

b. Ground Water Use in the Bellevue Triangle is Contrary to the Doctrine That “First in Time is First in Right.”

The rule that “first in time is first in right” is one of the “bedrock” principles of Idaho’s prior appropriation doctrine. *In Matter of Distribution of Water to Various Water Rts. Held By or For Ben. of A & B Irrigation Dist.*, 155 Idaho 640, 650, 315 P.3d 828, 838 (2013). “Priority in time is an essential part of western water law and to diminish one’s priority works an undeniable injury to that water right holder.” *Clear Springs Foods, Inc. v. Spackman*, 150 Idaho 790, 797–98, 252 P.3d 71, 78–79 (2011).

“The presumption under Idaho law is that the senior is entitled to his decreed water right, but there certainly may be some post-adjudication factors which are relevant to the determination of how much water is actually needed.” *AFRD2*, 143 Idaho at 878, 154 P.3d at 449. Once an initial determination is made that the senior appropriator is or will be injured by diversions under a junior priority water right, the junior appropriator bears the burden of proving that curtailment would be futile, or otherwise challenging the injury determination. *Id.* Further, junior appropriators who claim their diversions do not injure a senior appropriator are required to establish that claim by “clear and convincing evidence.” *A&B Irr. Dist., et al., v. IDWR*, 153 Idaho 500, 516-20, 284 P.3d 225, 241-45 (2012). This requirement “gives the ‘proper presumptive weight to a decree.’” *Id.* at 517, 284 P.3d at 242.

In this case, almost all of the water rights to divert from Silver Creek and the Little Wood River are “first in time” and therefore “first in right.” The vast majority of the surface water rights for lands irrigated by Silver Creek and the Little Wood River bear priority dates pre-dating 1900. IDWR Ex. 3 at 18 & Attachment A. The vast majority of the ground water rights in the Bellevue Triangle bear priority dates later than 1940. *See, e.g.*, IDWR Ex. 2 at 12-13 (discussing ground water development). Only one of the surface water rights for lands irrigated by Silver Creek and the Little Wood River in Attachment A to the Luke Memorandum has a priority date later than 1940. IDWR Ex. 3 at 18 & Attachment A.

Sukow’s modelling analyses, as explained in her staff memorandum and testimony, show that the Wood River Valley aquifer system is hydraulically connected to Silver Creek and its tributaries above the Sportsman’s Access gage, and that ground water pumping in the Bellevue Triangle has a significant impact on stream flows in Silver Creek. Sukow used the WRV1.1 Model to simulate the effects of curtailment of ground water rights diverting within the Bellevue Triangle on July 1 of this year. This analysis predicted that the curtailment would increase flows in Silver Creek by approximately 23-27 cfs during the months of July, August, and September. These conclusions are supported by the testimony of the watermaster and the surface water users on Silver Creek and the Little Wood River. They testified that, based on their observations, flows in Silver Creek and the Little Wood River respond to changes in ground water pumping in the Bellevue Triangle within a few days, or a week at most.

Most of the water rights to divert from Silver Creek and the Little Wood River have already been curtailed, or will be curtailed soon. Silver Creek and Little Wood River water rights having priority dates of 1885 or later have already been curtailed, 1884 water rights will likely be curtailed sometime before the end of June, and even the April 1, 1883 priority—which is among the most senior—will likely be cut by the end of June, or soon thereafter. *See, e.g.*, Tr. pp. 771-72 788-89 (Lakey test.); Rigby Ex. 2 (Lakey memorandum); IDWR Ex. 3 at 18

& Attachment A (list of potentially injured water rights). The junior priority ground water rights in the Bellevue Triangle have not been curtailed this year, and apparently have never been curtailed in the past. Tr. p.764.

Consistent with the Director's instructions at the Prehearing Conference, the surface water right holders did not simply rely on the presumption that as senior appropriators they are entitled to their full amount of their decreed water rights before junior water rights are allowed to divert. The surface water users also submitted considerable testimony and exhibits showing that curtailment of their senior water rights will result in substantial crop and revenue losses during the 2021 irrigation season. The surface water users, therefore, carried their burden of providing evidence to support an initial determination that during the 2021 irrigation season, the surface water users have been and will continue to be injured by a shortage of water resulting, in part, from ground water pumping in the Bellevue Triangle under junior priority water rights.

The ground water users did not carry their burden of showing by clear and convincing evidence that ground water pumping in the Bellevue Triangle does not injure senior appropriators diverting from Silver Creek and the Little Wood River. The ground water users offered no support for their summary assertion that "the modeled boundary of curtailment is arbitrary and capricious as it is not based upon actual groundwater hydrology in the basin." *South Valley Groundwater District and Galena Ground Water District's Post Hearing Memorandum ("SVGWD-GGWD Brief")* at 29. The Sukow Memorandum's explanation of the area modeled for curtailment purposes, in contrast, shows that the modeled area of curtailment is based on the ground water hydrology of the Wood River basin. IDWR Ex. 2 at 22.

The ground water users also relied on evidence that WRV1.1 Model has a predictive uncertainty of $\pm 22\%$ over a ten-month span, and the predictive uncertainty may increase for shorter time periods, such as Sukow's curtailment simulations. *SVGWD-GGWD Brief* at 29. All ground water models are simplifications with inherent predictive uncertainty, however, Tr. p. 82, and it is undisputed that the WRV1.1 Model is the best scientifically-based tool currently available for predicting Silver Creek's hydraulic responses to ground water curtailment in the Bellevue Triangle. Tr. pp. 156-57, 231, 1299-1300, 1320, 1452.

Further, the Model's predictive uncertainty does not mean the Model is overestimating Silver Creek's hydraulic responses to ground water curtailment. It means that it is equally possible that the Model is underestimating Silver Creek's hydraulic responses to ground water curtailment. *Id.* The risk of any uncertainty in this regard must be allocated to the ground water users. "Equality in sharing the risk does not adequately protect the senior priority surface water right holder from injury." *Memorandum Decision and Order on Petition for Judicial Review, Rangen, Inc. v. IDWR*, p. 13 (5th Jud. Dist. Case No. CV 2014-2446) (Dec. 3, 2014) ("*Rangen Dec.*").

The ground water users also assert the WRV1.1 Model is unreliable because it is allegedly based on "assumed values for pumping prior to 2014, especially in the proposed curtailment area," and because "additional data has been collected since that time which includes pumping data, ET, stream measurements, aquifer levels and efficiency." *SVGWD-GGWD Brief* at 20. The record shows, however, that values for pumping prior to 2014 were not "assumed" but rather calculated from available data including ET, precipitation, and surface water diversion data. Canal seepage and surface water irrigation efficiency had to be estimated. IDWR Exhibit

2 at 26 (Appendix A at 15); Tr. pp.97-98. Surface water irrigation efficiency values were adjusted within an allowable range during model calibration. Tr. p.109.¹²

The ground water users also relied on the testimony of their expert witness Erick Powell that the hydraulic conductivity estimates for some of the Model's "cells" are "outrageously high." Tr. p.1270; *SVGWD-GGWD Brief* at 31.¹³ Powell conceded that no model is perfect, however, and that every model has problems. *Id.* Further, the WRV1.1 Model has over 55,000 cells, each of which represents an area of 100 meters by 100 meters, but only 200 cells had the high hydraulic conductivity estimates. Tr. pp.1244, 1308. The ground water users' expert did not agree that this proportion constituted a significant issue, but rather only raised questions as to the constraints used in calibrating the model. Tr. p.1308. The expert also affirmed that the Model, as calibrated, remains "the best tool" currently available, "warts and all." Tr. pp. 1300-01, 1320.¹⁴

The ground water users also assert the WRV1.1 Model "is unable to predict whether water will actually make it downstream to senior surface water users if curtailment occurs" and is unable to account for conveyance losses in Silver Creek and the Little Wood River. *SVGWD-GGWD Brief* at 31. The record shows, however, that Silver Creek above the Sportsman Access gage is a gaining reach, and the reach between the Sportsman Access gage and the Model boundary has minimal gain or loss. IDWR Ex. 2 at 8, 26; *SVGWD & GGWD Ex. 14* at 16; *SVGWD & GGWD Ex. 14* at 5. Thus, there are no seepage losses to simulate in these reaches.

¹² The methods used to develop and calibrate the Model were developed with the input of a Modeling Technical Advisory Committee (MTAC), which was established to provide transparency in model development and to serve as a vehicle for stakeholder input. Twenty-two MTAC meetings were convened between March 2013 and January 2019 to facilitate a transparent and open process of data collection, model construction, and model calibration. IDWR Exhibit 2 at 14.

¹³ South Valley and Galena appear to argue that Powell "specifically" testified that the hydraulic conductivity values for two of the Model's three "layers" were 500,000 feet per day and 950,000 feet per day. *SVGWD-GGWD Brief* at 31. This argument mischaracterizes the Powell's testimony, which referred to the "maximum" hydraulic conductivity value in individual cells, not the overall conductivity for the layers. Tr. p.1270. That is, Powell was referring to the individual cell in each layer having the highest conductivity value for that particular layer. The overall hydraulic conductivity value for all cells across each layer was much lower, as Powell's testimony confirms. *See* Tr. p.1308 ("the average for layer one was at somewhere in the order of 3,000 feet per day").

¹⁴ The record contradicts the ground water users' assertion that the Model's predictive uncertainty estimate of $\pm 22\%$ "does not even include the undisputed deficiencies in the model's hydraulic transmissivity rates." *SVGWD-GGWD Brief* at 48. The record shows that the results of the predictive uncertainty analyses performed by Wylie (2019) do include the uncertainty associated with the calibration of hydraulic conductivity. These results also include the uncertainty associated with the range of other calibrated parameters. Tr. pp. 163-64; *SVGWD & GGWD Ex. 16* at 3, 5.

Some seepage losses of additional flow are expected to occur in downstream reaches of Silver Creek and the Little Wood River between the Highway 20 Bridge and Station 10, IDWR Ex. 2 at 26-29, but these reaches are downstream of the ground water flow model boundary. The effects of seepage and potential diversions of additional flow in these reaches will be accounted for in the watermaster's priority cut determination and does not need to be predicted by the Model. Tr. 826, 889.

The ground water users also rely on evidence that channel seepage in portions of Silver Creek and the Little Wood River downstream of Sportsman's Gage reduce the flows available to surface water users, and that, in some locations, beaver dams and "holes" in levees or embankments cause water in Silver Creek and the Little Wood River to overflow or spill out of the stream channel. Tr. pp.833, 858-61, 1392. The ground water users did not provide evidence, however, that these losses and flow depletions dry up any portion of Silver Creek or the Little Wood River, or prevent usable quantities of water from reaching the surface water users' points of diversion. To the contrary, the evidence shows that there is a continuous flow of water in Silver Creek and the Little Wood River downstream from the Sportsman's Access gage. *See, e.g.,* Tr. pp. 764, 792, 886-93. At best the ground water users' evidence raises questions about how much water is lost through seepage and other mechanism in the reaches the Sportsman's Access gage and the senior surface water right holders' points of diversion. Further, these factors are "built into priority cuts. They are already within the system." Tr. p. 826; *see also id.*, p. 889 (similar). The junior ground water users must bear the risk of any uncertainty regarding these channel losses. *Rangen Dec.* at 13-14.

The ground water users further rely on evidence that an increase in stream flow the watermaster had once observed at Station 10 on the Little Wood River was not caused by reduced ground water pumping in the Bellevue Triangle, but rather by the direct pumping of ground water into Silver Creek by an upstream water user. Tr. pp.854-55. Other testimony established, however, that the upstream water user typically re-diverted the pumped water back out of the creek, and that this was done "to avoid getting our September 1883 cut" rather than to enhance stream flows generally. Tr. pp. 1409-10, 1413-14.

"Clear and convince evidence" is "evidence indicating that a thing to be proved is highly probable or reasonably certain." *A&B Irr. Dist.*, 153 Idaho at 516, 284 P.3d at 241 (citation omitted). The ground water users' evidence regarding the WRV1.1 Model raises questions about the Model's calibration and predictions of the hydraulic response in Silver Creek and the Little Wood River to curtailment of ground water pumping in the Bellevue Triangle. The ground water users have not shown, however, that it is highly probable or reasonably certain that the Model is so flawed that it cannot be relied upon for purposes of this proceeding. To the contrary, it is essentially undisputed that the Model is the best scientifically-based based tool currently available for predicting the hydraulic response in Silver Creek and the Little Wood River to curtailment of ground water pumping in the Bellevue Triangle. Certainly the Model can be and should be improved and refined, and would benefit from having more data, but this is true of all models, and these risks must be borne by the ground water users in order to avoid imposing "an unlawful risk" on the senior surface water users. *Rangen Dec* at 6, 13-14. The ground water users have not carried their burden of showing by clear and convincing evidence that the WRV1.1 Model cannot be relied upon to show that ground water pumping in the Bellevue Triangle reduces flows in Silver Creek and the Little Wood River.

The ground water users' evidence that the flows of Silver Creek and the Little Wood River are depleted by channel seepage, "holes" in levees or embankments, and beaver dams does not show that it is highly probable or reasonably certain that curtailment of ground water pumping in the Bellevue Triangle will not result in usable quantities of water reaching senior surface water users on Silver Creek and the Little Wood River. See *Sylte v. Idaho Dep't of Water Res.*, 165 Idaho 238, 245, 443 P.3d 252, 259 (2019) (explaining the "futile call doctrine"). At best, the evidence regarding channel seepage, "holes," and beaver dams shows that there will be some losses between the Sportsman's Access gage and surface water users' points of diversion.

Further, the watermaster testified that curtailment of ground water pumping in the Bellevue Triangle would increase the amount of water available for diversion by at least some of the senior surface water users on Silver Creek and the Little Wood River, and the ground water users did not rebut or undermine this testimony. Tr. pp.787-92. Any risk of uncertainty on these questions falls upon the junior ground water users. The ground water users have not carried their burden of showing by clear and convincing evidence that curtailment of ground water pumping in the Bellevue Triangle will not result in "a sufficient quantity" of water for senior surface water users on Silver Creek and the Little Wood River to apply to beneficial use. *Sylte*, 165 Idaho at 245, 443 P.3d at 259.

The record, therefore, supports a conclusion that the effects of ground water withdrawals in the Bellevue Triangle on senior water rights diverting from Silver Creek and the Little Wood River during the 2021 irrigation season are contrary to "the doctrine of 'first in time is first in right.'" Idaho Code Idaho Code § 42-226. The Director, therefore, is authorized to prohibit or limit ground water withdrawals in the Bellevue Triangle on this basis. Idaho Code § 42-237a.g.

c. Ground Water Use in the Bellevue Triangle Should be Curtailed to Protect Senior Surface Water Rights on Silver Creek and the Little Wood River.

The Idaho Supreme Court has stated that the drafters of the Idaho Constitution "intended that there be no unnecessary delays in the delivery of water pursuant to a valid water right." *AFRD2*, 143 Idaho at 874, 153 P.3d at 445. "Clearly, it was important to the drafters of our Constitution that there be a timely resolution of disputes relating to water." *Id.* at 875, 153 P.3d at 446. The District Court for Twin Falls County has also emphasized the need for prompt administrative action to address a water supply deficiency "in the year in which it occurs." *Rangen Dec.* at 10. "Curtailing ground water rights the following irrigation season is too late. The injury [to the senior appropriator], and corresponding out-of-priority use, will have already occurred." *Rangen Dec.* at 10.

A drought has been predicted for the 2021 irrigation season, and the most recent SWSI suggests that the 2021 water supply shortage in Basin 37 will be even worse than originally predicted. IDWR Ex. 5. Many surface water rights on Silver Creek and the Little Wood River have already been curtailed, including some of the most senior priorities, and further curtailments are expected within the coming days and weeks. Some fields and crops have already dried up, and so will many more without prompt action to protect the senior water rights.

The Director concludes that consumptive ground water pumping in the Bellevue Triangle¹⁵ for purposes other than domestic and stock watering uses pursuant to Idaho Code §§ 42-111 and 42-1401A(11) should be curtailed as soon as possible in order to protect senior surface water rights diverting from Silver Creek and the Little Wood River.

The Director disagrees with the argument of the Idaho Ground Water Users Association, Inc. (“IGWA”), that there is no need for “prompt action” in this case because ground water pumping from the Eastern Snake Plain Aquifer (“ESPA”) does “not cause a sudden loss of water discharge from the springs” and “curtailment would not quickly restore the spring flows.” *IGWA's Post-Hearing Brief* at 4 (quoting *Clear Springs*, 150 Idaho at 815, 252 P.3d at 96). This case involves pumping from the Wood River Valley aquifer within the Bellevue Triangle, not from the ESPA. The ESPA delivery calls involved many more ground water diversions and a far larger area than this case. The vast majority of the ESPA diversions were much farther away from the Snake River than ground water diversions in the Bellevue Triangle are from Silver Creek and its tributaries. The impacts of the ESPA diversions on surface flows of the Snake River are far more diffuse, delayed, and attenuated than the impacts of ground water diversions in the Bellevue Triangle are on the surface flows of Silver Creek and its tributaries. Further, the record shows that ground water pumping in the Bellevue Triangle has significant impacts on flows in Silver Creek and the Little River within a few days of when pumping begins or ends.

The Director also disagrees with the arguments of South Valley and Galena that curtailing ground water pumping in the Bellevue Triangle would be futile. South Valley and Galena argue that curtailment of ground water pumping in the Bellevue Triangle would be futile because:

- 23,000 acres would be curtailed to provide usable water to three senior surface water rights;
- the Exchange Condition ensures a full water supply to the holders of senior surface rights having the Exchange Condition;
- curtailment would not provide usable quantities of water to surface water rights junior to April 1, 1884;
- it is “too late” to protect some senior water rights; and
- most of the water produced by curtailment of ground water pumping would remain in the Wood River Valley aquifer during the 2021 irrigation season.

Curtailment is “futile” if due to “seepage, evaporation, channel absorption or other conditions beyond the control of the appropriators the water in the stream will not reach the point of the prior appropriator in sufficient quantity for him to apply it to beneficial use.” *Sylte*, 165 Idaho at 245, 443 P.3d at 259. As previously discussed, the record establishes that curtailment of junior ground water pumping in the Bellevue Triangle will provide water in usable quantities for at least some of the senior surface water users, a fact that South Valley and Galena concede. The fact that curtailment will not provide usable quantities to all senior surface water right holders who have an insufficient supply, therefore, does not render the curtailment “futile.” It simply means that, in this year of drought, some senior water right holders would have been curtailed

¹⁵ As previously noted, the term “Bellevue Triangle” as used in this order refers to the potential area of curtailment identified in the Sukow Memorandum.

regardless of ground water pumping in the Bellevue Triangle. That does not change the fact that curtailment will provide usable quantities of water to some senior surface water users.

South Valley's and Galena's argument that it is futile to curtail 23,000 acres in the Bellevue Triangle in order to provide 8.5 cfs of water to senior water users also lacks merit. *SVGWD-GGWD Brief* at 19. As Idaho courts have recognized, protecting senior surface water rights from junior ground water pumping can require curtailment of extensive acreages. *See, e.g., IGWA*, 160 Idaho at 132, 369 P.3d at 910 (“Indeed, as the district court accurately and aptly noted, the very nature of conjunctive management involves a large disparity between the number of acres curtailed and the accrued benefit to a senior surface right.”). In the Rangen delivery call case, for instance, the Idaho Supreme Court upheld an order requiring “curtailment of 17,000 acres per cfs predicted to benefit Rangen.” *Id.* 135, 369 P.3d at 913. In this case, many fewer acres must be curtailed “per cfs,” even using South Valley's and Galena's numbers. Curtailing 23,000 acres to provide 8.5 cfs of benefit to three senior water rights requires curtailing only 2,706 acres per cfs of benefit to senior water rights.

Further, South Valley's and Galena's argument that curtailment would be futile incorrectly assumes that the Director may only consider the benefits of curtailment to the senior water rights held by water users who appeared in this proceeding. This case is not a response to a delivery call by individual senior water right holders, however, and Idaho Code § 42-237a.g., does not limit the Director to considering the benefits of curtailment to senior water users who have appeared in an administrative proceeding. In addition, the senior water right holders who appeared in this proceeding are not necessarily the only water users on Silver Creek and the Little Wood River who would benefit from curtailment. Almost all water rights on Silver Creek and the Little Wood River are senior to ground water rights in the Bellevue Triangle. Any of these surface water rights would be allowed to divert flows resulting from curtailment, within the limits of their individual priorities. Tr. p.898

Even assuming, simply for the sake of argument, that this proceeding was intended to address a “delivery call”—which it was not—curtailment of ground water pumping in the Bellevue Triangle is consistent with the futile call doctrine. Ground water pumping from the Wood River Valley aquifer is not limited to the Bellevue Triangle. Approximately one-third of the consumptive ground water use within the model domain comes from the aquifer area located outside the Bellevue Triangle. IDWR Ex. 2 at 22-23; Tr. pp.86-87. Further, limiting curtailment to the Bellevue Triangle will provide senior surface water users with 99% of the predicted benefit of curtailing all ground water uses within the domain of the WRV1.1 Model. *Id.* Limiting curtailment to the Bellevue Triangle, therefore, gives effect to the beneficial use principles underlying the futile call doctrine. *See IGWA v. IDWR*, 160 Idaho 119, 128, 369 P.3d 897, 906 (2016) (discussing the “trim line”).

South Valley and Galena also argue that “full” curtailment of all ground water pumping in the Bellevue Triangle is not justified because it would not provide usable water to surface water rights equal or junior in priority to April 1, 1884. *SVGWD-GGWD Brief* at 18-22. South Valley and Galena therefore argue the Director should limit curtailment of junior ground water rights within the Bellevue Triangle to those necessary “to satisfy surface water rights with priorities April 1, 1884 and junior.” *Id.* at 22. This assertion is a logically flawed because it contradicts the very assumption upon which it is based. South Valley and Galena begin with the assumption, based on the watermaster's testimony, that curtailing all junior water rights within