BEFORE THE DEPARTMENT OF WATER RESOURCES

OF THE STATE OF IDAHO

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

Docket No. CM-DC-2010-001

ORDER REVISING APRIL 2023 FORECAST SUPPLY AND AMENDING CURTAILMENT ORDER

(METHODOLOGY STEPS 5 & 6)

The Director of the Idaho Department of Water Resources ("Department") finds, concludes, and orders as follows:

FINDINGS OF FACT

A. Background

1. On July 19, 2023, the Director issued the *Sixth Final Order Regarding Methodology for Determining Material Injury to Reasonable In-Season Demand and Reasonable Carryover* ("Methodology Order"). The Methodology Order established nine steps for determining material injury to members of the Surface Water Coalition ("SWC"). This order applies Steps 5 and 6 to the 2023 irrigation season.

2. On November 30, 2022, the Director issued the *Final Order Establishing 2022 Reasonable Carryover – Methodology Step 9* ("November Carryover Order") establishing a reasonable carryover shortfall of 49,309 AF. The Director ordered junior ground water users holding consumptive ground water rights within the Eastern Snake Plain Aquifer ("ESPA") area of common ground water supply with priority dates junior to May 31, 1989, to mitigate for their proportionate share of the reasonable carryover shortfall or be curtailed. *November Carryover Order* at 6.

3. On April 21, 2023, the Director issued his *Final Order Regarding April 2023 Forecast Supply (Methodology Steps 1 – 3)* ("April Forecast Supply Order"). The April Forecast Supply Order predicted a demand shortfall to the SWC of 75,200 acre-feet for the 2023 irrigation season. *April Forecast Supply Order* at 3. At that time, the only member of the SWC predicted to experience material injury during the 2023 irrigation season was the Twin Falls Canal Company ("TFCC"). The Director ordered that, by May 5, 2023, ground water users with consumptive water rights "junior to December 30, 1953, within the Eastern Snake Plain Aquifer area of common ground water supply shall establish, to the satisfaction of the Director, that they can mitigate for their proportionate share of the predicted [demand shortfall] of 75,200 acre-feet in accordance with an approved mitigation plan" *Id.* at 5. The Director also ordered that, if

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a junior ground water user cannot establish they can mitigate for their proportionate share of the predicted demand shortfall in accordance with an approved mitigation plan, "the Director will issue an order curtailing the junior-priority ground water user." *Id.* However, on May 1, 2023, the Director sent notice to affected water users that a hearing on the April Forecast Supply Order would be held June 6-10, 2023, and the Director would wait until after the hearing to decide whether to issue a curtailment order.

4. Step 5 of the Methodology Order addresses the final injury determination to reasonable carryover for members of the SWC. "If the storage allocations held by members of the SWC fill, there is no reasonable carryover shortfall." *Methodology Order* at 43. On July 13, 2023, the Water District 01 published its 2023 Preliminary Storage Report ("Storage Report").¹ The Storage Report stated that TFCC had 1,088 acre-feet of last to fill (i.e., LTF) that did not fill. TFCC has 1,088 acre-feet of LTF space due to its lease of 1,088 acre-feet to the Supplemental Pool in 2020. Because the LTF storage space did not fill due to a lease by TFCC, TFCC's unfilled LTF space is not considered a reasonable carryover shortfall.

5. Step 6 states:

Approximately halfway through the irrigation season . . . the Director will, for each member of the SWC: (1) recalculate RISD [Reasonable In-Season Demand]; (2) issue a revised FS [Forecast Supply]; and (3) estimate the Time of Need date.

Id. (footnote omitted).

B. April–June Climate

6. The April 2023 Joint Forecast prepared by the United States Army Corps of Engineers and the United States Bureau of Reclamation ("BOR") predicted 3,700,000 acre-feet of natural flow at the Heise gage for the period of April through July 2023. *April Forecast Supply Order* at 2. The Joint Forecast "is generally as accurate a forecast as is possible using current data gathering and forecasting techniques." *Methodology Order* at 19 (citation omitted).

7. Spring precipitation (April–June) was variable. According to Natural Resource Conservation Service SNOTEL sites, the Upper Snake received 96%, 64%, and 179% of average precipitation in April, May, and June, respectively. The National Weather Service's Twin Falls weather station reported 20%, 132%, 79% of normal precipitation in April, May, and June, respectively. Temperatures reported by the Twin Falls weather station were -1.6 degrees below normal for April, 4.1 degrees above normal for May, and -0.6 degrees below normal for June.²

¹ The 2023 Preliminary Storage Report can be viewed on-line at the following link: https://www.waterdistrict1.com/media/5piix3cc/2023-prelim-storage-report.pdf.

² Precipitation and temperature data obtained from the NOAA National Weather Service Preliminary Monthly Climate Data for the Twin Falls 3SE weather station (Twin Falls Airport).

C. Reasonable In-Season Demand

8. RISD "is the projected annual diversion volume for each SWC entity during the year of evaluation that is attributable to the projected beneficial use of growing crops within the service area of the entity." *Methodology Order* at 13. In April, the demand from the 2018 BLY defines the RISD. *Id.* at 17. During the irrigation season, the RISD for the completed portion of the irrigation season is recalculated by dividing the actual crop water need ("CWN") for each entity by the project efficiency for that entity. *Id.* at 17, 43. For the remainder of the irrigation season, the RISD is the demand defined by the July–October 2018 BLY. *Id.* RISD is calculated on a monthly time step.

i. <u>Crop Water Need</u>

9. "CWN is the volume of irrigation water required for crop growth within a SWC entity boundary, such that crop growth is not limited by water availability." *Methodology Order* at 15. CWN is the difference between the fully realized consumptive use associated with crop growth, or [evapotranspiration], and effective precipitation" *Id*.

10. CWN is an input variable for calculating RISD for the completed portion of the irrigation season. *Id.* at 17. Actual RISD for the completed portion of the irrigation season is combined with monthly predicted baseline demands for the remaining months of the irrigation season to calculate a season-total RISD volume. *Id.* at 17-18. In-season demand shortfall is then calculated as the difference between the adjusted FS and the RISD. *Id.* at 23.

11. As calculated from the beginning of the irrigation season (April 1), the SWC's volumetric CWN for the current water year through the month of June is 367,222 acre-feet. This volume is 73% of the April 1–June 30 ten-year average CWN (2013–2022) and 79% of the April 1–June 30 CWN for the 2018 BLY. The following graphs summarize monthly volumetric CWN values:









ii. <u>Extension of BLY</u>

12. The RISD for the remaining portion of the irrigation season (July–October) is the July–October demand for 2018 BLY. The numeric values are shown in the table in Finding of Fact 13 below.

iii. <u>Calculation of RISD</u>

13. As calculated from the beginning of the irrigation season (April 1), the SWC's volumetric RISD for 2023 through the month of June is 991,737 acre-feet. This volume is 72% of the April 1–June 30 ten-year average RISD (2013–2022) and 70% of the April–June demand for the 2018 BLY. The recalculated RISD at this point of the 2023 irrigation season by entity is:

	April–June CWN (AF)	E _p (April - June)	April–June RISD (AF)	July–October Demand for 2018 BLY (AF)	Recalculated RISD (AF)
A&B	8,872	0.46-1.05	15,093	38,528	53,622
AFRD2	41,551	0.22-0.40	129,884	274,485	404,369
BID	31,241	0.31-0.49	78,538	145,546	224,085
Milner	8,578	0.38-0.87	15,353	36,432	51,786
Minidoka	58,753	0.35-0.55	131,152	196,968	328,121
NSCC	86,283	0.23-0.41	278,976	594,099	873,075
TFCC	131,944	0.29-0.51	342,740	653,473	996,214

D. Forecast Supply

14. When determined during the irrigation season, the FS is the sum of the actual natural flow supply from April through June, the predicted natural flow supply from July through

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October, and the actual storage allocations. *Methodology Order* at 43. Actual natural flow diversions for the completed portion of the irrigation season are extracted from the Department's water rights accounting program. The natural flow diversions for the remainder of the irrigation season are estimated by regression analysis. *Id.* at 20–21, 43. Storage allocations are determined by Water District 01 after the Day of Allocation. *Id.* at 43.

i. <u>Sum of Actual Natural Flow Diverted</u>

15. Actual natural flow diverted in April through June for each SWC member is shown in the table contained in Finding of Fact 25 below, within the "Summary of Forecast Supply" section.

ii. <u>Regression Models to Predict Natural Flow (July–October)</u>

16. Natural flow diversions were predicted for the remainder of the irrigation season by regression analysis. The Methodology Order established the following variables as predictor variables in the regression models: natural flow in the Snake River near Heise as reported by the BOR, snow water equivalent ("SWE") data at Two Ocean Plateau SNOTEL site, Spring Creek discharge, and groundwater levels near American Falls Reservoir. *Methodology Order* at 20–21. Unique regression models with unique predictor variable groups are established in the Methodology Order for each SWC member.

17. Either June 15 or July 1 SWE values for the Two Ocean Plateau SNOTEL site are used as input variables in each of the regression models developed in the Methodology Order. Two Ocean Plateau SWE data was selected as a predictor variable in the Methodology Order based upon step-wise statistical analysis carried out in the development of each regression model. The Two Ocean Plateau SWE data is an optimum predictor variable for several reasons including: its elevation (the site is located above 9,000 ft and typically still has snow late in the runoff season (June 15 and July 1); its location (the site is in the headwaters of the Snake River above Jackson Reservoir); and its period of record, which is sufficiently long enough to support model development.

18. On July 1, 2023 the Two Ocean Plateau SNOTEL station reported 0.0 inches of SWE. When the snow water equivalent is zero on July 1, the predicted natural flow supplies for the period July 1–October 31 for A&B, AFRD2, and Milner are zero acre-feet. *Methodology Order* at 20.

19. The input variables used to predict the July–October natural flow volumes for BID, Minidoka, and NSCC in 2023 include: (1) 4.1 inches of the SWE reported by the Two Ocean Plateau SNOTEL site on June 15, 2023; (2) 2,935,356 acre-feet of natural flow runoff at the Snake River near Heise (April–June) as reported by the BOR; and (3) 27.61 feet depth to water at well 5S31E27ABA1 as measured by the Department on March 23,2023.

20. The input variables used to predict the July–October natural flow volumes for TFCC in 2023 include: (1) 4.1 inches of the SWE reported by the Two Ocean Plateau SNOTEL site on June 15, (2) 2,935,356 acre-feet of natural flow runoff at the Snake River near Heise

(April–June) as reported by the BOR, and (3) 76,428 acre-feet total discharge at Spring Creek (January–May) as measured and reported by the United States Geologic Survey for its *Spring Creek at Sheepskin Rd Nr Fort Hall ID* Gage (Gage No. 13075983).

iii. <u>Storage Allocations</u>

21. The preliminary storage allocations identified by Water District 01 in the Storage Report for each of the SWC members are reported in the table in Finding of Fact 23 below.

iv. <u>Adjustments to Total Supply</u>

22. The natural flow and storage water supplies were both adjusted as shown in the table in Finding of Fact 23 below. Adjustments to natural flow include wheeled water to Southwest Irrigation District through BID and Milner, 3,714 acre-feet and 3,011 acre-feet, respectively. The only adjustments to the stored water supply in the table below were for the Minidoka Credit. Water supplied to or from the rental pool was not included in the adjustments.

v. <u>Summary of Forecast Supply</u>

23. The following table contains the individual components of the FS for each of the SWC members:

	Natural	Predicted Natural				
	Flow Discussion	Flow	NT- 41	D. 1.	M::1.1.	
	Diverted	Diversions	Natural	Preliminary	Minidoka	
	4/1 to	7/1 to	Flow	Storage	Credit	
	6/30	10/31	Adjustment	Allocation	Adjustment	FS
	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)
A&B	15,545	0	0	132,888	0	148,436
AFRD2	148,717	0	0	382,422	1,000	532,147
BID	105,323	10,972	(3,714)	220,083	5,130	337,799
Milner	19,449	0	(3,011)	86,922	0	103,362
Minidoka	137,692	15,529	0	336,711	8,370	498,310
NSCC	395,563	83,732	0	834,545	(7,750)	1,306,091
TFCC	426,135	418,779	0	237,918	(6,750)	1,076,089

E. Revised Shortfall Projection

24. In-season demand shortfall ("IDS") is calculated as the difference between RISD and the FS.

25. Based on the above, and as summarized in the table below, the Director predicts no mid-season IDS to the SWC.

	FS RISD		Shortfall
	(AF)	(AF)	(AF)
A&B	148,436	53,622	0
AFRD2	532,147	404,369	0
BID	337,799	224,085	0
Milner	103,362	51,786	0
Minidoka	498,310	328,121	0
NSCC	1,306,091	873,075	0
TFCC	1,076,089	996,214	0
		Total	0

F. Time of Need

26. Step 5 of the Methodology Order requires that the Director estimate the Time of Need if there is water owed to SWC members that is in addition to the reasonable carryover shortfall volume. *Methodology Order* at 43. As stated in Finding of Fact 4, there is no reasonable carryover shortfall. Execution of Step 6 demonstrates there is no mid-season IDS to the SWC for 2023. With no additional water owed to SWC members, there is no need to establish a Time of Need as described in Step 6.

CONCLUSIONS OF LAW

1. Idaho Code § 42-602 authorizes the Director to supervise water distribution within water districts:

The director of the department of water resources shall have direction and control of the distribution of water from all natural water sources within a water district to the canals, ditches, pumps and other facilities diverting therefrom. Distribution of water within water districts created pursuant to section 42-604, Idaho Code, shall be accomplished by watermasters as provided in this chapter and supervised by the director. The director of the department of water resources shall distribute water in water districts in accordance with the prior appropriation doctrine. The provisions of chapter 6, title 42, Idaho Code, shall apply only to distribution of water within a water district.

2. Idaho Code § 42-607 states that the watermaster, under the direction of the Director, shall regulate diversions "when in times of scarcity of water it is necessary so to do in order to supply the prior rights of others in such stream or water supply"

3. Step 5 of the Methodology Order requires that the Director estimate the Time of Need if there is water owed to the SWC members that is in addition to the reasonable carryover shortfall volume. *Methodology Order* at 43. No member of the SWC is owed reasonable

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carryover in 2023 for a reasonable carryover shortfall determined in 2022. Execution of Step 6 of the Methodology Order demonstrates there is no mid-season IDS to the SWC for 2023. With no additional water owed to SWC members, there is no need to establish a Time of Need as described in Step 6.

ORDER

Based upon and consistent with the foregoing, IT IS HEREBY ORDERED that there is no mid-season in-season demand shortfall to the SWC members.

Dated this 19th day of July 2023.

Dackman

Director

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that on this 19th day of July 2023, the above and foregoing, was served by the method indicated below, and addressed to the following:

John K. Simpson MARTEN LAW LLP P.O. Box 2139 Boise, ID 83701-2139 jsimpson@martenlaw.com		U.S. Mail, postage prepaid Email
Travis L. Thompson MARTEN LAW LLP P.O. Box 63 Twin Falls, ID 83303-0063 <u>tthompson@martenlaw.com</u> jnielsen@martenlaw.com		U.S. Mail, postage prepaid Email
W. Kent Fletcher FLETCHER LAW OFFICE P.O. Box 248 Burley, ID 83318 wkf@pmt.org		U.S. Mail, postage prepaid Email
Thomas J. Budge Elisheva M. Patterson RACINE OLSON P.O. Box 1391 Pocatello, ID 83204-1391 <u>tj@racineolson.com</u> <u>elisheva@racineolson.com</u>		U.S. Mail, postage prepaid Email
David W. Gehlert Natural Resources Section Environment and Natural Resources Division U.S. Department of Justice 999 18th St., South Terrace, Suite 370 Denver, CO 80202 <u>david.gehlert@usdoj.gov</u>		U.S. Mail, postage prepaid Email
Matt Howard US Bureau of Reclamation 1150 N Curtis Road Boise, ID 83706-1234 <u>mhoward@usbr.gov</u>		U.S. Mail, postage prepaid Email
Sarah A Klahn Maximilian C. Bricker Somach Simmons & Dunn 1155 Canyon Blvd, Ste. 110 Boulder, CO 80302 <u>sklahn@somachlaw.com</u> <u>mbricker@somachlaw.com</u> <u>dthompson@somachlaw.com</u>	\boxtimes	U.S. Mail, postage prepaid Email

Rich Diehl City of Pocatello P.O. Box 4169 Pocatello, ID 83205 rdiehl@pocatello.us		U.S. Mail, postage prepaid Email
Candice McHugh Chris Bromley MCHUGH BROMLEY, PLLC 380 South 4th Street, Suite 103 Boise, ID 83702 <u>cbromley@mchughbromley.com</u> <u>cmchugh@mchughbromley.com</u>		U.S. Mail, postage prepaid Email
Robert E. Williams WILLIAMS, MESERVY, & LOTHSPEICH, LLP P.O. Box 168 Jerome, ID 83338 <u>rewilliams@wmlattys.com</u>		U.S. Mail, postage prepaid Email
Robert L. Harris HOLDEN, KIDWELL, HAHN & CRAPO, PLLC P.O. Box 50130 Idaho Falls, ID 83405 <u>rharris@holdenlegal.com</u>	X	U.S. Mail, postage prepaid Email
Randall D. Fife City Attorney, City of Idaho Falls P.O. Box 50220 Idaho Falls, ID 83405 <u>rfife@idahofallsidaho.gov</u>		U.S. Mail, postage prepaid Email
Skyler C. Johns Nathan M. Olsen Steven L. Taggart OLSEN TAGGART PLLC P.O. Box 3005 Idaho Falls, ID 83403 <u>sjohns@olsentaggart.com</u> <u>nolsen@olsentaggart.com</u> <u>staggart@olsentaggart.com</u>		U.S. Mail, postage prepaid Email
Dylan Anderson Dylan Anderson Law PLLC P.O. Box 35 Rexburg, Idaho 83440 <u>dylan@dylanandersonlaw.com</u>		U.S. Mail, postage prepaid Email
Tony Olenichak IDWR—Eastern Region 900 N. Skyline Drive, Ste. A Idaho Falls, ID 83402 <u>Tony.Olenichak@idwr.idaho.gov</u>		Email

Corey Skinner IDWR—Southern Region 1341 Fillmore St., Ste. 200 Twin Falls, ID 83301-3033 <u>corey.skinner@idwr.idaho.gov</u>	Email
COURTESY COPY TO: William A. Parsons PARSONS SMITH & STONE P.O. Box 910 Burley, ID 83318 wparsons@pmt.org	Email

And Sarah Tschonl Paralegal

EXPLANATORY INFORMATION TO ACCOMPANY A FINAL ORDER

(To be used in connection with actions when a hearing was **not** held)

(Required by Rule of Procedure 740.02)

<u>The accompanying order is a "Final Order" issued by the department pursuant to section</u> <u>67-5246, Idaho Code.</u>

PETITION FOR RECONSIDERATION

Any party may file a petition for reconsideration of a final order within fourteen (14) days of the service date of this order as shown on the certificate of service. Note: The petition must be <u>received</u> by the Department within this fourteen (14) day period. The department will act on a petition for reconsideration within twenty-one (21) days of its receipt, or the petition will be considered denied by operation of law. See section 67-5246(4), Idaho Code.

REQUEST FOR HEARING

Unless the right to a hearing before the director or the water resource board is otherwise provided by statute, any person who is aggrieved by the action of the director, and who has not previously been afforded an opportunity for a hearing on the matter shall be entitled to a hearing before the director to contest the action. The person shall file with the director, within fifteen (15) days after receipt of written notice of the action issued by the director, or receipt of actual notice, a written petition stating the grounds for contesting the action by the director and requesting a hearing. See section 42-1701A(3), Idaho Code. Note: The request must be received by the Department within this fifteen (15) day period.

APPEAL OF FINAL ORDER TO DISTRICT COURT

Pursuant to sections 67-5270 and 67-5272, Idaho Code, any party aggrieved by a final order or orders previously issued in a matter before the department may appeal the final order and all previously issued orders in the matter to district court by filing a petition in the district court of the county in which:

- i. A hearing was held,
- ii. The final agency action was taken,
- iii. The party seeking review of the order resides, or
- iv. The real property or personal property that was the subject of the agency action is located.

The appeal must be filed within twenty-eight (28) days of: a) the service date of the final order, b) the service date of an order denying petition for reconsideration, or c) the failure within twenty-one (21) days to grant or deny a petition for reconsideration, whichever is later. See section 67-5273, Idaho Code. The filing of an appeal to district court does not in itself stay the effectiveness or enforcement of the order under appeal.