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BEFORE THE DEPARTMENT OF WATER RESOURCES
OF THE STATE OF IDAHO

IN THE MATTER OF THE PETITION FOR DELIVERY CALL OF A&B IRRIGATION DISTRICT FOR THE DELIVERY OF GROUND WATER AND FOR THE CREATION OF A GROUND WATER MANAGEMENT AREA	)	**DOCKET NO. 37-03-11-1** **A&B IRRIGATION DISTRICT'S RESPONSE TO IGWA'S AND CITY OF POCATELLO'S POST-HEARING BRIEFS AND PROPOSED FINDINGS**

COMES NOW, A&B IRRIGATION DISTRICT ("A&B"), by and through its attorneys of record, and hereby submits this *Response to IGWA's and City of Pocatello's Post-Hearing Briefs and Proposed Findings*, each filed in the above-entitled proceeding on January 9, 2009, pursuant to the schedule approved by the Hearing Officer.

INTRODUCTION

IGWA and Pocatello (hereinafter collectively referred to as "Ground Water Users") claim that A&B's senior ground water right 36-2080 is not injured for a variety of reasons. However, each argument fails to recognize the fact that: 1) A&B holds a decreed senior water right that cannot be "re-adjudicated" through administration; 2) declining ground water levels caused by junior pumping have reduced A&B's pumping capacities resulting in water shortages; and 3) A&B is not required to "self-mitigate" for the injuries caused by others.

While the Ground Water Users urge the Hearing Officer to ignore A&B's decreed water right, and the rate of delivery provided for under that right (which can be beneficially used by A&B's landowners), they point to no legal support for their arguments and instead rely upon a misinterpretation of pre-decree information and an insufficient irrigation diversion requirements analysis. As explained below and in A&B's *Post-Hearing Memorandum and Proposed Findings* ("*Post-Hearing Memo*"), the Director erred in his January 29, 2008 *Order*, and the arguments advanced by IGWA and Pocatello do not cure those errors and do not excuse the injury to A&B's senior water right.

In addition to ignoring A&B's decree, and its individual wells or points of diversion, Pocatello even goes so far to advocate a water requirement that will *admittedly* provide insufficient water to A&B's crops during the peak season. Mr. Sullivan's testimony that 0.65 miner's inches per acre was not adequate for potatoes and sugar beets – shallow rooted crops commonly grown On the A&B project – was confirmed by the testimony from A&B's landowners. These landowners testified about their actual water use and the need for an ***increased***, not decreased, rate of delivery during the peak of the irrigation season.

In light of the injuries to A&B's water right and the resulting harm to its landowners' operations, the Director erred in refusing to deliver water to A&B's senior right. With continued ground water declines and a lack of water to meet its landowners' crop demands, the evidence demonstrates material injury to A&B's water right 36-2080 that requires proper administration.

ARGUMENT

I. The Ground Water Users Fail to Recognize A&B's Decreed Water Right, They Subscribe to the Director's Flawed 0.75 Miner's Inch "Maximum" Delivery Rate, and They Seek to Force a Re-Adjudication of the Water Right Contrary to Actual Water Use on the A&B Project.

Refusing to acknowledge A&B's partial decree for water right 36-2080, IGWA and Pocatello assert that A&B is *not* entitled to use its decreed diversion rate (1,100 cfs, i.e. 0.88 miner's inch per acre) based upon their interpretation of pre-decree information. *See IGWA FF* at 36; *Poc. FF* at 6. They instead attempt to collaterally attack the decree and claim that: (1) A&B never diverted 1,100 cfs; and (2) the design for the project was 0.75 miner's inch per acre. *Id.* As A&B has explained in it prior briefing, including its *Post-Hearing Memo*, these arguments are wrong and constitute the very collateral attack on A&B's decreed water right that was expressly prohibited by the Idaho Supreme Court *AFRD #2 v. IDWR*, 143 Idaho 862 (2007).

Although they characterize A&B's decreed diversion rate as an "authorized maximum," IGWA and Pocatello demand that A&B be limited to less than its decreed diversion rate (0.88 miner's inch per acre) by supporting the Director's erroneous determination that 0.75 miner's inch per acre is A&B's "maximum rate of delivery." These flawed arguments are based on an incorrect interpretation of A&B's physical delivery capacities and are not supported by the record and fail to recognize the facts concerning the actual development and operation of the project. They also ignore the fact that A&B seeks to deliver a minimum of 0.75 miner's inch per

acre and that its landowners can beneficially use the rate provided by the decree, 0.88 miner's inch per acre.

Notably, IGWA and Pocatello ignore the historical diversion records that show that the average A&B well produced 0.86 to 0.88 (i.e. 1,080 to 1,098 cfs total) from 1967 to 1970 and the vast majority produced between 0.80 to over 1.0 miner's inch per acre. *See July 19, 2008 Corrected Testimony of John Koreny* at 1, ¶ 12); *A&B Expert Report* at 3-69 (Figure 3-20); *A&B Expert Report* at Appendix A, Annual Report Part I, "Inches Per Acre Available at Well". Contrary to the Ground Water Users' claims, well capacities were sufficient to support A&B's decreed amounts in the late 1960s when the project was first put into full operation and have declined to present day due to lowered ground water levels. *Compare A&B Expert Report* at 3-69 (Figure 3-20) to 3-74 (Figure 3-27).[1]

Furthermore, as demonstrated at hearing, A&B's landowners have a need for and can beneficially use the decreed rate of diversion (0.88 miner's inch per acre) for irrigation of their lands. *See, e.g., Adams Testimony*; **Vol. V**, pp.888-89 (testifying that he could beneficially use more than the 0.75 in the *Order* and up to "1 inch of water"); *Kostka Testimony*; **Vol. V**, pp. 960-61 (testifying that he can beneficially use more than 0.75 inches of water and that when he is limited to 0.75, he is limited on his crops).[2] IGWA and Pocatello compound the fiction that A&B has no right to its decreed diversion rate by asserting that monthly "average" diversions are less than 0.75 miner's inches, that the annual water supply is adequate, and that A&B cannot show that it has ever delivered the decreed quantity of water. *IGWA FF* ¶ 9; *Poc. FF* at 7-8.

[1] For example, in 1970 only 14 wells could not produce 0.75 miner's inches per acre and 69 wells produced between 0.80 and 0.90 miner's inches per acre. Of that amount 43 wells produced more than 0.90 miner's inch per acre. By 2007, well capacity had declined significantly so that 51 wells produced less than 0.75 miner's inches per acre.

[2] This conforms with the per se entitlement under Idaho's water appropriation statute, which authorizes a water right holder to acquire 1 miner's inch per acre for irrigation uses. *See* I.C. 42-202(6). IGWA's witness also testified that he has used 0.9 miner's inch per acre to meet crop demands under his sprinkler irrigated field with his licensed ground water right. *Deeg Testimony*, **Vol. V**, p. 1080, lns. 12-20; **Ex. 240**.

These erroneous statements are based on a flawed review of A&B's pumping records. First, as discussed above, A&B has diverted its decreed amount of water. *See, supra.* Even using the "average" amount it is clear that the Unit B wells were developed near an average capacity of 0.88 miner's inch per acre to meet the peak demands. *See July 19, 2008 Corrected Testimony of John Koreny* at 1, ¶ 12); *A&B Expert Report* at 3-69 (Figure 3-20); *A&B Expert Report* t Appendix A, Annual Report, Part I, "Inches Per Acre Available at Well".

In addition, IGWA and Pocatello wrongly evaluated A&B's annual and monthly pumping records from a total of all the Unit B wells in support of their arguments. A&B does not have daily diversion data at individual well systems until after 1995. The monthly or annual diversion data from prior years used by Pocatello to advance its arguments represents the combined discharge from all well systems and incorrectly assumes that water from one separate well system can be used at another. Also, the use of monthly or average data assumes that water available from earlier or later in the irrigation season when demand is lower can be used instead during the peak of the irrigation season which is not the case. *See Koreny Testimony*, **Vol. XI**, p. 2192, ln. 21 – p. 2193, ln. 16; *Brockway Testimony*, **Vol. XI**, p. 2163, lns. 4-11; *Koreny Direct*, July 16, 2008, p. 9, ¶ 26.

Moreover, the present daily diversion data from 2007 shows that A&B is pumping almost the full rate provided by its water right in wells with the capacity to pump this amount. The 2007 daily diversion data indicates that the well systems with the capacity to pump more than .75 miner's inches per acre did, in fact, pump on average daily basis more than 0.87 miner's inches per acre![3] *See A&B Experts Rebuttal of Greg Sullivan*, at 22 (Table 22), at 25. The Ground

[3] Of course, this maximum well capacity is not pumped at the same time at all well systems because the wells systems are not interconnected and the timing of the irrigation demand at individual well systems varies to meet the

Water Users completely ignore these facts. Therefore, the claim that A&B does not pump its available capacity and that its landowners do not need this amount of water is unpersuasive. Indeed, the daily water use records and crop demands during the irrigation season, particularly during the peak, demonstrate otherwise.

Pocatello also mischaracterizes the record in this case to further its arguments, even going so far as to claim that the Director "settled on a rate of 0.75 miner's inches/acre" and that this was A&B's "claim in the Motion to Proceed". *Pocatello FF 21.b, b.iii.; 44.* First, the language of A&B's *Motion to Proceed* refutes Pocatello's mischaracterization.

> d. That ***the decreed diversion rate under A&B's ground water right is necessary*** to provide a reasonable quantity for the beneficial use of water in the irrigation of lands of A&B. Because of the shortages suffered by junior pumping interference and declining ground water levels, A&B is unable to divert an average of ***0.75 of a miner's inch per acre which is a minimum amount necessary*** to irrigate lands within A&B during the peek periods when irrigation water is most needed.

Ex. 102 at 7 (emphasis added). Contrary to Pocatello's misrepresentation, A&B's motion references the need to divert the "decreed diversion rate" and notes that 0.75 miner's inch per acre is a "minimum" amount that is necessary. Dan Temple testified that the 0.75 miner's inch per acre criteria is a "minimum" amount, and that the A&B landowners have a need for the amount provided by the water right.[4] *Dan Temple Testimony*, **Vol. III**, p. 640, lns. 15-19, p. 641, lns. 3-4.

In addition, nothing in the Director's *Order* suggests that IDWR staff used 0.75 miner's inch per acre as a "design criteria" for purposes of its evaluation. In fact, the historical diversion

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crop demands and farming practices at each individual well system. *Temple Testimony*, **Vol. III**, p. 514, lns. 16-21 & p. 516, lns. 5-11.

[4] Elmer McDaniels, A&B's former manager, and current manager of the Tumalo Irrigation District in Bend, Oregon, confirmed that 0.75 miner's inch per acre, or the "design criteria" term referenced in his 1984 letter, represents a "minimum" amount to him as well. *McDaniels Deposition*, at p. 23, lns. 8-21.

records show otherwise. *See, supra.* Yet, the Director overlooked the actual diversion records – all of which were provided to the Director prior to his issuance of the *Order* – and used 0.75 miner's inch per acre as a "false ceiling" or erroneous "maximum rate of delivery." Sean Vincent admitted that the Department did not consider A&B's pump reports to evaluate historical well capacities on the project:

> Q. [BY MR. THOMPSON] And you didn't go back and look at those annual pump reports to determine what A&B was actually providing at each of those well systems; did you?
>
> A. I did not, as I testified to in my deposition

Vincent Testimony, **Vol. IX**, p. 1841, lns.16-21.[5]

Rather, this decision was based on the Director's misinterpretation of pre-decree documents, not any technical analysis. At hearing, Department staff Sean Vincent and Tim Luke admitted the 0.75 miner's inch rate of delivery set forth in the *Order* was not related to A&B's decreed water right and was based solely upon statements from the 1985 BOR (Bureau of Reclamation) study and his misunderstanding about the capacities of A&B's delivery system:

> Q. [BY MR. THOMPSON] if you could read lines 4 through 6 on that.
>
> A. "Did you review A&B's partial decree for its Water Right 36-2080?" "Answer. I did not."

Vincent Testimony; **Vol. IX**, p. 1835, lns. 10-14.

> Q. But the comparison is not to the water right; is that correct?
>
> A. That's correct.
>
> Q. So you didn't assume anything related to the water right.

[5] Obviously, if Mr. Vincent never reviewed the Unit B well capacity records (which were provided in advance of the date of the *Order*), then he cannot have an informed opinion regarding the actual Unit B well capacities over time. At his deposition Mr. Vincent further testified that he did not review the pumping records and compare those to the actual design and size of the wells. *See Vincent Deposition Tr.*, p. 80, lns. 4-14.

A. No, well other than the acres. I guess.

Id., p. 1844, lns. 12-19.

Q. So looking back at your work on this order, would you agree that the sole basis for your statement about the maximum delivery rate was the 1985 Bureau Hydrology Appendix, and that reference to the letter from the district?

A. That was the only thing that was referenced. . . .

Id., p. 1836, lns. 18-24.

Q. And is it correct that at the time you were working on findings [FF 63-64] for the order that you interpreted the .75 miner's inch maximum rate of delivery as a system constraint, that A&B could not provide more than that amount?

A. I did, and I said that in my deposition.

Id., p. 1843, lns. 12-18.

Q. [BY MR. THOMPSON] And would you agree that this paragraph [FF 63] relies upon that 1985 Bureau of Reclamation report and its reference to a letter – it was Elmer McDaniels at the time, manager of A&B, for this finding?

A. Yes.

Luke Testimony; **Vol. VI**, p. 1264, lns. 8-13.

Q. And isn't it true that you did not compare the water supply referenced in this paragraph [FF 64] to the diversion rate provided by the water right?

A. That's correct. It's not in this particular finding. It doesn't make that comparison.

Id., p. 1265, lns. 14-20.

Accordingly, Pocatello's claim that the Director "settled" on 0.75 miner's inch per acre is misleading and ascribes too much weight to the *Order's* faulty interpretation of other documents, which is admittedly not based upon any technical analysis performed by IDWR staff.

Remarkably, the Director's findings about A&B's physical delivery capacities were made *despite his staff's understanding that A&B could provide more than 0.75 miner's inch per acre.* At hearing, Mr. Luke admitted he was well aware that some wells could provide more than 0.75 miner's inch per acre:

> Q. [BY MR. THOMPSON] Did you recognize that A&B could deliver more than .75 miner's inch per are depending upon the well system?
>
> A. Yeah, I recognize that certain well systems could or were providing more than three-quarters.

Vol. VI, p. 1264, lns. 16-21.

Pocatello relies upon Mr. Vincent's "*hearing-prepared*"[6] review of BOR's planning documents to justify a 0.75 miner's inch "design criteria." However, this review of pre-project documents failed to consider the actual development or the decreed water right that was acquired by the District. Although Mr. Vincent relies upon various planning documents for his personal views on the issue, it's clear he did not evaluate A&B's pumping capacities and water delivery records as reflected by the actual construction and operation of the project. *Vincent Testimony*, **Vol. IX**, p. 1841, lns.16-21. Moreover, it's obvious this view is not shared by the Director who did not even have Mr. Vincent's analysis presented to him prior to the issuance of the January 29, 2008 Order. *Id.*, p. 1842, lns. 22-23 ("I was prepared to talk about this for my testimony today. And I had not had this in my mind at the time the order was written."); p. 1843, lns. 6-9.

[6] When questioned about his so-called analysis of pre-decree documents, Mr. Vincent admitted he did not complete the work for purposes of the Director's *Order*. **Vol. IX**, p. 1843, lns. 6-9. Mr. Vincent further admitted that he has no experience in designing or constructing irrigation wells or developing an irrigation project. *Id.*, p. 1928, ln. 25 – p. 1929, ln. 4. Therefore, Mr. Vincent's interpretation of the A&B project design "delivery rate" is unpersuasive.

Indeed, it is clear that the actual development of the A&B project and the water right that was actually acquired well after the early "planning" stage of the project, was not limited to 0.75 miner's inch per acre. In fact, even assuming BOR only "planned" the project to deliver 0.75 miner's inch per acre, the project was actually "constructed and operated" to provide more than that amount – as is evidenced by the *decreed* water right for 0.88 miner's inch per acre (1,100 cfs).

Regardless of what IDWR believed BOR's "plan" was in the 1950s, IDWR is legally bound to honor the decree which reflects the acquired water use on the project as it was actually developed. *See* I.C. § 42-1420. Any effort to re-create history and force a reduced distribution based upon IDWR's misguided belief as to BOR's "plans" for the project 50 years ago constitutes an impermissible collateral attack on A&B's decreed water right and seeks to force A&B to re-adjudicate its decree. *See AFRD#2, et al. v. IDWR, et al.*, 143 Idaho 862, 877-78 (2007) ("The Rules should not be read as containing a burden shifting provision to make the petitioner re-prove or re-adjudicate the right which he already has")

Since A&B acquired a decreed water right for 0.88 miner's inch per acre, and most of the wells were actually constructed and operated to provide over 0.75 miner's inch per acre after the project was completed, Mr. Vincent's personal interpretation of BOR planning documents is not relevant. *See A&B Expert Report* at 3-69 (Figure 3-20); **Ex. 249** (1968 Annual Pump Report). Likewise, IGWA's and Pocatello's reliance on Mr. Vincent's testimony is without merit.[7] Notably, no testimony or evidence was presented to rebut the fact that Unit B Annual Report well capacity records maintained by BOR and A&B since the project was developed show that

[7] In addition, it does not justify the Director's action to "look behind" the decree and second-guess how the project was actually developed and the fact A&B's landowners have a need to beneficially use the decreed amount.

the wells were constructed with the capacity to deliver the full amount of A&B's senior ground water right.

Therefore, contrary to IGWA's and Pocatello's proposed findings and arguments, the maximum rate of delivery depends upon the individual well being analyzed, and 0.75 miner's inch per acre is not an "across the project" physical constraint or limitation under A&B's decreed water right. Dan Temple, A&B's manager, further explained that the rates of delivery vary between well systems and confirmed that A&B has and does deliver more than 0.75 miner's inch per acre, which is then beneficially used by A&B's landowners. *Temple Testimony*, **Vol. III**, p. 540, lns. 16-24. Any effort, by the Director, IGWA or Pocatello, to try and "cap" A&B's water use at a rate of delivery far below its decreed water right is without legal or factual support and should be rejected.

II. The Director's and Ground Water Users' Irrigation Diversion Requirements Analysis Fails to Recognize the Decreed Diversion Rate, Individual Well Systems, and Peak Requirements Needed by A&B's Landowners.

A. The District Does Not Deliver Water From a Single Distribution System.

Pocatello and IGWA support the Director's use of a "district wide" analysis to evaluate A&B's water use since it assumes all water pumped can be distributed equally to all landowners. This is not surprising, since this type of "average" analysis – which wrongly presumes that A&B can deliver water "equally" to all landowners – masks A&B's material injury. In clinging to this argument, IGWA and Pocatello suggest that A&B should "self-mitigate" for the injuries caused by lowered ground water levels and interference from junior priority pumping by simply drilling more wells or interconnecting well systems across the project. *See IGWA FF* at 7; *Poc. Br.* at 4-5. This argument is legally and factually flawed. Indeed, A&B does not, and cannot, deliver water like a single distribution irrigation project. Furthermore, Idaho law does not require a

senior water right holder to modify its delivery system in order to compensate for injuries caused by junior water rights.[8]

Importantly, the testimony at hearing clarified that A&B pumps water from over 130 separate well systems to deliver water to specific lands served by those systems. *Dan Temple Testimony*, **Vol. III**, p. 467, lns. 3-7, p. 473, ln. 14 – p. 474, ln. 7; p. 475, lns. 2-9. Contrary to statements by IGWA and Pocatello, A&B cannot simply "interconnect" these systems at will, nor is it required to under the law. Dan Temple explained that the few systems that are considered "interconnected" were established that way by BOR during the project's initial development, and even in those cases it is obvious that water pumped from lower elevation wells on a canal cannot supply acres located upstream on the system:

> Q. [BY MR. THOMPSON] Are there any well systems that are connected on the same lateral or canal for distribution?
>
> A. Yes. The District has what we call, under the original construction, they are still there, interconnected systems where there is a connection between wells.
>
> * * *
>
> Q. They are not interconnected in the sense that water from 8A824 can go uphill and serve land elsewhere?
>
> A. No, it can't run back upstream.
>
> Q. These were set up that way by the Bureau when the project was constructed?
>
> A. Constructed by Reclamation, that's correct.

Vol. III, p. 475, lns. 10-16, p. 477 ln. 22 – p. 478, ln. 4 (*see also* pp. 476-77, and explanation of an "interconnected" system provided at **Ex. 238**).

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[8] The prior appropriation doctrine does not require a senior water right holder to completely reconstruct its diversion, distribution, and water application systems to achieve the maximum possible efficiency. This is particularly true in this case where A&B is one of the most efficient, if not the most efficient, irrigation delivery project in the state.

Accordingly, contrary to IGWA's and Pocatello's view, A&B has not "interconnected" the wells on its project and there is no requirement for A&B to create a single distribution project. Moreover, no expert witness in this case studied the proposal or provided any testimony about the feasibility of such a project. Although IGWA speculates that such action is possible, Mr. Temple explained the limitations on A&B's project and even showed that a basic schematic to move only 0.02 cfs (the amount of water for the size of a garden hose) was not practical on a large irrigation project like A&B's.[9] *Dan Temple Testimony*, **Vol. IV**, p. 715, p. 719, lns. 5-18. Accordingly, IGWA's cogitations about what "might" happen are not credible and do not justify forcing a senior water user to modify its delivery system in order to avoid interference from junior water users.

In addition, the Director's and Ground Water Users' analysis of A&B's water use fails to recognize that A&B cannot provide an equal "average" rate of delivery across the project due to varying well production across the project . *Dan Temple Testimony*, **Vol. III**, p. 517-21. Since A&B does not operate its project in the manner the Director and the Ground Water Users suggest, it is improper to mesh all the well systems together and assign a proportionate share of the total water pumped to each landowner for purposes of analyzing how water is actually diverted and used on the project. Such a "district-wide average" or "average annual basis," *see Poc. FF* 47-49, is not justified by the facts in this case.

Pocatello further incorrectly suggests that the Director's water use analysis was confirmed by the landowner testimony. *Poc. FF* 50. Pocatello attempts to minimize the real impacts to A&B's landowners from reduced water supplies and argues that less water merely

[9] IGWA's speculation about moving only 9 gallons per minute (0.02 cfs) a distance of miles is ridiculous and demonstrates a lack of understanding about how water is delivered on irrigation projects. Moreover, no private ground water right holder would go to the effort and expense to install miles of pipeline the size of a garden hose to convey irrigation water for only 1 acre.

means "more work" for the farmer. To the contrary, each of A&B's landowners testified about the costs they have incurred due to reduced water supplies and the fact that reduced deliveries to their farms, particularly during the peak of the irrigation season, is harming their operations or dictating their cropping decisions. *See Eames Testimony*; **Vol. III**, pp. 814-15, 817-21; *Adams Testimony*; **Vol. IV**, pp. 889-894; *Kostka Testimony*; **Vol. IV**, pp. 956-966; *Mohlman Testimony*; **Vol. IV**, pp. 1017-1020.

The water supply and delivery rate is vital to the A&B landowners' operations and any attempt to discount that importance and how they rely upon that water demonstrates a lack of understanding about irrigation and actual farming practices. Since A&B's landowners can beneficially use the amount of water provided by the decree (0.88 miner's inch per acre), Pocatello's contrary arguments and findings on this issue fail.

B. Pocatello's Suggested Rate of Delivery Results in Water Shortage to A&B's Landowners' Crops.

There is really no dispute among the experts that the crop ET in the field for high-water demand crops, such as potatoes, is about 10-11 inches/month or about 0.33 to 0.36 inch/day during July (to meet peak demand); *Petrich Testimony*, **Vol. X**, pp. 1945-46; *Sullivan Corrected Expert Report*, Table 2; *Brockway Testimony*, **Vol. XI**, p. 2292, lns. 14-17; *A&B Expert Report* at 4-47 (Table 4-13). Therefore, the issue is whether enough water can be stored in the soil moisture zone to compensate for a reduction in the irrigation application rates demanded by Pocatello.

As explained by Dr. Brockway at hearing, for shallow rooted crops, such as potatoes, beans, wheat or sugar beets, only 1 to 2 inches of water is available before the soil moisture content drops below the Maximum Allowable Depletion. *Brockway Testimony*, **Vol. XI**, p. 2289, lns. 22-25. He further explained that providing an insufficient delivery rate such that the

soil moisture below the Maximum Allowable Depletion causes stress to the crop and reduces crop yield and quality and if the rate of decline continues and the farmer has a limited capacity and cannot catch up, the soil moisture can decrease to the Permanent Wilting Point, at which the crop stress is permanent and the plant will not recover. *Id.*, pp. 2283-88; *see* also, **Ex. 251.** 2291, lns. 1-17. This shows that with a 0.33 to 0.36 inch/day crop ET demand and with a 1 to 2 inch available soil moisture content above Maximum Allowable Depletion, the soil moisture content will be below Maximum Allowable Depletion within 3 to 6 days, and that is assuming perfect conditions with a completely full soil moisture profile at the start of the maximum demand period in late June. Dr. Brockway explained that the soil moisture profile is used to store that water between irrigation applications and that there isn't any extra soil moisture capacity to store for a long-term supply, as advocated by Mr. Sullivan. *Brockway Testimony*, **Vol. XI,** pp. 2290-2293. In other words, A&B's landowners cannot simply "bank" water early in the year in the soil profile to reduce their crop demands or the need for sufficient delivery rates during the peak of the irrigation season. *See infra.*

Finally, Dr. Brockway testified that allowing soil moisture to fall below the Maximum Allowable Depletion point reduces crop quality and crop yield for shallow-rooted crops. *Id.*, p. 2291, lns. 1-17. This analysis was confirmed by A&B's landowners who testified about their experiences on the ground and the crop yield and stress issues they face during the peak of the irrigation season with reduced water supplies. *See Landowners' Testimony, supra* at 14.

Despite this evidence, Mr. Sullivan, Pocatello's expert witness, suggests that a diversion rate of 0.65 miner's inches per acre (or about 0.26 inches per day) is sufficient to meet all crop demand across the project for the entire irrigation season. *Sullivan Expert Report*, at 11. He assumes that enough water will be stored in the soil to make up for deficiencies in deliveries (i.e.

the 0.33 to 0.36 inches per day actually needed by the crop minus the 0.26 inches per day suggested by Mr. Sullivan). Importantly, Mr. Sullivan, recognized that his suggested irrigation requirement would result in crop stress.[10] Since Mr. Sullivan testified that his assumed rooting depth was 3.4 feet (an average for all crops), shallow rooted crops like beets and potatoes are not accounted for in his irrigation requirements analysis. *Sullivan Testimony*, **Vol. VIII**, p. 1639, lns. 15-17; p. 1640, ln. 14 – p. 1641, ln. 14. In particular, Mr. Sullivan admitted that his analysis did not provide sufficient water for certain crops, notably potatoes:

> Q. [BY MR. SIMPSON] . . . would there be any time under that analysis where potatoes would suffer any stress from the utilization of that soil moisture depletion identified in this report?
>
> A. So this represents a drawing down of 50 percent of the soil moisture, because the only thing we're simulating here is that 50 percent part.
> * * *
>
> Q. Okay. Is there any point during July when the soil moisture is depleted to where the root depth for potatoes is not in the saturated soil? Do I have that right?
>
> A. I don't know if I exactly agree with your question. But there are – if this was only potatoes --
>
> Q. And that's my question. If this was potatoes.
>
> * * *
> Q. -- would there be a point in July where that soil moisture is not sufficient to meet the root depth for potatoes?
>
> A. ***Well, you would probably cause a little bit of stress in the potatoes. But – I think that's what you're trying to ask me.***
>
> Q. ***Well, so your answer is yes, there would be stress induced upon the potatoes under that situation***?
>
> A. ***If you were only putting on .65.***

[10] Mr. Sullivan also used a Maximum Allowable Depletion of only 57% in his analysis, which is much greater than the published guidelines cited in the Appendix in his Rebuttal Report for various crops (Potatoes, 25-50%, Alfalfa 30-55%, Sugar Beets, 30-60%). *See November 11, 2008 Affidavit of John Koreny*, p. 5, Table 1.

* * *

Q. All right. And under that analysis on those lands for which this describes, if those lands were under – the crop was potatoes, those lands would be subjected to stress; correct?

A. ***If you were only putting on .65***

Sullivan Testimony, **Vol. VIII**, p. 1713, lns. 1-8, p. 1714, lns. 12-20, p. 1715, lns. 2-11, 20-24 (emphasis added).

Upon the same line of questioning for sugar beets, Mr. Sullivan further admitted that his recommended diversion rate fell short of what would be required by the crop:

Q. [BY MR. SIMPSON] Okay. And would that analysis be the same if you were – if those lands had sugar beets on them as well?

A. ***Yes.***

Id., p. 1715, ln. 25 – p. 1716, ln. 3.

Mr. Sullivan's testimony shows that his analysis does not provide the amount of water needed to meet certain crop demands on the A&B project. Pocatello's admitted shortage is consistent with the experiences of A&B's landowners who testified about the water-sensitivity of potatoes during the peak of the irrigation season and how a lack of water can affect their crops. Tim Eames explained that his potatoes suffer due to reduced water deliveries:

Q. [BY MR. THOMPSON] How has a reduced water supply, this reduced delivery rate, affected your potatoes [for 2008]?

* * *

THE WITNESS: In 2008 a couple of examples might be the 31A and the 29 system. We experienced a reduction in yield, I believe, because we experienced reduction of water. We didn't have the water necessary to run all the systems all the time and we had to rotate, regularly rotate through the season with those systems. Therefore, I would attribute that to loss of yield to stretching out the watering system over those acres.

* * *

> Q. What is the importance of quality for your potato contracts?
>
> A. We have a processor contract we sell to Lamb Weston ConAgra and also to McCain Foods. They have a contract which is based upon a base price plus certain quality incentives, like size, solids, No. 1s, which is the smoothness of the potato. And those kind of things can be impacted by a lack of water.
>
> Or even though we may irrigate our whole farm unit, when we stretch that irrigation rotation out, we impact the moisture in the soil that is available to those crops. So we do see some sustainable damage.

Eames Testimony, **Vol. IV**, p. 818, lns. 16-19, p. 819, lns. 3-12, p. 820, lns. 2-15.

As recognized by Pocatello's own analysis, crop stress due to reduced water results in lost yield or quality for potatoes. *See, supra.* For A&B landowners like Mr. Eames, the consequences are real impacts to real farming operations – impacts far more devastating than the mere demand for extra work. Mr. Kostka further confirmed that potatoes are highly water-sensitive crops and the decisions he has been forced to make due to reduced water deliveries:

> Q. [BY MR. THOMPSON] Does the water supply of a particular well system affect your decision?
>
> A. Of course. I've got some wells – well, I've got one place that I've had on a 10-year lease, I think I have 1 or 2 more years left on it, it's been an alfalfa field that's a little short on water and I had intentions of going to potatoes for 2009 that I've kind of pulled back because this last year it was tight on my alfalfa even. So I thought maybe where the alfalfa is an established crop, I could get by with it, even if I get a little bit less yield, at least I'll get something out of it. With potatoes I can't take the risk of not having enough water.

Kostka Testimony, **Vol. V**, p. 947, ln. 17 – p. 948, ln. 6.

> Q. So would you say the water supply provided in any certain well system has affected your cropping decisions?
>
> A. Of course, no doubt. I don't think there is any doubt that when I get to these numbers that are in front of me, this 248AB823, 73 hundred [0.73 miner's inch], that's not getting potatoes. . . . I can't afford to take a position on the higher-value ones, so it has to have a good supply of water. 75 hundredths is not adequate.

Id., p. 960, lns. 13-19, p. 962, lns. 3-6.

In addition to the above testimony, Mr. Kostka further confirmed that the lack of water has forced him to forego growing a higher-value variety of potato. *Id.*, p. 963, ln. 11 – p. 966, ln. 6. When questioned about the consequences of being forced to only have 0.65 miner's inch per acre for his operations, the amount of water advocated by Pocatello's witness, Mr. Kostka replied "If it was .65 I would find a new job". *Id.*, p. 969, lns. 1-2. Accordingly, the irrigation diversion requirements presented by Pocatello, which admittedly results in impacts to at least potato and sugar beet crops, is inadequate and fails to provide the water that can be beneficially used by A&B's landowners under its senior ground water right.

Dr. Brockway's testimony further supports the A&B landowners and succinctly describes the impacts resulting from the analysis advocated by Pocatello.

> Let's say we have a potato crop. And in a silt-loam soil, the amount of water between field capacity and maximum allowable depletion is going to be 1 or 2 inches. That's what you got to play with, 1 or 2 inches of water.
>
> If you make some wrong assumptions, if you don't get the soil profile filled here during an irrigation, either because your well went out or some other reason, you are -- and if you're trying to operate down here (indicating), you're permanently behind and you can't catch up. So it's risky business to assume that you're going to operate down here (indicating) during a couple of months of the year because you may get super hot weather that puts you behind. And if you've only got 1 or 2 inches to work with, say, on a potato crop, and the maximum – and the high daily ET is 3/10ths of an inch, you only have three to four days to play with.
>
> ***
>
> If you have three, four hot days in a row, which we have quite often, you can burn through your allowable depletion on potatoes in three to four days easily.
>
> So if you have had a problem, you get behind, you're just going to go on down until you have a problem with your crop.
>
> And potatoes are particularly sensitive to the timing of stress. If you stress them during the flowing state, you could lose the crop. If you stress them during the later stage when they're bulking, you just don't get the yields, or

you get translucent ends or you get knobby potatoes or any number of things which changes them from number ones to culls, or something like that.

Well, that's the reason you manage the soil moisture system. You always manage the soil moisture system. And if your water supply is inadequate, you're going to get behind and you're risking the whole crop.

***

Q. [BY MR. THOMPSON] Dr. Brockway, you talked about potatoes. But the problems you suggested that could occur with potatoes using the soil moisture analysis, would that also be true for other shallow-rooted crops?

A. It would be true to varying degrees for all of the crops grown on the A & B except alfalfa. Because they all -- with the exception of alfalfa, they're all fairly shallow-rooted crops. Beans, grain – and those are usually in the crop rotation – they would have the same problems.

Brockway Testimony.; **Vol. XI**, pp.2289-91, p. 2305, ln. 22 – p. 2306, ln. 9.

Ironically, while promoting an irrigation requirement that, admittedly, would leave shallow-rooted crops like potatoes suffering without adequate water, *see supra*, Mr. Sullivan admits that his recommendation does not account for shallow-rooted crops during the high demands periods of early July, for example. *See Sullivan Testimony*, **Vol. VII**, at 1639-41 (recognizing that potatoes, sugar beets and beans are all important crops in the A&B project and that all have shorter root depth than the 3.4 foot average he utilized in his analysis).

Obviously Mr. Sullivan could not offer his irrigation requirements opinion to an A&B potato farmer and assure that farmer he would have sufficient water for the entire irrigation season.[11] Dr. Brockway's testimony plainly exposed the dangers in such an analysis.

Accordingly, the analysis offered by Pocatello impermissibly places the "risk" squarely upon the senior appropriator in this case, not the juniors.[12] The A&B landowners confirmed Dr.

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[11] Importantly, over 90% of the crops grown on Unit B are wheat, sugar beets, potatoes, and beans, which Dr. Brockway confirmed are all shallow-rooted crops. *See A&B Expert Report* at 4-34 (Table 4-3), *Brockway Testimony*, **Vol. XI**, pp. 2289-91, p. 2305, ln. 22 – p. 2306, ln. 9.

Brockway's analysis and further explained that they cannot accept this risk and rely upon "soil moisture" in a way suggested by Pocatello's witness that would reduce their needed diversion rates during the peak of the irrigation season. Notably, all A&B landowners explained that they manage their water supply to meet the crop demands, and that applying water early in the year does not reduce their demands during the peak of the irrigation season.

Tim Eames described the importance of the rate of delivery for his crops and the fact water applied early does not then mean he can divert less and still meet crop demands during the heat of the summer:

> Q. [BY MR. THOMPSON] What is the importance of the rate of delivery provided by A&B?
>
> A. The importance of that would be to run the complete system so that we have a proper rotation on our crops for watering and we're not staggering our watering schedule.
>
> Q. Is that particularly important during the peak of the irrigation season?
>
> A. It is, especially for water-sensitive crops.

Eames Testimony, **Vol. IV**, p. 815, ln. 19 – p. 816, ln. 3.

> Q. Based on your irrigation practices are you able to apply more water early in the spring to reduce your demand later in the year?
>
> A. We try not to go into the high demand dry at all, but the soil will only hold so much water. You can't preload it past its capacity to hold water, it would just leach anyway. And early in the spring you have small root zones, so it's good to be prepared, but you can't really make a difference through the whole growing season by being preloaded at the front.

Eames Testimony, **Vol. IV**, p. 823, lns. 15-25.

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[12] It's evident that IGWA's members are not willing to shoulder this "risk". As documented in *A&B's Rebuttal Report to Greg Sullivan* at 27 (Figures 1 and 2), Water District 130 records show that about 51% of IGWA's members exceed their authorized diversion rate and nearly 10% exceed their annual volume limitation. In addition, a review of pumping rates in the Magic Valley Ground Water District shows that over 55% of the private wells have capacities greater than 0.75 miner's inch per acre, with 40% having capacities exceeding 0.85 miner's inch per acre. *See A&B's Rebuttal Report to Greg Sullivan* at 30 (Figure 5). If that delivery rate is not needed, as IGWA suggests, then why would its members' wells have those higher pumping capacities?

Timm Adams also explained that the rate of diversion is critical for his operations and that he irrigates to meet crop demand.

> Q. [BY MR. THOMPSON] For those well systems that produce more than .75 miner's inches, are you able to use that water during the irrigation season; do you have a need for that?
>
> A. Yes, I have a need for that. I would be able to use when the crops are at the right stage probably a criteria of 1 inch of water.

Adams Testimony, **Vol. V**, p. 888, ln. 20 – p. 889, ln. 1.

> Q. So on those examples, that list, those criteria list, if A&B could increase the rate of water delivery from those well systems, would you be able to use that during your irrigation season?
>
> A. Yes, I could use a larger delivery during the peak time, I think. There's no question in my mind that we could use that.
>
> Like I think I mentioned earlier, our systems that are in place are all designed to be able to utilize a higher amount of water than what A&B is able to deliver us at this time.

Id., p. 893, lns. 2-13.

Mr. Adams explained that a reduced delivery rate during the peak of the irrigation season does not meet the crop demand[13], and that a full soil profile early in the year will not reduce his demand during the peak of the season:

> Q. Do you think you could meet your crop demands with that amount [0.65 miner's inch] during the peak of the irrigation season?
>
> A. No, you would not be able to.

Id., p. 894, lns. 19-22.

[13] Mr. Adams also explained that he has been forced to reduce nozzle sizes due to reduced water supplies during the peak of the irrigation season and that this reduced rate of delivery does not meet the crops' demands in this critical period. *Adams Testimony*, **Vol. V**, p. 937-38. Mr. Adams was also forced to stop irrigating 20 acres during the middle of the 2007 irrigation season in order to provide sufficient water to other parts of his field, resulting in loss of crop yield. *Id.*, p. 889, ln. 7- p. 891, ln. 11.

Q. Has it been your experience that you are able to put on enough water early in the season that it reduces your demands during the peak?

A. No, that would not be my experience. I think it would really be the opposite of that. Because we need to produce quality in barley, potatoes, and sugar beets, quality and yield, there is no time that you should give the crop more water than just the optimal amount, just try to bank it, so to speak. I don't think that's the case, that you could do that.

Adams Testimony, **Vol. V**, p. 885, lns. 8-19.

Mr. Kostka testified that he irrigates carefully to meet crop demand as well, particularly for potatoes, and that his water demand is highest during the peak of the season:

Q. [BY MR. THOMPSON] What are some of your experiences in irrigating potatoes as far as the right amount of water to apply during the year, early in the season through peak?

A. Early in the season I have to – it's been my practice that I have to be extremely careful on the front side because of fertilization leaching. Potatoes are a high input crop because they take a lot of fertilizer. Where you place the fertilizer on the surface of the ground nitrogen leaches extremely rapidly, phosphate doesn't. But nitrogen is usually the key factor in me deciding my early irrigation, or a big factor, because I can't afford to push my pre-emergence fertilizer below root zone of the plant before the plant needs it.

So I try to gauge my early irrigation to try to maintain as much of that nitrogen in the root zone ad I can. Then my later irrigations are more dependent upon what the crop need is, which is usually about all I can put on it until roughly the 10th of August.

Kostka Testimony, p. 950, ln. 20 – p. 951, ln. 16.

Mr. Mohlman emphasized the importance of the rate of water delivery during the summer months and the fact that if he fails to meet the crop demand it induces stress:

Q. [BY MR. THOMPSON] How would you describe your crop demands during that allotment period?

A. Well, because it's the hotter part of the season, crop usage goes up, so demand for water goes up. So we're basically deficit irrigating through those middle summer months.

Q. What is the importance of that rate of delivery at that time?

> A. The importance is to meet the demand that the crop has. I know we generally figure that our crop would use anywhere from 3/10 of an inch or 3/10 of an inch to 4/10 of an inch [ruler inches] of water per day. And if we're not putting that on we're stressing the crop.

Mohlman Testimony, **Tr. Vo. V**, p. 1017, ln. 15 – p. 1018, ln. 3.

The above testimony demonstrates that A&B's landowners carefully irrigate to meet their crops demand, and that demand is not reduced during the peak of the season as a result of irrigation earlier in the year. Moreover, they all testified about the increased need for water during that time, not an inadequate delivery rate as suggested by Pocatello's analysis. Whereas limiting A&B's landowners to a rate of 0.65 miner's inch per acre would result in crop stress and loss, it's obvious the crop demand would not be met at that time. The irrigation diversion requirements advocated by Pocatello (0.65 miner's inch per acre) is not supported by the evidence, completely disregards the rate provided by A&B's decreed water right (0.88 miner's inch per acre), and would admittedly harm A&B's landowners' crops.

C. A&B's Experts' Analysis Confirms the Actual Crop Demands and Water Used by the Landowners Pursuant to A&B's Decreed Water Right.

Pocatello disputes A&B's Experts' analysis since they used a "well-by-well" system approach and did not use the "system wide well capacity" inquiry used by Mr. Sullivan. *Poc. FF* at 18-20. Pocatello is incorrect and has failed to acknowledge the system-wide well capacity analysis reported in the *November 11, 2008 Affidavit of John Koreny* at 1-2, Figure 1. This is the same method to evaluate Unit B well capacities to meet the irrigation diversion requirement offered by Mr. Sullivan in his expert report dated July 24, 2008 (Figures 4 and 5). Figure 1 from the *Koreny Affidavit* compares the well capacity in the middle of the irrigation season to the estimated irrigation diversion requirements. The well capacity versus irrigation diversion requirements analysis shows that 110 wells (or 76% of the total wells on the project) are unable

to meet the estimated peak demand irrigation diversion requirement of 0.89 miner's-inch/acre. *See* **Ex. 213B**. The Unit B well systems each need to be maintained so they can support a rate of pumping of 0.89 miner's-inch/acre during peak demand periods in order to meet crop water use requirements.

Next, Pocatello criticizes the method used to develop the irrigation diversion requirement estimate by the A&B Experts, which was 0.89 miner's-inch/acre at the wellhead and 0.86 miner's inches per acre at the field headgate during peak demand months. *Koreny Direct*, p. 9, ¶ 27; *A&B Expert Report* at 4-47 (Table 4-13). An irrigation requirement of 0.89 miner's-inch/acre is consistent with the irrigation needs testified to by A&B's landowners at hearing and corresponds with the decreed diversion rate per acre. *See Landowner Testimony, supra at* 20-22. As identified above, the A&B Experts incorporated essentially the same assumptions as Mr. Sullivan's irrigation diversion requirement estimate (system-wide field capacity, conveyance losses, crop type, etc.). The analysis used a system-wide estimate of crop types, conveyance losses, and field efficiencies, because no information is available to break down crop type and field efficiency every year for individual well systems. Indeed, A&B's landowners testified that they rotate crops depending upon the year, therefore a crop mix under one well system may be all potatoes one year, and then all grain, or half alfalfa and half grain the next. *See Kostka Testimony*, **Vol. V**, p. 946, ln. 25 – p. 947, ln. 16; *Adams Testimony*, **Vol. V**, p. 871, ln. 10 – p. 872, ln. 8. The use of uniform field efficiency, conveyance losses and crop types, which Pocatello criticizes, is the same assumption incorporated by Mr. Sullivan for purposes of his analysis. The only significant issue between the A&B Expert's and Mr. Sullivan's irrigation diversion requirement estimate methodology is Mr. Sullivan's inappropriate use of soil moisture to attempt to justify a reduced irrigation rate of 0.65 miner's-inch/acre for the entire season, even

during the peak months. Mr. Sullivan admitted that his irrigation requirement estimate of 0.65 miner's-inch/acre will not provide an irrigation rate sufficient to support shallow-rooted crops. Shallow-rooted crops (potatoes, beans, sugar beets, wheat) are important cash crops for A&B and comprise over 90 percent of all the crops grown on Unit B (A&B Expert Report, Table 4-3, pg 4-34). Accordingly, while the A&B Experts' analysis supports meeting these crops' irrigation demands during the hot and dry part of the irrigation season, Mr. Sullivan's does not. As such, the A&B Experts' analysis is more persuasive and protects the A&B landowners from shortage.

Next, Pocatello criticizes the A&B Expert's analysis comparing the irrigation diversion requirements with A&B's historical pumping records. This was done to determine whether A&B was facing shortages during the middle of the irrigation season. Most of Pocatello's criticism is focused on identifying issues with the analysis early or late in the irrigation season. A separate well-by-well system analysis was necessary and is the only way to compute mid-season shortages because the Unit B well distribution system is not interconnected. *Brockway Testimony*, **Vol. XI**, p. 2163, lns. 4-11. This comparison showed that in the middle of the irrigation season in July, shortages ranged from 11-25%. *Koreny Direct* at 10, ¶ 29.

In sum, the A&B's Experts' analysis supports the water use testified to by A&B's landowners. Whereas Pocatello's recommendation does not provide sufficient water during the peak of the irrigation season, it would force A&B's landowners to suffer unwarranted crop stress and loss. Whereas A&B's landowners can beneficially use the rate of diversion provided by A&B's decree, which is confirmed by the A&B Experts' analysis, the evidence requires the Director to distribute water to A&B's senior water right accordingly.

D. The Department's and Ground Water Users' Proposed Rates of Delivery Unlawfully Shifts the Burden to A&B and Forces its Landowners to Endure Shortages Contrary to Idaho Law.

Under Idaho law, if A&B's landowners can beneficially use the amounts provided by its water right, the Director and Watermaster have a "clear legal duty" to distribute that amount. *See* I.C. § 42-607; *AFRD #2 v. IDWR*, 143 Idaho at 877-78 (2007); *Musser v. Higginson*, 125 Idaho 392, 395 (1994).

The Department's and Ground Water Users' proposed delivery rates impermissibly shift the burden to A&B – the senior water right holder – who is now forced to reprove its decreed diversion rate merely because the Department, and now IGWA and Pocatello, do not agree with the SRBA Court's decision to decree a water right that authorizes the diversion of 0.88 miner's inches per acre (1,100 cfs). This tactic was firmly rejected by *AFRD#2, supra* at 877-78 ("The Rules should not be read as containing a burden shifting provision to make the petitioner re-prove or re-adjudicate the right which he already has"). Since A&B has demonstrated that it can beneficially use its entire decreed quantity of water, the Director's and the Ground Water Users' attempts to reduce that quantity to 0.75 miner's inch per acre, or less, should be rejected.

III. A&B Cannot be Forced to Self-Mitigate for the Injuries Caused by Depletions to the Aquifer Resulting from Out of Priority Junior Diversions.

Seeking to evade responsibility for their injury to A&B's water right and its decreed points of diversion, IGWA and Pocatello accuse A&B of failing to make sufficient efforts to mitigate for the injury it is suffering.[14] They ignore the history of development of water right 36-

[14] IGWA and Pocatello further fault A&B for not "curtailing" junior priority "enlargement" acres within the A&B project. Approximately 2,000 of these acres are irrigated pursuant to 1962 priority decreed water rights, which are senior to the majority of IGWA's members' water rights. Why should A&B curtail its enlargement acres when even more junior priority water rights continue to divert unabated? Particularly where some of these private water rights may be located directly adjacent to A&B. Moreover, IDWR has no authority to curtail any of A&B's "enlargement" acres unless and until it issues an order to curtail private junior priority water rights.

2080 and claim that A&B should integrate all of its separate well systems, drill deeper wells, and "use ready and available options and alternatives available to fully utilize the flexibility enjoyed under its water right." *IGWA Br.* at 7-9; *Poc. Br.* at 4-5. They cling to the Department's "project-wide average" scheme and ignore the historical development of the water right – while arguing that A&B is precluded from seeking priority administration because *they believe* that the water right was developed wrong (i.e. at the wrong place and wrong point in time). *See IGWA FF* at 15 (asserting problems in the southwestern portion of the project) & 17 (claiming that the wells were not drilled deep enough). It is not surprising that IGWA and Pocatello would adhere to the misguided and unfounded determination by the Director that a "system-wide average" scheme would reliably depict the usage and development on A&B's Unit B. Such a scheme allows IGWA and Pocatello to continue depleting the water source and injuring A&B's senior water right. However, the facts presented at hearing refute the claim that A&B can simply pump any amount of water from any well on the project and deliver it to any acre. A&B addressed this argument in its *Post-Hearing Memorandum and Proposed Findings*, filed in this matter on January 9, 2009, at Argument Part II. That section is incorporated herein.

As explained in A&B's *Post Hearing Memo*, and further addressed below, the historical development of water right 36-2080 refutes the Director's "project-wide average" scheme of administration. Accordingly, IGWA's and Pocatello's arguments on this point fail. A&B pumps water from 177 individual wells that comprise over 130 ***separate*** well systems. *Dan Temple Testimony*, **Vol. III**, p.467, lns. 3-7 & 473-74. In fact, the Department recognizes that, as the project exists and has been developed, water cannot be delivered to every acre from every well. *Luke Testimony.*; **Vol. VI**, p. 1209-1211.

In 2003, water right 36-2080 was partially-decreed in the SRBA Court. *See* **Ex.139**. The decree recognizes 177 individual points of diversion and is ***based on the actual development and use of the water right***. This historical development and use includes a distribution system that incorporates over 130 individual, separate and distinct well systems. This fact is supported by BOR's January 19, 1965 letter, cited by both IGWA, *IGWA Br.* at & *IGWA* FF(g), and Pocatello, *Poc. Br.* at 4. *See* Ex. 157D. That letter, responding to a request by the Department for a list of wells and serviced lands, *see* **Ex. 157**, expressed the Bureau's intentions in developing the system. According to the Bureau, the project is "one integrated system, physically, operationally and financially," and that it would be "impractical and undesirable to designate precise land areas." **Ex.157D**. This is because "***some lands***, depending on project operational requirements, can be served from water from ***several wells***." *Id.* (emphasis added).[15] Contrary the IGWA's and Pocatello's misrepresentation of this memo, the Bureau did not anticipate or claim that all lands could be served by all wells.[16] Rather, the Bureau's letter is consistent with the testimony at hearing that, even though a few systems are interconnected (such that "some lands" can be served by "several wells"), a majority of the well systems are not, and have never been, interconnected. *Dan Temple Testimony*; **Vol. III**, p. 475 & 477-78. There is simply no factual or legal foundation for IGWA and Pocatello to read the Bureau's statement so expansively.[17]

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[15] Contrary to Pocatello's claim, A&B has not "interconnected some of its well system." *Poc. Br.* at 4. Rather, any interconnected well systems were connected by the Bureau – prior to turning the system over to A&B. *Temple Testimony*, **Vol. III**, p. 475, lns. 10-16 & pp.477-78.

[16] Likewise, the claim that A&B's system was developed to "create maximum flexibility" through the interconnection of all well systems, *see Poc. Br.* at 4; *IGWA Br.* at 8-9, is not supported by the undisputed evidence that only "some lands" could be served by "several wells." *See* Ex. 157D. Furthermore, the Director's recognition of water right 36-2080 as it was historically developed and used – in more than 130 independent well systems – would not "have penalized juniors and rewarded A&B." *Poc. Br.* at 5.

[17] Furthermore, there is no support for the contention that it is "A&B's internal restriction" that led to the development of unique well systems. *IGWA Br.* at 8-9. Rather, the system was developed so that "some lands" could be served by "several wells" but that not all of the wells systems would be interconnected. *See* Ex. 157D & *Dan Temple Testimony*, **Vol. III**, pp. 475 & 477-78.

Moreover, the Director cannot use such information to "re-adjudicate" A&B's decreed water right.

Rather, as explained in A&B's *Post-Hearing Memorandum*, the Director erred in ignoring the actual development of water right 36-2080 – a development that led to both a license and a partial decree for a water right that entitles A&B to divert water through more than 130 individual and separate well systems. IGWA and Pocatello ignore this fact when they assert that the absence of a specific description of the more than 130 individual well systems on the water right equates to the absence of any dispute that A&B can "irrigate any or all of its lands from any or all of its wells." *IGWA Br.* at 8.[18] To the contrary, the historical development, application and use of water right 36-2080 shows that the water cannot be diverted from every well to every acre. Rather, only "some lands" were serviced by "several wells."

Setting aside the Ground Water Users' failed understanding of water delivery on the project, their arguments essentially advocate that A&B should "self-mitigate" for the injuries caused by junior diversions.[19] While IGWA cannot dispute the continued decline in ground water levels at A&B, it nonetheless understates the magnitude of the decline in an effort to justify their out-of-priority diversions. *See IGWA Br.* at 9. Contrary to IGWA's claim that ground water levels have only declined "less than ½ ft/yr", even the Director's *Order* recognizes the facts and identifies the total decline for wells in A&B averages 25.2 ft and ranges up to 46.4

[18] IGWA further claims that A&B could simply interconnect its well system. *IGWA FF* at 6-8. Yet, IGWA cannot provide any credible evidence to support this claim. It casually claims that only "39 miles of pipeline" is necessary – yet, it ignores the tremendous undertaking required for such a process (i.e. financing, engineering planning, construction management, real estate acquisition, permitting, surveying and contracting).

[19] Contrary to IGWA's claim, A&B is not seeking to have junior users pay its "normal and reasonable" operating expenses. *IGWA Br.* at 4. Rather, A&B is seeking to relief to protect its senior water right, and from having to continually modify and reconstruct wells and delivery systems to pump water from a source that is being depleted by junior priority diversions. While IGWA's members choose to treat their own rights as "common property" without regard to priority, that is not the law in Idaho, and such actions do not justify injury to senior rights held by others, namely A&B.

feet. *See Order* FF 112-113. Moreover, A&B's Expert Report and District hydrographs demonstrate that ground water levels were stable through the 1950 to 1980 period, with a continued persistent decline from the 1980s to present day. *See A&B Expert Report* at 3-4; **Ex. 225**. The Ground Water Users cannot ignore this evidence and the resulting injury to A&B's senior water right.

Where pumping under junior rights on the ESPA is causing declines in ground water levels and has reduced pumping capacities at A&B, the law requires proper administration of those rights. As set forth in A&B's *Post-Hearing Memo and Proposed Findings* at 9-14, A&B's senior ground water right is being injured by junior diversions. Accordingly, the Ground Water Users' continued arguments that A&B should simply look to remedy its own problem disregards Idaho law and should be rejected.

IV. The Evidence Does Not Support the Ground Water Users' Claims that the A&B Wells were Improperly Constructed and Not Drilled Deep Enough.

In another attempt to evade responsibility for injury to A&B's senior water right, IGWA claims that A&B's well systems were improperly constructed and that the wells were not drilled deep enough. *See IGWA FF* at 15, 17. The evidence provided in this case and the testimony produced at hearing demonstrates otherwise.

First, the evidence demonstrates that the wells were drilled deep enough to produce an average of 0.89 miner's inches per acre, with a least 5-10 feet of submergence over the pump bowls in almost all wells when BOR finished construction and A&B began operating the project in the mid-1960s. *Koreny Direct* at 5; *A&B Expert Report* at 3-69 (Figures 3-19, 3-20); *A&B Expert Report* at Appendix A, Annual Report, Part I, "Inches Per Acre Available at Well" (1965 to 1970). While IGWA and Pocatello suggest that a "well delivery rate" and a "submergence" criteria to evaluate well performance at the time of construction was improper, they fail to

identify any other objective standard to justify why BOR should have drilled deeper or should have "foreseen" future ground water level declines at the level experienced which has been caused by junior priority pumping. In addition, contrary to the Ground Water Users' opinion, Dr. Wylie testified that the test of adequacy for a production well is to consider whether the well can produce the desired yield needed to meet the crop demand at the completion of the drilling depth, and if so, this indicates the well is adequate for the intended purpose:

> Q. [BY MR. SIMPSON] Okay. And Dr. Wylie, this morning when you were describing your experience in designing a well and the criteria you look at, was one of the criteria you would consider is whether there's sufficient capacity in the design to meet crop demand?
>
> A. Yeah. After you finish drilling a well, you've designed it all with their demand, the amount of water that they need, so it will accommodate an appropriate size pump. And then after drilling the well, you run a test to make sure the well will supply that amount of water.
>
> Q. So you design it to meet the demand, and then you run the pump test to ensure that after you've undertaken the effort to drill the well that it will meet the demand; correct?
>
> A. Correct.
>
> Q. And it has the capacity to meet demand?
>
> A. That it will be able to pump that much water.

Wylie Testimony, **Vol. VII**, p. 1465, ln. 13 – p. 1466, ln. 8.

Virgil Temple, who worked with a well driller on the ground at the time wells were initially drilled on the project, testified that this procedure was followed, with well and pump testing to verify the production rate, alignment and depth of the well by BOR. *Virgil Temple Testimony*, **Vol. II**, pp. 262-263. Therefore, the Ground Water Users' claims about the lack of adequate construction and testing at the time of the original construction are not supported by the record.

In addition, available data indicates that the wells were drilled as deep as or deeper than other wells in the region. *Koreny Direct.* at 5-6; *A&B Expert Report* at 3-16 to 3-17. With respect to the original construction or drilling method, IDWR staff admitted that the cable-tool drilling method used for these wells was an appropriate method that is still used today. *Vincent Testimony*, **Vol. IX**, pp. 1855-56. Dr. Wylie further testified that the well depth was adequate and "reasonable." *Wylie Testimony*, **Vol. VII**, pp. 1428-29. Finally, Mr. Vincent further testified that he knew of no specific well that suffered from "reduced yield based upon diameter." *Vincent Testimony*, **Vol. IX**, pp. 1887, lns. 5-22.

Likewise, wells located in the southwest portion of Unit B did provide an adequate supply of water when they were constructed. All of the southwest area produced greater than 0.75 miner's inches per acre – with most producing between 0.8 to more than 0.9. *Koreny Direct* at 5; *A&B Expert Report* at 3-70 (Figures 3-22, 3-23). As such, these wells were adequate to meet the intended purpose. *See Wylie Testimony*, **Vol. VII,** pp.1465-66 (testifying that so long as the well "has the capacity to meet demand" it is has sufficient capacity).

The problems with the declining yields in the Southwest wells are due to declining ground water levels which cause the saturated portion of the aquifer to fall into a lower zone where there is a larger percentage of sedimentary interbeds and the aquifer transmissivity is reduced. *Koreny Direct*, p. 14. As explained by Dr. Ralston, there is little probability that drilling wells deeper in the Southwest-area will be successful at increasing well yields, as noted in his hydrogeologic report. *See* **A&B 1089, 1091**. Consequently, the original construction and well depth in the Southwest wells is not the cause for reduced pumping capacities, it is due to reduced ground water levels and the lack of yield available to meet A&B's pumping demands.

In summary, the construction and location of A&B's wells, or points of diversion, does not justify dewatering of those wells caused by junior pumping. Since A&B's wells produced adequately before the onset of a persistent aquifer level decline, the Ground Water Users' efforts to shift the blame to the original construction methods and developed locations for A&B's wells and irrigated lands fails.

CONCLUSION

The proposed findings offered by the Ground Water Users are not supported by the law or facts of this case. In addition, the Director's refusal to deliver water to A&B's senior ground water right is contrary to the law and the evidence submitted. Therefore, the Hearing Officer should accept A&B's proposed findings for the reasons set forth above.

DATED this 13th day of February, 2008.

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