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DEPARTMENT OF
WATER RESOURCES

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BEFORE THE DEPARTMENT OF WATER RESOURCES

OF THE STATE OF IDAHO

IN THE MATTER OF DISTRIBUTION OF WATER TO VARIOUS WATER RIGHTS HELD BY OR FOR THE BENEFIT OF A&B IRRIGATION DISTRICT, AMERICAN FALLS RESERVOIR DISTRICT #2, BURLEY IRRIGATION DISTRICT, MILNER IRRIGATION DISTRICT, MINIDOKA IRRIGATION DISTRICT, NORTH SIDE CANAL COMPANY, AND TWIN FALLS CANAL COMPANY	**Docket No. CM-DC-2010-001** **CITY OF POCATELLO, CITY OF IDAHO FALLS, AND COALITION OF CITIES' CLOSING BRIEF**

The City of Pocatello, City of Idaho Falls, and Coalition of Cities[1] ("Cities"), by and through their undersigned counsel, hereby submit their *Closing Brief* in the above captioned matter. The Cities' *Closing Brief* will focus on areas of the *Fifth Amended Final Order Regarding Methodology for Determining Material Injury to Reasonable In-Season Demand and Reasonable Carryover* ("Order"), issued by the Director of the Idaho Department of Water Resources ("IDWR" or "Department") on April 21, 2023, that merit revision based on evidence presented during the June 6-9 hearing.

[1] The Coalition of Cities is composed of the Cities of Bliss, Burley, Carey, Declo, Dietrich, Gooding, Hazelton, Heyburn, Jerome, Paul, Richfield, Rupert, Shoshone, and Wendell.

Introduction

At the close of the hearing, the Director made the following comment, in the context of providing some guidance on topics to be covered in the closing briefs:

> And then I think -- associated with that, I think there's also a question about burdens of proof. In other words, in the conjunctive -- and I don't know the answer to this, necessarily, but under the conjunctive management rules, who bears the burden of establishing, by clear and convincing evidence, what those adjustments should be? Is it the Department's burden? Is it the senior burden? Or is it the junior burden?

Vol. IV Tr. at 203:14-22. This *Closing Brief* focuses on modifications to the *Order* that the Cities believe the Department should make based on "clear and convincing" evidence; it also takes issue with the Department's imposition of transient modeling.[2] As for who bears the burden: the Department bears the initial burden of determining the basis for administration. If the Department proposes to administer water rights in a manner that is at variance with the senior's decree, it must on its own determine what is "clear and convincing." On issues such as irrigated acres and project efficiency, the Department has taken the easy road—it has used acreage values provided by the Surface Water Coalition ("SWC") members themselves and refrained from analyzing the reasonableness of SWC members' project efficiencies, which would require revisiting the 2008 determinations of Justice Schroeder.

In a hearing such as this, where the juniors are challenging the bases of the *Order*, the juniors bear the burden of showing by "clear and convincing" evidence that the Department/SWC values are incorrect. This is supported by a prior decision of Judge Wildman:

> [I]f the junior users believe for some reason that the seniors will receive water they cannot beneficially use, it is their burden under the established evidentiary

[2] The Director's remarks at the close of the fourth day of hearing also seemed to reflect the sentiment expressed by Judge Wildman at the June 1 arguments related to IWGA and the Cities' complaints for judicial review and requests for extraordinary writs: it is difficult to understand why the Department couldn't have taken a more measured approach on any shift in modeling for purposes of curtailment, for example, to hold a hearing on this topic during the winter months.

> standards . . . to prove that fact by clear and convincing evidence. For example, the juniors may assert that the Director in their opinion is considering some, but not *all* acres that are no longer irrigated by the seniors.

Memorandum Decision and Order on Petitions for Judicial Review (Case No. CV-2010-382, filed Sept. 26, 2014) at 31. In acknowledging this standard, however, it bears noting that "clear and convincing" evidence is not an impossible bar to breach—notwithstanding the attitude of the SWC and apparent viewpoint of the Department—but it is simply a higher standard than preponderance. For example, there was testimony at the hearing from Department staff and the SWC's expert that Twin Falls Canal Company's ("TFCC") 2013 irrigated acreage data contains "hardened" acres. It is hard to know how admissions against interest like these could be anything *but* clear and convincing evidence.

A further point is that if the juniors bear this burden—and the Cities acknowledge that they do to the extent they are challenging a determination in the Department's *Order*—they need time to prepare for a hearing. Flippant suggestions that the parties have been sitting around preparing for a hearing for the last period of months are no substitute for due process; nor is the dismissal of a request for extraordinary relief by the District Court (which should not be read as anything other than what it was).

Finally, the Cities urge the Department to stay true to its word that it has an "ongoing obligation to use the best available science and information." Ex. 300 at 2. Because the Department has chosen to, *inter alia*, accept irrigated acreage data from SWC members without any scrutiny, omit 2022 data in the *Order*, and refrain from analyzing the reasonableness of SWC member's project efficiencies, the Cities feel strongly that the Department has fallen short of meeting this obligation. Accordingly, the Cities request that the Department revise the *Order* as described below.

I. The Department Must Correct the SWC's Irrigated Acreage Amounts Because they are Erroneous and Overstate the SWC's CWN.

The Department must revise the *Order* to incorporate irrigated acreage data that accurately reflects SWC-member irrigation. During trial, Mr. Anders, the Department's lead on technical revisions from the *Fourth Methodology Order* to the *Fifth Methodology Order*, testified that the *Order's* quantification of TFCC's irrigated acres (194,732 acres) includes "hardened acres," which cannot be irrigated, as well as partially irrigated acres; he also admitted that the *Order's* quantification of A&B Irrigation District's irrigated acres includes A&B's 1994 enlargement/water spreading acres. Mr. Anders also testified that IDWR has not looked for enlargement/water spreading acres within other SWC boundaries.

Moreover, accurate acreage values are available in the form of IDWR irrigated land datasets, developed by the Department for, *inter alia,* calibration of the ESPAM. *See* Testimony of Mr. Anders. The Director accepted into evidence the SWC's Expert Report, Exhibit 4, which identifies three different Department-prepared data sets—IDWR 2011 Delineation, IDWR 2017 Delineation, and an acreage dataset associated with NRT METRIC.[3] The Department's irrigated acreage datasets demonstrate that TFCC has been irrigating between 179,000 and 181,000 acres in recent history. Ex. 4 at 3. Mr. Sullivan's testimony established that the Department's irrigated acreage datasets more accurately depict the amount of acres that the Twin Falls Canal Company ("TFCC"), Burley Irrigation District, and Minidoka Irrigation District irrigate than the acreage values used in the *Order* on p. 10 at paragraph 22. The Cities' Expert Report demonstrates that using more accurate irrigated acreage data could reduce TFCC's reasonable in-season demand ("RISD") by a magnitude of 96,000 acre-feet. Ex. 347A at 18-19. Thus, for those SWC

[3]NRT METRIC stands for "near real time" METRIC, and refers to a method of determining crop consumptive use under evaluation by the Department in "near real time."

members who irrigate less acres than the amounts in the 2013 shapefile or their decreed acreage amounts, paragraph 22 of the *Order* should be revised so that the irrigated acreage amounts match those used in the Department's 2017 data set.

The Idaho Supreme Court has stated that "the Director 'has the duty and authority' to consider circumstances when the water user is not irrigating the full number of acres decreed under the water right." *A&B Irrigation v. Spackman (In re A&B Irrigation Dist.),* 155 Idaho 640, 652 (2013) (quoting *Am. Falls Reservoir Dist. No. 2 v. Idaho Dep't of Water Res.* ("*AFRD#2*"), 143 Idaho 862, 876 (2007)). The Department's use of the acreage values in paragraph 22 of the *Order* (which erroneously includes non-irrigated acres and junior acres) in determining the SWC's crop water need ("CWN") results in CWN values that are significantly overstated.[4] Further, use of this inaccurate irrigated acreage data for Methodology administration results in the Department determining shortages associated with acres that the SWC members cannot beneficially irrigate, which is contrary to law. *See, e.g., A&B Irrigation*, 155 Idaho at 652; IDAPA 37.03.11.020.03.

II. The Department's Reliance on Historical Average Project Efficiencies is Flawed and Overstates the SWC's RISD.

The Department's use of historical average project efficiencies to calculate RISD under Steps 6-9 is flawed because it fails to consider whether SWC members' operations are reasonably efficient. While Justice Schroeder concluded at the end of the 2008 hearing in this matter that SWC members were operating reasonably efficiently, the Department has not made (and does not make) evaluations of SWC system efficiencies as part of the Methodology Order since.[5] Even

[4] Further, the use of accurate irrigated acreage data demonstrates that key Methodology assumptions (e.g., that TFCC's operations are reasonably efficient) based on the 2008 hearing in this matter are no longer true.
[5] The Cities were prepared to conduct the same type of operational evaluations that were performed prior to the 2008 hearing to develop evidence to test the Department's assumption that operations that were efficient in 2008 are still

the SWC's expert, Dr. Brockway, agreed that the reasonableness of an appropriator's irrigation operations is based on "current industry standards or current state of the art." Vol. IV Tr. at 130:2-16. As Mr. Sullivan testified, "current industry standards or current state of the art" have changed in the past 15 years because of continued sprinkler conversions and advances in irrigation technology and management. Thus, project efficiencies that may have been reasonable in the past may be unreasonable now or in the future as conditions change; and since the SWC delivery call is an ongoing proceeding, with the requirement to use the best available science, it is correct to periodically review efficiencies to ensure they are reasonable and result in reasonable computed diversion demands.

The *Order*, on pp. 13-14, enumerates the monthly "project efficiencies" for each SWC member in paragraph 32. The methods used to determine project efficiencies (or "E_p") in the *Order* assume a linear relationship between diversions and CWN, in other words, that diversions (or RISD) linearly rise and fall with changes in CWN. However, as Mr. Sullivan showed in his Expert Report (*see* section 3.2 and Figures 3-4 through 3-11), the reality is different—in fact, in many months there is a weak correlation between SWC diversions and changes in CWN. In other words, some SWC members seemingly divert water based more on availability rather than CWN, often resulting in diversions in excess of what is reasonably necessary to meet crop demand. This simplifies SWC irrigation operations because it minimizes the need for active water management, and in the absence of a delivery call (or a year in which the Director predicts an adequate water supply), the Cities have no objection to this type of operation.

efficient; this is one of several areas of inquiry that the Cities were not able to pursue due to the inadequate time for discovery in this matter. *See* Testimony of Greg Sullivan; *see also* Exhibit 347A at 3, 12.

However, in years in which the Director predicts a shortage and orders curtailment, the Department should not calculate SWC members' RISD by dividing CWN by average historical project efficiencies. This approach effectively locks in historical diversions as the measure of RISD and relies on what is, at best, circular logic: CWN/historical diversions are used to compute E_p and CWN/E_p is used to compute diversion demand (or RISD). As Dr. Brockway testified, "diversions are a given," without any consideration for whether the diversions are reasonable, efficient, and not wasteful. *See* Vol IV Tr. at 51:1-15. Dr. Brockway testified that if TFCC reduced its system losses (e.g., operational spills) it could also reduce its diversions by a magnitude of 200,000 acre-feet to raise its average project efficiency from 0.35 to 0.42. *Id.* at 131:2-25. The notion that SWC member diversions are locked in stone and can never again be re-evaluated is absurd and counter to case law and the Conjunctive Management Rules ("CMR").

The flaws in the Department's approach to project efficiency are further reinforced by Figures 3-12 through 3-19, Exhibit 347A, and Mr. Sullivan's testimony on the same. Figures 3-12 through 3-19 show that project efficiencies vary with CWN. As a result, the Department's reliance on historical average monthly project efficiencies to calculate RISD (in Steps 6-9) results in overstated RISD amounts that are not supported by actual diversions.

As reflected in Exhibit 347A, and the testimony of Mr. Sullivan at the hearing, the Cities suggest the Department jettison the efficiency values in paragraph 32 and rely on project efficiencies that reflect reasonably efficient operations consistent with industry standards. Short of that, the Cities suggest the following refinements to project efficiencies to reasonably reflect the historical relationships between CWN and E_p and ensure that the E_p generally reflect above average efficiencies that the SWC members have demonstrated they routinely achieve.

The Cities suggest that the Department derive project efficiency values depending on the R^2 relationship between E_p and CWN[6]:

- When the R^2 relationship between E_p and CWN is greater than 0.50, use the regression equations found in Figures 3-13 through 3-19 for the months from April-September (but no lower than the historical average monthly efficiencies);
- When the R^2 relationship between E_p and CWN is less than 0.50, use the 75th percentile of efficiency as shown in the graphs.

III. The Department Must Revert to Steady-State Modeling Because the Curtailment of Water Rights via Transient Modeling is not Justified and is Contrary to Law.

In the *Order*, the Department, for the first time, decided to switch from using steady-state modeling to using transient modeling to determine the priority date of water rights that must be curtailed to produce the demand shortfall. The timing of the change is curious, and is not due to ESPAM improvements: Jennifer Sukow and Dave Colvin both testified that the Department has had transient modeling at its disposal since the model's inception and that refinements made in 2013 allow for a finer time-step. Without any basis, the Department's mantra has been that curtailment based on transient modeling is required to ensure the seniors are provided with water "at the time and place required," apparently based on the standards for a *mitigation plan* under CMR 43. There is no appellate or statutory law that authorizes the Department to view curtailment in the same manner as a request by a junior for a mitigation plan.

Furthermore, curtailment based on transient modeling is inconsistent with Idaho law because of the vast disparity between acres curtailed to water that shows up in the stream. The Idaho Supreme Court has stated "the policy of securing the maximum use and benefit, and least

[6] For convenience, **Exhibit A** (attached) illustrates the monthly project efficiencies (or the equations to calculate project efficiencies) for each SWC member if the Department adopted the Cities' suggested method.

wasteful use of Idaho's water resources, has long been the policy in Idaho." *Rangen, Inc. v. Idaho Dep't of Water Res.*, 160 Idaho 119, 131 (2016) (citing *Clear Springs Foods, Inc. v. Spackman*, 150 Idaho 790, 808 (2011)). The Court acknowledged that this policy "limits the prior appropriation doctrine by excluding from its purview water that is not being put to beneficial use." *Id*. (citing *AFRD#2*, 143 Idaho at 876). The Court further tied the policy of maximum use to an acceptable "limit on the prior appropriation doctrine," found in CMR 20.03, that "[a]n appropriator is not entitled to command the entirety of large volumes of water in a surface or ground water source to support his appropriation contrary to the public policy of reasonable use of water." *Id.* (quoting IDAPA 37.03.11.020.03 (CMR 20.03)). The Court has held that the Director has broad discretion in implementing the CMR, which honor the state policy of reasonable use of both surface and ground water. *See id.* at 130.

> The policy of reasonable use includes the concepts of priority in time and superiority in right being subject to conditions of reasonable use as the legislature may by law prescribe as provided in Article XV, Section 5, Idaho Constitution, optimum development of water resources in the public interest prescribed in Article XV, Section 7, Idaho Constitution, and full economic development as defined by Idaho law. . . .

Rangen, 160 Idaho at 131 (quoting CMR 20.03).

In the conjunctive administration of groundwater and surface water, the Court has recognized that "not all of the water collected due to the curtailment will accrue to the senior water right holder; some will remain in the aquifer and some will flow to other tributary springs." *Id.* at 132. Accordingly, the Court said:

> This complexity can make it very difficult to balance a senior right holder's interest in receiving additional water against the State's interest in securing the maximum use and benefit, and least wasteful use, of its water resources. In light of this challenging balancing requirement, *it is necessary that the Director have some discretion to determine in a delivery call proceeding whether there is a point where curtailment is unjustified because vast amounts of land would be curtailed to produce a very small amount of water to the caller*.

Id. at 132 (emphasis added). Idaho law therefore authorizes the Director to rely on CMR 20.03 and Article XV, section 7, of the Idaho Constitution as a basis to limit curtailment. In *Rangen*, this policy authorized the Director to impose a trim line. *Id.* at 134. Here, the policy authorizes, if not requires, the Department to determine the priority date of water rights that must be curtailed by using steady-state modeling because curtailment under transient modeling unjustifiably increases the amount of curtailed acres tenfold and moves the priority date more senior by roughly 30-35 years. *See* Ex. 318 at 13.

Setting aside whether facts or conditions warrant the Department's switch in its modeling approach *this year*, the use of transient modeling in this delivery call in general offends the principles set forth in Idaho Code § 42-101, and the rationale and principles set forth by the Idaho Supreme Court in *Rangen* and *Clear Springs Foods*, because:

1) The disparity between the number of acres curtailed using transient modeling in 2023 (roughly 700,000), *see* Ex. 322 at 13, the amount of water that junior groundwater users would be precluded from diverting (estimated to be between 1.75 million acre-feet ("maf") and 2.0 maf) due to the curtailment, and the amount of water that would accrue to TFCC this year (75,200 acre-feet ("af")), renders curtailment past the "point where [it] is unjustified," *Rangen*, 160 Idaho at 132;
2) As discussed in the testimony of Greg Sullivan, Jennifer Sukow, and Dave Colvin, it is the past and present pumping by groundwater rights junior to approximately 1987 that has caused Snake River flows to decline by 75,200 af this year, so, consistent with the prior appropriation doctrine, only those junior right holders who are causing the shortage should face curtailment, *see* Ex. 347A at 25-26;

3) The maximum amount of water that curtailment using transient modeling could *ever* accrue to the near Blackfoot to Minidoka reach of the Snake River in the first year of curtailment is 97,700 AF, *see* Ex. 322 at 15. To achieve 97,700 AF of water, *all* ground water rights would need to be curtailed. In a dry year such as 2022, where there was a predicted shortage of 162,000 AF, transient modeling would be ineffective at fully reducing shortages calculated to SWC members. This further illustrates the limitations of curtailment and transient modeling as effective elements in administration of the SWC delivery call.

The Department's use of transient modeling disregards its duty to balance the State's interests in securing the maximum use and benefit of its water resources against the interests of the senior users; instead, it shifts conjunctive administration to a shut-and-fasten strict priority system that defies the Department's statutory mandate to "equally guard all the various interests involved" to the use of water. Idaho Code § 42-101.

Further, curtailment under transient modeling could result in certain water users being curtailed, or being forced to supply mitigation water, when those users are not injuring the SWC's members whatsoever. In *Rangen*, the SWC "argue[d] that the prior appropriation doctrine requires administration of all rights contributing to the material injury . . . ." 160 Idaho at 130. Here, testimony from Jennifer Sukow, Dave Colvin, and Greg Sullivan demonstrates that using steady-state modeling better reflect reality in the ESPA, as the aquifer has reached a state of quasi-equilibrium and it is those groundwater users with priority dates junior to the mid-1980s that are causing the SWC's shortfall in 2023. *See, e.g.*, Ex. 347A at 25-26. It is inequitable, if not unconstitutional, to redress an injury by penalizing water users who did not cause the injury.

Accordingly, the Department must not curtail water users who are not actually contributing to the SWC's demand shortfall.

Finally, the Department should revert to using steady-state modeling because use of the transient model would not adequately redress the SWC's material injury—the maximum amount of water that could accrue to TFCC in 2023 through curtailment is 97,700 af. *See* Ex. 318 at 13, 15. Had 2023 been a dry year, the demand shortfall could have far exceeded this amount, meaning that curtailment of *all* pumping on the ESPA would still not be enough. Curtailing so much pumping would be unjustified and contrary to Idaho law. This validates the testimony of Greg Sullivan, who opined that curtailment of groundwater users (in lieu of requiring these users to supply mitigation water) is an inferior and inefficient way to conjunctively administer surface and groundwater rights.

In sum, the Department must revise the *Order* to reinstate the use of steady-state modeling to determine "a priority date for curtailment if mitigation obligations are not satisfied." If not, curtailment using transient modeling will be unjustified (based on the disparity between acres curtailed and water accrued), and will unduly prejudice users who did not cause the SWC's injury.

Respectfully submitted this 16th day of June, 2023.

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CERTIFICATE OF SERVICE

I HEREBY CERTIFY that on this 16th day of June 2023, I caused to be filed and served a true and correct copy of the foregoing document via electronic mail to the following:

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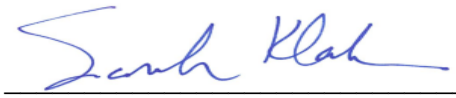

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Exhibit A

Monthly Project Efficiencies for SWC Members

Month	A&B	AFRD2	BID	Milner
April	1.19	0.38	0.54	1.04
May	0.49	PE = 1.01E-05*CWN + 0.059 (min = 0.26)	PE = 1.39E-05*CWN + 0.130 (min = 0.38)	PE = 5.88E-05*CWN + 0.180 (min = 0.47)
June	0.72	0.42	PE = 1.11E-05*CWN + 0.205 (min = 0.55)	0.66
July	PE = 4.15E-05*CWN + 0.286 (min = 0.77)	PE = 9.51E-06*CWN + 0.052 (min = 0.47)	0.56	0.72
August	PE = 4.60E-05*CWN + 0.260 (min = 0.61)	0.42	PE = 1.50E-05*CWN + 0.136 (min = 0.48)	0.58
September	PE = 9.97E-05*CWN + 0.126 (min = 0.50)	PE = 1.22E-05*CWN + 0.045 (min = 0.30)	PE = 2.57E-05*CWN + 0.078 (min = 0.36)	0.52
October	Use Sept. PE	Use Sept. PE	Use Sept. PE	Use Sept. PE

Month	Minidoka	NSCC	TFCC
April	0.53	0.27	0.34
May	PE = 1.10E-05*CWN + 0.113 (min = 0.40)	PE = 4.58E-06*CWN + 0.062 (min = 0.27)	PE = 3.92E-06*CWN + 0.093 (min = 0.32)
June	0.58	PE = 3.39E-06*CWN + 0.146 (min = 0.43)	PE = 3.34E-06*CWN + 0.183 (min = 0.53)
July	PE = 9.61E-06*CWN + 0.158 (min = 0.69)	PE = 3.52E-06*CWN + 0.120 (min = 0.50)	PE = 4.01E-06*CWN + 0.091 (min = 0.60)
August	PE = 1.45E-05*CWN + 0.033 (min = 0.59)	PE = 4.61E-06*CWN + 0.047 (min = 0.45)	PE = 3.76E-06*CWN + 0.117 (min = 0.49)
September	PE = 2.05E-05*CWN + 0.055 (min = 0.45)	PE = 7.33E-06*CWN - 0.013 (min = 0.35)	PE = 5.99E-06*CWN + 0.020 (min = 0.30)
October	Use Sept. PE	Use Sept. PE	Use Sept. PE

Notes:

(1) PE values based on analysis of historical data from the last 15 years (2007-2021).

(2) For months in which the R-squared value for the historical PE vs CWN relationship is greater than 0.5, compute the monthly PE using the historical regression equation based on the monthly CWN, but no lower than the historical average PE shown.

(3) For months in which the R-squared value for the historical PE vs CWN relationship is less than 0.5, the monthly PE is set at the 75th percentile value from the historical data.