	700.49
WIN 1981			502.13	7.33	509.46
SPR 1982	792		524.42	7.20	531.62
SUM 1982	1672		693.42	7.52	700.94
WIN 1982			502.53	7.37	509.90
SPR 1983	792		524.81	7.24	532.04
SUM 1983	1672		693.80	7.56	701.35
WIN 1983			502.89	7.41	510.30
SPR 1984	792		525.16	7.27	532.44
SUM 1984	1672		694.14	7.59	701.73
WIN 1984			503.23	7.44	510.67
SPR 1985	792		525.49	7.31	532.80
SUM 1985	1672		694.46	7.62	702.09
WIN 1985			503.54	7.47	511.01
SPR 1986	792		525.79	7.34	533.13
SUM 1986	1672		694.76	7.65	702.41
WIN 1986			503.83	7.50	511.33
SPR 1987	792		526.08	7.37	533.44
SUM 1987	1672		695.03	7.68	702.71
WIN 1987			504.10	7.53	511.63
SPR 1988	792		526.33	7.39	533.73
SUM 1988	1672		695.29	7.71	702.99
WIN 1988			504.34	7.55	511.90
SPR 1989	792		526.58	7.42	533.99
SUM 1989	1672		695.52	7.73	703.25
WIN 1989			504.57	7.58	512.15
SPR 1990	792		526.80	7.44	534.24
SUM 1990	1672		695.74	7.75	703.49
WIN 1990			504.78	7.60	512.38
SPR 1991	792		527.00	7.46	534.47
SUM 1991	1672		695.94	7.77	703.71
WIN 1991			504.98	7.62	512.60
SPR 1992	792		527.20	7.48	534.68
SUM 1992	1672		696.12	7.79	703.92
WIN 1992			505.16	7.64	512.80
SPR 1993	792		527.37	7.50	534.88
SUM 1993	1672		696.30	7.81	704.11
WIN 1993			505.33	7.66	512.99
SPR 1994	792		527.54	7.52	535.06
SUM 1994	1672		696.46	7.83	704.29
WIN 1994			505.49	7.67	513.16
SPR 1995	792		527.69	7.54	535.23
SUM 1995	1672		696.61	7.85	704.46
WIN 1995			505.64	7.69	513.33
SPR 1996	792		527.83	7.55	535.39
SUM 1996	1672		696.75	7.86	704.61
WIN 1996			505.77	7.71	513.48
SPR 1997	792		527.97	7.57	535.54
SUM 1997	1672		696.88	7.88	704.76
WIN 1997			505.90	7.72	513.62
SPR 1998	792		528.09	7.58	535.67
SUM 1998	1672		697.00	7.89	704.89
WIN 1998			506.02	7.73	513.75
SPR 1999	792		528.21	7.59	535.80
SUM 1999	1672		697.11	7.90	705.02

WIN 1999			506.13	7.74	513.87
SPR 2000	792		528.32	7.61	535.92
SUM 2000	1672		697.22	7.91	705.13
WIN 2000			506.23	7.76	513.99
SPR 2001	792		528.42	7.62	536.03
SUM 2001	1672		697.32	7.93	705.24
WIN 2001			506.33	7.77	514.10
SPR 2002	792		528.51	7.63	536.14
SUM 2002	1672		697.41	7.94	705.35
WIN 2002			506.42	7.78	514.20
SPR 2003	792		528.60	7.64	536.24
SUM 2003	1672		697.50	7.95	705.44
WIN 2003			506.50	7.79	514.29
SPR 2004	792		528.68	7.65	536.33
SUM 2004	1672		697.58	7.95	705.53
WIN 2004			506.58	7.80	514.38
SPR 2005	792		528.76	7.66	536.41
SUM 2005	1672		697.65	7.96	705.62
WIN 2005			506.66	7.80	514.46
SPR 2006	792		528.83	7.66	536.50
SUM 2006	1672		697.72	7.97	705.70
WIN 2006			506.73	7.81	514.54
SPR 2007	792		528.90	7.67	536.57
SUM 2007	1672		697.79	7.98	705.77
WIN 2007			506.79	7.82	514.61
SPR 2008	792		528.96	7.68	536.64
SUM 2008	1672		697.85	7.99	705.84
WIN 2008			506.85	7.83	514.68
SPR 2009	792		529.02	7.69	536.71
SUM 2009	1672		697.91	7.99	705.90
WIN 2009			506.91	7.83	514.74
SPR 2010	792		529.08	7.69	536.77
SUM 2010	1672		697.97	8.00	705.97
WIN 2010			506.96	7.84	514.80
SPR 2011	792		529.13	7.70	536.83
SUM 2011	1672		698.02	8.00	706.02
WIN 2011			507.01	7.84	514.86
SPR 2012	792		529.18	7.70	536.89
SUM 2012	1672		698.07	8.01	706.08
WIN 2012			507.06	7.85	514.91
SPR 2013	792		529.23	7.71	536.94
SUM 2013	1672		698.11	8.01	706.13
WIN 2013			507.11	7.85	514.96
SPR 2014	792		529.27	7.71	536.99
SUM 2014	1672		698.16	8.02	706.18
WIN 2014			507.15	7.86	515.01
SPR 2015	792		529.32	7.72	537.03
SUM 2015	1672		698.20	8.02	706.22
WIN 2015			507.19	7.86	515.05
SPR 2016	792		529.36	7.72	537.08
SUM 2016	1672		698.24	8.03	706.27
WIN 2016			507.23	7.87	515.10
SPR 2017	792		529.39	7.73	537.12
SUM 2017	1672		698.27	8.03	706.31
WIN 2017			507.26	7.87	515.14
SPR 2018	792		529.43	7.73	537.16
SUM 2018	1672		698.31	8.04	706.35
WIN 2018			507.30	7.88	515.17
SPR 2019	792		529.46	7.73	537.20
SUM 2019	1672		698.34	8.04	706.38
WIN 2019			507.33	7.88	515.21
SPR 2020	792		529.49	7.74	537.23
SUM 2020	1672		698.37	8.04	706.42
WIN 2020			507.36	7.88	515.24
SPR 2021	792		529.52	7.74	537.26
SUM 2021	1672		698.40	8.05	706.45
WIN 2021			507.39	7.89	515.28
SPR 2022	792		529.55	7.74	537.30
SUM 2022	1672		698.43	8.05	706.48
WIN 2022			507.42	7.89	515.31
SPR 2023	792		529.58	7.75	537.33
SUM 2023	1672		698.46	8.05	706.51

Scenario A - Curtailment Order Remains

WIN 2023			507.44	7.89	515.34
SPR 2024	792		529.60	7.75	537.35
SUM 2024	1672		698.48	8.06	706.54
WIN 2024			507.47	7.89	515.36
SPR 2025	792		529.63	7.75	537.38
SUM 2025	546		499.83	7.59	507.42
WIN 2025			382.81	7.19	389.99
SPR 2026	0		307.85	6.69	314.54
SUM 2026	0		257.22	6.19	263.40

Attachment D

TRIMESTER	Consumptive Use (AF)		Nr Blackfoot to Neeley Depletions (AF)	Neeley to Minidoka Depletions (AF)	Total Nr Blackfoot to Minidoka Depletions (AF)
SPR 1952	792		139.74	0.33	140.07
SUM 1952	1672		382.71	1.20	383.91
WIN 1952			242.87	1.57	244.44
SPR 1953	792		302.81	1.90	304.72
SUM 1953	1672		500.91	2.61	503.52
WIN 1953			333.24	2.79	336.04
SPR 1954	792		374.51	2.94	377.45
SUM 1954	1672		559.30	3.50	562.80
WIN 1954			381.74	3.55	385.29
SPR 1955	792		415.39	3.60	419.00
SUM 1955	1672		594.19	4.08	598.27
WIN 1955			411.80	4.07	415.87
SPR 1956	792		441.51	4.06	445.58
SUM 1956	1672		617.04	4.49	621.53
WIN 1956			431.92	4.45	436.36
SPR 1957	792		459.31	4.41	463.72
SUM 1957	1672		632.87	4.82	637.68
WIN 1957			446.05	4.75	450.80
SPR 1958	792		471.98	4.70	476.68
SUM 1958	1672		644.26	5.09	649.35
WIN 1958			456.34	5.01	461.34
SPR 1959	792		481.31	4.94	486.25
SUM 1959	1672		652.74	5.32	658.06
WIN 1959			464.07	5.23	469.30
SPR 1960	792		488.38	5.15	493.53
SUM 1960	1672		659.23	5.52	664.75
WIN 1960			470.04	5.42	475.46
SPR 1961	792		493.88	5.34	499.22
SUM 1961	1672		664.32	5.70	670.02
WIN 1961			474.76	5.60	480.36
SPR 1962	792		498.27	5.51	503.78
SUM 1962	1672		668.41	5.87	674.28
WIN 1962			478.58	5.76	484.34
SPR 1963	792		501.85	5.67	507.51
SUM 1963	1672		671.76	6.02	677.79
WIN 1963			481.73	5.91	487.64
SPR 1964	792		504.82	5.81	510.63
SUM 1964	1672		674.57	6.16	680.73
WIN 1964			484.39	6.04	490.43
SPR 1965	792		507.33	5.94	513.28
SUM 1965	1672		676.96	6.29	683.25
WIN 1965			486.65	6.17	492.82
SPR 1966	792		509.49	6.07	515.56
SUM 1966	1672		679.01	6.41	685.42
WIN 1966			488.62	6.29	494.90
SPR 1967	792		511.37	6.18	517.54
SUM 1967	1672		680.81	6.52	687.33
WIN 1967			490.33	6.39	496.73
SPR 1968	792		513.01	6.29	519.30
SUM 1968	1672		682.38	6.62	689.01
WIN 1968			491.85	6.50	498.34
SPR 1969	792		514.47	6.38	520.85
SUM 1969	1672		683.78	6.72	690.50
WIN 1969			493.19	6.59	499.78
SPR 1970	792		515.76	6.48	522.24
SUM 1970	1672		685.03	6.81	691.84
WIN 1970			494.40	6.68	501.08
SPR 1971	792		516.92	6.56	523.49
SUM 1971	1672		686.15	6.89	693.05
WIN 1971			495.48	6.76	502.24
SPR 1972	792		517.97	6.64	524.61
SUM 1972	1672		687.16	6.97	694.14
WIN 1972			496.46	6.84	503.29
SPR 1973	792		518.92	6.72	525.63
SUM 1973	1672		688.08	7.05	695.12
WIN 1973			497.34	6.91	504.25
SPR 1974	792		519.77	6.79	526.56
SUM 1974	1672		688.91	7.11	696.02
WIN 1974			498.15	6.97	505.12
SPR 1975	792		520.55	6.85	527.40
SUM 1975	1672		689.66	7.18	696.84

WIN 1975			498.88	7.04	505.92
SPR 1976	792		521.26	6.91	528.17
SUM 1976	1672		690.35	7.24	697.59
WIN 1976			499.55	7.09	506.64
SPR 1977	792		521.91	6.97	528.88
SUM 1977	1672		690.98	7.29	698.27
WIN 1977			500.16	7.15	507.31
SPR 1978	792		522.50	7.02	529.52
SUM 1978	1672		691.56	7.34	698.90
WIN 1978			500.72	7.20	507.91
SPR 1979	792		523.04	7.07	530.12
SUM 1979	1672		692.08	7.39	699.48
WIN 1979			501.23	7.25	508.47
SPR 1980	792		523.54	7.12	530.66
SUM 1980	1672		692.57	7.44	700.00
WIN 1980			501.70	7.29	508.99
SPR 1981	792		524.00	7.16	531.16
SUM 1981	1672		693.01	7.48	700.49
WIN 1981			502.13	7.33	509.46
SPR 1982	792		524.42	7.20	531.62
SUM 1982	1672		693.42	7.52	700.94
WIN 1982			502.53	7.37	509.90
SPR 1983	792		524.81	7.24	532.04
SUM 1983	1672		693.80	7.56	701.35
WIN 1983			502.89	7.41	510.30
SPR 1984	792		525.16	7.27	532.44
SUM 1984	1672		694.14	7.59	701.73
WIN 1984			503.23	7.44	510.67
SPR 1985	792		525.49	7.31	532.80
SUM 1985	1672		694.46	7.62	702.09
WIN 1985			503.54	7.47	511.01
SPR 1986	792		525.79	7.34	533.13
SUM 1986	1672		694.76	7.65	702.41
WIN 1986			503.83	7.50	511.33
SPR 1987	792		526.08	7.37	533.44
SUM 1987	1672		695.03	7.68	702.71
WIN 1987			504.10	7.53	511.63
SPR 1988	792		526.33	7.39	533.73
SUM 1988	1672		695.29	7.71	702.99
WIN 1988			504.34	7.55	511.90
SPR 1989	792		526.58	7.42	533.99
SUM 1989	1672		695.52	7.73	703.25
WIN 1989			504.57	7.58	512.15
SPR 1990	792		526.80	7.44	534.24
SUM 1990	1672		695.74	7.75	703.49
WIN 1990			504.78	7.60	512.38
SPR 1991	792		527.00	7.46	534.47
SUM 1991	1672		695.94	7.77	703.71
WIN 1991			504.98	7.62	512.60
SPR 1992	792		527.20	7.48	534.68
SUM 1992	1672		696.12	7.79	703.92
WIN 1992			505.16	7.64	512.80
SPR 1993	792		527.37	7.50	534.88
SUM 1993	1672		696.30	7.81	704.11
WIN 1993			505.33	7.66	512.99
SPR 1994	792		527.54	7.52	535.06
SUM 1994	1672		696.46	7.83	704.29
WIN 1994			505.49	7.67	513.16
SPR 1995	792		527.69	7.54	535.23
SUM 1995	1672		696.61	7.85	704.46
WIN 1995			505.64	7.69	513.33
SPR 1996	792		527.83	7.55	535.39
SUM 1996	1672		696.75	7.86	704.61
WIN 1996			505.77	7.71	513.48
SPR 1997	792		527.97	7.57	535.54
SUM 1997	1672		696.88	7.88	704.76
WIN 1997			505.90	7.72	513.62
SPR 1998	792		528.09	7.58	535.67
SUM 1998	1672		697.00	7.89	704.89
WIN 1998			506.02	7.73	513.75
SPR 1999	792		528.21	7.59	535.80
SUM 1999	1672		697.11	7.90	705.02

WIN 1999				506.13	7.74	513.87
SPR 2000	792			528.32	7.61	535.92
SUM 2000	1672			697.22	7.91	705.13
WIN 2000				506.23	7.76	513.99
SPR 2001	792			528.42	7.62	536.03
SUM 2001	1672			697.32	7.93	705.24
WIN 2001				506.33	7.77	514.10
SPR 2002	792			528.51	7.63	536.14
SUM 2002	1672			697.41	7.94	705.35
WIN 2002				506.42	7.78	514.20
SPR 2003	792			528.60	7.64	536.24
SUM 2003	1672			697.50	7.95	705.44
WIN 2003				506.50	7.79	514.29
SPR 2004	792			528.68	7.65	536.33
SUM 2004	1672			697.58	7.95	705.53
WIN 2004				506.58	7.80	514.38
SPR 2005	792			528.76	7.66	536.41
SUM 2005	1672			697.65	7.96	705.62
WIN 2005				506.66	7.80	514.46
SPR 2006	792			528.83	7.66	536.50
SUM 2006	1672			697.72	7.97	705.70
WIN 2006				506.73	7.81	514.54
SPR 2007	792			528.90	7.67	536.57
SUM 2007	1672			697.79	7.98	705.77
WIN 2007				506.79	7.82	514.61
SPR 2008	792			528.96	7.68	536.64
SUM 2008	1672			697.85	7.99	705.84
WIN 2008				506.85	7.83	514.68
SPR 2009	792			529.02	7.69	536.71
SUM 2009	1672			697.91	7.99	705.90
WIN 2009				506.91	7.83	514.74
SPR 2010	792			529.08	7.69	536.77
SUM 2010	1672			697.97	8.00	705.97
WIN 2010				506.96	7.84	514.80
SPR 2011	792			529.13	7.70	536.83
SUM 2011	1672			698.02	8.00	706.02
WIN 2011				507.01	7.84	514.86
SPR 2012	792			529.18	7.70	536.89
SUM 2012	1672			698.07	8.01	706.08
WIN 2012				507.06	7.85	514.91
SPR 2013	792			529.23	7.71	536.94
SUM 2013	1672			698.11	8.01	706.13
WIN 2013				507.11	7.85	514.96
SPR 2014	792			529.27	7.71	536.99
SUM 2014	1672			698.16	8.02	706.18
WIN 2014				507.15	7.86	515.01
SPR 2015	792			529.32	7.72	537.03
SUM 2015	1672			698.20	8.02	706.22
WIN 2015				507.19	7.86	515.05
SPR 2016	792			529.36	7.72	537.08
SUM 2016	1672			698.24	8.03	706.27
WIN 2016				507.23	7.87	515.10
SPR 2017	792			529.39	7.73	537.12
SUM 2017	1672			698.27	8.03	706.31
WIN 2017				507.26	7.87	515.14
SPR 2018	792			529.43	7.73	537.16
SUM 2018	1672			698.31	8.04	706.35
WIN 2018				507.30	7.88	515.17
SPR 2019	792			529.46	7.73	537.20
SUM 2019	1672			698.34	8.04	706.38
WIN 2019				507.33	7.88	515.21
SPR 2020	792			529.49	7.74	537.23
SUM 2020	1672			698.37	8.04	706.42
WIN 2020				507.36	7.88	515.24
SPR 2021	792			529.52	7.74	537.26
SUM 2021	1672			698.40	8.05	706.45
WIN 2021				507.39	7.89	515.28
SPR 2022	792			529.55	7.74	537.30
SUM 2022	1672			698.43	8.05	706.48
WIN 2022				507.42	7.89	515.31
SPR 2023	792			529.58	7.75	537.33
SUM 2023	1672			698.46	8.05	706.51

Scenario B - Curtailment Order Stayed

WIN 2023			507.44	7.89	515.34
SPR 2024	792		529.60	7.75	537.35
SUM 2024	1672		698.48	8.06	706.54
WIN 2024			507.47	7.89	515.36
SPR 2025	792		529.63	7.75	537.38
SUM 2025	546		499.83	7.59	507.42
WIN 2025			382.81	7.19	389.99
SPR 2026	0		307.85	6.69	314.54
SUM 2026	220		296.03	6.28	302.31

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that on this 15th day of September, 2026, I caused a true and correct copy of the foregoing DECLARATION OF R. JEFFREY DAVIS IN SUPPORT OF MOTION TO STAY RESPONDENT'S FINAL ORDER PENDING JUDICIAL REVIEW to be served upon the following individuals by the designated method:

Director of IDWR 322 E. Front Street, Suite 648 Boise, ID 83702 idwrinfo@idwr.idaho.gov	[ ] U.S. Mail, postage prepaid [ ] Hand Delivery [x] iCourt E-File & Serve
John K. Simpson IdaH20, PLLC PO Box 152 Boise, ID 83701-0152 jks@idahowaters.com	[ ] U.S. Mail, postage prepaid [ ] Hand Delivery [x] iCourt E-File & Serve
Travis L. Thompson Abby R. Bitzenburg PARSONS BEHLE & LATIMER PO Box 63 Twin Falls, ID 83303-0063 tthompson@parsonsbehle.com abitzenburg@parsonsbehle.com	[ ] U.S. Mail, postage prepaid [ ] Hand Delivery [x] iCourt E-File & Serve
Norman M. Semanko Garrett M. Kitamura PARSONS BEHLE & LATIMER 800 W. Main Street, Suite 1300 Boise, Idaho 83702 nsemanko@parsonsbehle.com gkitamura@parsonsbehle.com	[ ] U.S. Mail, postage prepaid [ ] Hand Delivery [x] iCourt E-File & Serve
Thomas J. Budge RACINE OLSON PO Box 1391 Pocatello, ID 83204-1391 tj@racineolson.com	[ ] U.S. Mail, postage prepaid [ ] Hand Delivery [x] iCourt E-File & Serve

David W. Gehlert Natural Resources Section U.S. DOJ, Environment and Natural Resources Div. 999 18th St., South Terrace, Suite 370 Denver, CO 80202 david.gehlert@usdoj.gov	[ ] U.S. Mail, postage prepaid [ ] Hand Delivery [x] iCourt E-File & Serve
Matt Howard US Bureau of Reclamation 1150 N Curtis Road Boise, ID 83706-1234 mhoward@usbr.gov	[ ] U.S. Mail, postage prepaid [ ] Hand Delivery [x] iCourt E-File & Serve
Sarah A Klahn Maximilian C. Bricker Somach Simmons & Dunn 1155 Canyon Blvd, Ste. 110 Boulder, CO 80302 sklahn@somachlaw.com mbricker@somachlaw.com	[ ] U.S. Mail, postage prepaid [ ] Hand Delivery [x] iCourt E-File & Serve
Rich Diehl City of Pocatello PO Box 4169 Pocatello, ID 83205 rdiehl@pocatello.us	[ ] U.S. Mail, postage prepaid [ ] Hand Delivery [x] iCourt E-File & Serve
Candice McHugh Chris Bromley MCHUGH BROMLEY, PLLC PO Box 107 Boise, ID 83701 cmchugh@mchughbromley.com cbromley@mchughbromley.com	[ ] U.S. Mail, postage prepaid [ ] Hand Delivery [x] iCourt E-File & Serve
Robert E. Williams WILLIAMS, MESERVY, & LOTHSPEICH, LLP PO Box 168 Jerome, ID 83338 rewilliams@wmlattys.com	[ ] U.S. Mail, postage prepaid [ ] Hand Delivery [x] iCourt E-File & Serve

Robert L. Harris HOLDEN, KIDWELL, HAHN & CRAPO, PLLC PO Box 50130 Idaho Falls, ID 83405 rharris@holdenlegal.com	[ ] U.S. Mail, postage prepaid [ ] Hand Delivery [x] iCourt E-File & Serve
Zachary H. Jones City Attorney, City of Idaho Falls PO Box 50220 Idaho Falls, ID 83405 zjones@idahofalls.gov	[ ] U.S. Mail, postage prepaid [ ] Hand Delivery [x] iCourt E-File & Serve
Skyler C. Johns Nathan M. Olsen Steven L. Taggart OLSEN TAGGART PLLC PO Box 3005 Idaho Falls, ID 83403 sjohns@olsentaggart.com nolsen@olsentaggart.com staggart@olsentaggart.com	[ ] U.S. Mail, postage prepaid [ ] Hand Delivery [x] iCourt E-File & Serve
Dylan Anderson DYLAN ANDERSON LAW PLLC PO Box 35 Rexburg, Idaho 83440 dylan@dylanandersonlaw.com	[ ] U.S. Mail, postage prepaid [ ] Hand Delivery [x] iCourt E-File & Serve

/s/ Reed W. Larsen
Reed W. Larsen