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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 RANGEN, INC.'S WATER RIGHT NOS. 36-02551 & 36-07694	Docket No. CM-DC-2011-004 **RANGEN, INC.'S CLOSING BRIEF**

Rangen, Inc., by and through its attorneys, submits the following Closing Brief in accordance with Director Spackman's verbal order on May 16, 2013.

I. INTRODUCTION

The spring water shortage that sparked the surface water vs. groundwater disputes over the past twenty years has come to a head. In the Spring of 1993, Alvin Musser, his brother Tim, and Butch Morris, their farmer tenant (the "Mussers"), made a water delivery call because the spring water from what is called the Martin-Curren Tunnel in the Hagerman Valley was no longer sufficient to fulfill their water rights. Musser v. Higginson, 125 Idaho 392, 393-94, 871

P.2d 809, 810-11 (1994). The Idaho Department of Water Resources ("IDWR" or the "Department") denied the Mussers' call even though there was no dispute that "[t]he springs which supply the Mussers' water are tributary to the Snake River and hydrologically interconnected to the Snake Plain aquifer (the aquifer)." Id. at 394, 871 P.2d at 811.

The Department claimed that it was ". . . not authorized to direct the watermaster to conjunctively administer ground and surface water within Water District 36A short of a hydrologic determination that such conjunctive management is appropriate." See id. The Department argued: (1) it did not have a groundwater model to demonstrate the hydrologic connection between groundwater use and spring flows; and (2) the conjunctive management rules were not yet complete. The Mussers filed suit against IDWR, asking the Court to issue a Writ of Mandate compelling the Department to conjunctively manage their rights. The District Court issued a Writ of Mandate to the Department and the Idaho Supreme Court affirmed that decision. The groundwater pumpers settled their dispute with the Mussers by building the Sandy Pipeline to provide the Mussers with an alternate source of water for irrigation.

Nearly twenty years after the Idaho Supreme Court issued the Musser decision, Rangen filed this delivery call because the spring water from the Martin-Curren Tunnel has continued to decline and is insufficient to satisfy Rangen's spring water rights. IDWR now has the tools it needs to evaluate Rangen's call. The Idaho Supreme Court has ruled that the Department's Conjunctive Management Rules are facially constitutional (American Falls Reservoir No.2 v. IDWR, 143 Idaho 862, 154 P.3d 433 (2007)) and the Department recently completed the development of the Eastern Snake Plain Aquifer Model 2.1 ("ESPAM2.1") which demonstrates the relationship between spring flows and groundwater pumping.

Using those tools to evaluate Rangen's Petition for Delivery Call, Rangen's Petition should be granted in its entirety because: (1) the Martin-Curren Tunnel, the source of Rangen's water, includes water from the tunnel mouth and the spring complex that forms the headwaters of Billingsley Creek; (2) Rangen's use of its water rights has been hindered or impacted by junior-priority groundwater pumping within the area covered by the boundaries of ESPAM2.1; (3) the opposing parties have not proven their defenses to the call by clear and convincing evidence; and (4) ESPAM2.1, the best available science to evaluate Rangen's call, demonstrates that junior-priority groundwater pumping within the boundaries of the model domain is materially injuring Rangen's use of its water rights and that curtailment of junior-priority groundwater pumping would result in a substantial increase of spring flows at Rangen's Research Hatchery. For these reasons, Rangen respectfully requests that its Petition for Delivery Call be granted in its entirety.

II. STANDARDS OF REVIEW (BURDENS OF PROOF)

The Department has promulgated the Conjunctive Management Rules to help evaluate and administer water delivery calls such as the one at issue in this case. "The rules acknowledge all elements of the prior appropriation doctrine as established by Idaho law." American Falls Reservoir No. 2 v. IDWR, 143 Idaho 862, 873, 154 P.3d 433, 444 (2007). "Idaho law," as defined by CMR 10.12, means "[t]he constitution, statutes, administrative rules and case law of Idaho.'" *Id.*[1] To initiate a water delivery call, the CMRs "require the petitioner, that is the senior water rights holder, to file a petition alleging that by reason of diversion of water by junior

[1] "Thus, the Rules incorporate Idaho law by reference and to the extent the Constitution, statutes and case law have identified the proper presumptions, burdens of proof, evidentiary standards and time parameters, those are a part of the CM Rules. Due to the changing nature of the law and rules, it is unnecessary to incorporate extant law unless specifically necessary to a clear understanding of the particular Rule." American Falls Reservoir District No. 2 v. IDWR, 143 Idaho at 873.

priority ground water rights holders, the petitioner is suffering material injury." Id. at 877, 154 P.3d at 448. Rule 40.03 is the starting point of that analysis. It states:

> In determining whether diversion and use of water under rights will be regulated under Rule Subsection 040.01.a or 040.01b, the Director shall consider whether the petitioner making the delivery call is **suffering material injury to a senior-priority water right** and is **diverting and using water efficiently and without waste**, and in a manner consistent with the goal of reasonable use of surface and ground waters as described in Rule 42. The Director will also consider **whether the respondent junior-priority water right holder is using water efficiently and without waste.**

IDAPA 37.03.11.040.03 (emphasis added).

Under this Rule, the Director has three separate determinations he has to make when determining whether to grant a petition for delivery call: (1) whether the petitioner is suffering "material injury"; (2) whether the petitioner is diverting water efficiently and without waste; and (3) whether the respondent junior-priority water right holders are using water efficiently and without waste. These are three distinct inquiries.

The term "material injury" is defined in the CM Rules as: "[h]indrance or impact upon the exercise of a water right caused by the use of water by another person as determined in accordance with Idaho Law, as set forth in Rule 42." Rule 42 is labeled "Determining Material Injury **and** Reasonableness of Water Diversions." IDAPA 37.03.11.042 (emphasis added). The Rule states:

> Factors the Director **may** consider in determining **whether the holders of water rights are suffering material injury and using water efficiently and without waste** include, but are not limited to the following:
>
> a. The amount of water available in the source from which the water right is diverted.
>
> b. The effort or expense of the holder of the water right to divert water from the source.

> c. Whether the exercise of junior-priority ground water rights individually or collectively affects the quantity and timing of when water is available to, and the cost of exercising, a senior-priority surface or ground water right. This may include the seasonal as well as the multi-year and cumulative impacts of all ground water withdrawals from the area having a common ground water supply.
>
> d. If for irrigation, the rate of diversion compared to the acreage of land served, the annual volume of water diverted, the system diversion and conveyance efficiency, and the method of irrigation water application.
>
> e. The amount of water being diverted and used compared to the water rights.
>
> f. The existence of water measuring and recording devices.
>
> g. The extent to which the requirements of the holder of a senior-priority water right could be met with the user's existing facilities and water supplies by employing reasonable diversion and conveyance efficiency and conservation practices; . . ..
>
> h. The extent to which the requirements of the senior-priority surface water right could be met using alternate reasonable means of diversion or alternate points of diversion, including the construction of wells or the use of existing wells to divert and use water from the area having a common ground water supply under the petitioner's surface water right priority.

IDAPA 37.03.11.042.01(a)-(h) (emphasis added). When responding to a water call, and in consideration of CMR 42 factors, "the burden is not on the senior water rights holder to re-prove an adjudicated right." American Falls Reservoir No. 2 v. IDWR, 143 Idaho 862, 878, 154 P.3d 433, 449 (2007). The Idaho Supreme Court has held:

> While there is no question that some information is relevant and necessary to the Director's determination of how best to respond to a delivery call, the burden is not on the senior water rights holder to re-prove an adjudicated right. 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. The Rules may not be applied in such a way as to force the senior to demonstrate an entitlement to the water in the first place; that is presumed by the filing of a petition containing information about the decreed right.

Id.

Rather, to avoid the senior having to relitigate its decreed water rights, and if a junior water user argues that the senior can use less than the decreed quantity of the right, the junior water user bears the burden of proving that less water can be used under any theory supporting an argument for the use of less water. "Once a decree is presented to an administrate agency or court, **all changes to that decree**, permanent or temporary, must be supported by clear and convincing evidence." A&B Irrigation District v. IDWR, 153 Idaho 500, 284 P.3d 225, 249 (2012).

Since nearly the time of statehood, the Idaho Supreme Court has held that it is the junior's burden of establishing non-injury, and any other theory justifying a senior not obtaining its water, by clear and convincing evidence:

> This court has uniformly adhered to the principle announced both in the constitution and by the statute that the first appropriator has the first right; **and it would take more than a theory, and, in fact, *clear and convincing evidence*, in any given case, showing that the prior appropriator would not be injured or affected by the diversion of a subsequent appropriator**, before we would depart from a rule so just and equitable in its application and so generally and uniformly applied by the courts. Theories neither create nor produce water, and when the volume of a stream is diverted and seventy-five per cent of it never returns to the stream, it is pretty clear that not exceeding twenty-five per cent of it will ever reach the settler and appropriator down the stream and below the point of diversion by the prior user.

Id. at P.3d 244, citing, Moe v. Harger, 10 Idaho 302, 77 P. 645 (1904) (emphasis added and in original).

In continuing to apply the clear and convincing standard to juniors in conjunctive management matters, the Idaho Supreme Court has held that the possibility of any error in the process of making a call should be borne by the juniors:

> The application of the clear and convincing standard of proof only makes sense from a common sense perspective. If the Director determines that a senior can satisfy the decreed purpose of use on less than the decreed quantity reflected, he needs to be certain to a standard of clear and convincing evidence. In making a determination of whether or not to regulate juniors, the Director is required to evaluate whether the quantity available meets or exceeds the quantity the senior can put to beneficial use. If the Director regulates juniors to satisfy the senior's decreed quantity there is no risk of injury to the senior. **However, if the Director regulates juniors to satisfy a quantity less than decreed, there is risk to the senior that the Director's determination is incorrect. There is no remedy for the senior if the Director's determination turns out to be in error and the senior comes up short of water during the irrigation season**. Any burden of this uncertainty should be borne by the junior.... [I]f the Director's determination is only based on a finding 'more probable than not.' The senior's right is put at risk and the junior is essentially accorded the benefit of uncertainty. The requisite high standard accords appropriate presumptive weight to the decree.

Id. at P.3d 242. (emphasis added).

To summarize the burdens of proof, if the junior alleges that the senior can use water differently than the way the senior's water right is decreed, the junior bears the burden of proof by a clear and convincing standard. This means that if IGWA, the City of Pocatello, or Fremont-Madison Irrigation District contend that their junior-priority pumping does not affect Rangen's use of water, they have the burden of proving a "futile call" by clear and convincing evidence. Moe v. Harger, 10 Idaho 302, 307, 77 P. 645, 647 (1904); Josslyn v. Daly, 15 Idaho 137, 96 P. 5687 (1908); Silkey v. Tiegs, 54 Idaho 126, 28 P.2d 1037 (1934); A&B Irrigation District v. IDWR, 153 Idaho 500, 284 P.3d 225, 249 (2012). "Futile call" is defined as, "A delivery call made by the holder of a senior-priority surface or ground water right that, for physical and hydrologic reasons, cannot be satisfied within a reasonable time of the call by immediately curtailing diversions under junior-priority ground water rights or that would result in waste of the water resource." IDAPA 37.03.11.010.08.

In addition to the junior's general burden of proving "no injury" and "futile call" by clear and convincing evidence, the junior bears the burden by clear and convincing evidence as to the following specific issues: (1) establishing waste, A&B Irrigation District v. IDWR, 153 Idaho 500, 284 P.3d 225, 241 (2012), citing Gilbert v. Smith, 97 Idaho 735, 739, 552 p.2d 1220, 1224 (1976); (2) water not being put to a beneficial use, Id.; and (3) forfeiture or abandonment, Id., citing Crow v. Carlson, 107 Idaho 461, 467, 690 P.2d 916, 922 (1984).

III. ARGUMENT (BENEFICIAL USE – RANGEN'S WATER RIGHTS)

A. Background.

1. History of Rangen.

Rangen was started in 1925 by Theodor Rangen. (Tr., p. 53, l. 13-16). The company was formally incorporated in 1935 and has been in business for 88 years. (Id.) One family has owned the company for three generations. (Id.) Rangen is a household name in Buhl. (Tr., p. 156, l. 25 – p. 157, l. 3). In fact, community members sometimes joke that Buhl is three blocks east of Rangen. (Id.)

Rangen is an agricultural company. (Tr., p. 53, l. 22 - p. 54, l.14). Its operations include the buying and selling of commodities (e.g., dry edible beans, grains), manufacturing of general feeds (e.g., feeds for land and air animals), and aquaculture. (Id.) Rangen's aquaculture division manufactures fish feed and operates the Rangen Aquaculture Research Center, a cold water trout facility also known as the "Research Hatchery." (Id.); (Tr., p. 58, l. 10-11).

2. History of Research Hatchery.

Rangen built the Research Hatchery in 1962 and has been raising fish there for 50+ years. (Tr., p. 522, l. 8-10). Thorleif Rangen, Theodor's son, was the passion and driving force behind the development of the facility. (Tr., p. 522, l.11 – p. 524, l.14). Thorleif loved aquaculture and

even received a lifetime achievement award from the U.S. Trout Farmers Association. (Id.) Thorleif built the facility as a place to develop and test Rangen's fish feeds and showcase Rangen's involvement in the aquaculture industry. (Id.) It was a place where Rangen entertained clients from all over the world and brought leading researchers together for conferences and work. (Id.; Tr., p.164 l. 4-11). Lynn Babbington, the manager of the Research Hatchery from 1971-1991, described the role of the Research Hatchery as follows:

> Q. From your perspective as the manager of the hatchery, what was the relationship between the hatchery and the feed mill in Buhl?
>
> A. The -- yeah, it was -- the goal was to make a profit. And then I don't know if that would be the first goal. That was my first goal, because that's how I got paid. But the -- the other part was to help other hatcheries. There was many, many people come through there from -- like I said, from local and from the United States and all across the world that we would help in any way that we could to inform them, educate them, show them the new technology or whatever to help -- help their facilities. And it was kind of a -- it was a way to help sell Rangen feed, to give them a full service company.

(Tr., p. 181, l.11 – p. 182, l. 2) (emphasis added).

The Research Hatchery is located a few miles South of Hagerman. See, Exh. 1001. Tom Rogers, IGWA's fish expert, explained that Hagerman Valley has a wonderful water source that is perfect for raising trout because it is 59 degrees. (Tr., p. 1775, L. 19-22). The facility consists of 60+ acres of land and is situated along a canyon rim. See Exh. 1004 for survey. A 1986 aerial photograph shows the current configuration of the facility and full raceways at that time. See, Exh. 1006. Most of the raceways are empty today because of the spring water shortage:

See, Exh. 1206A. Lynn Babbington drew a diagram of the facility which accurately represents the facility today.[2] See, Exh. 1005; (Tr., p. 159, l. 7 – p. 162, l. 2).

Rangen uses the Research Hatchery as part of its feed marketing strategy, but the center is more than just something to tout in a brochure. (Tr., p. 524, l. 7-14). Rangen has used the Research Hatchery to make important advancements that are used throughout the aquaculture feed industry (e.g., the development of a stabilized form of vitamin C and demand feeders) and develop leading-edge aquaculture feeds. (Id.); (Tr., p. 525, l. 1-6; p. 177, l. 14-24).

B. The Term "Martin-Curren Tunnel" as Used in Rangen's Partial Decrees Encompasses the Spring Complex that Forms the Headwaters of Billingsley Creek.

1. Rangen's Water Rights.

Rangen has made this Delivery Call based on Water Right Nos. 36-02551 and 36-07694. Both water rights were originally obtained through the permit and licensing process and were subsequently adjudicated in the Snake River Basin Water Adjudication ("SRBA") resulting in

[2] Mr. Babbington explained that the hatchery building shown on the diagram has been expanded to include a laboratory and greenhouse and there is now also a separate building that houses a hatchery office and shop.

the issuance of Partial Decrees in Rangen's favor. The Partial Decree for Water Right No. 36-02551 grants Rangen the right to use 48.54 cfs of water for year-round fish propagation at its Research Hatchery. [3] See, Exh. 1026. The Partial Decree for Water Right No. 36-02551 describes the source of the water as: "Source: Martin-Curren Tunnel; Tributary: Billingsley Creek". (Id.) The backfile associated with Water Right No. 36-02551 is Exh. 1027A.

The Partial Decree for Water Right No. 36-07694 grants Rangen the right to use 26 cfs of water for year-round fish propagation at its Research Hatchery. The Partial Decree for Water Right No. 36-07694 describes the source of the water as: "Source: Martin-Curren Tunnel; Tributary: Billingsley Creek". (Id.) Rangen first obtained the right to use Water Right No. 36-07694 through the permit process. See, Exh. 1029 for the backfile associated with Water Right No. 36-07694.

2. The Latent Ambiguity Rules.

The decreed source of the two rights at issue is the "Martin-Curren Tunnel; tributary to Billingsley Creek." Rangen's Partial Decrees follow the standard SRBA form. The form is based on the Director's Report filed by the Department. Section 42-1401(B) of the Idaho Code explains the role that the Department played in the SRBA. It states in relevant part:

> (1) the Director's role under this chapter is as an independent expert and technical assistant to assure that claims to water rights acquired under state law are accurately reported in accordance with the procedures of chapter 14, title 42, Idaho Code. The director shall make recommendations as to the extent of beneficial use and administration of each water right under state law and may use

[3] Water Right No. 36-02551 is a companion to Water Right No. 36-15501 (not at issue in this case). Water Right No. 36-02551 is for 48.54 cfs of water and Water Right No. 36-15501 is for 1.46 cfs of water. See Exh. 1 to *Brody Affidavit in Support of Motion for Partial Summary Judgment Re: Source* for a copy of the Partial Decree for Water Right No. 36-15501. The two rights together are for a total flow of 50 cfs to be used for year-round fish propagation. The only difference between the two rights is the priority date. Water Right No. 36-15501 has a priority date of 7/1/1957. See Exh. 1 to *Brody Aff.* Water Right No. 36-02551 has a priority date of 7/13/62.

parameters for quantification of beneficial use recommended for rights within climatic regions of the state.

I.C. § 42-1401B(1). To fulfill its role as an independent expert and technical assistant, the Department was required to file a Director's report on the Snake River Basin which included, in pertinent part, determination of the following elements of the water rights within a basin:

(a) the name and address of the claimant;

(b) the source of water;

* * *

Idaho Code § 42-1411 (emphasis added).

The Department has promulgated an extensive set of rules governing its role in the adjudication process. IDAPA 37.03.01 (Adjudication Rules). The Department's Adjudication Rules actually specify how water sources were to be listed in the claim forms used in the SRBA. The claim forms were the basis for the Partial Decrees that were entered. Rule 37.03.01.060.02.c states:

> Source of Water Supply. The source of water supply shall be stated at item three (3) of the form.
>
> i. For surface water sources, the source of water shall be identified by the official name listed on the U.S. Geological Survey Quadrangle Map. **If no official name has been given, the name in local common usage should be listed.** If there is no official name, the source should be described as "unnamed stream" or "spring." The first named downstream water source to which the source is tributary shall also be listed. For ground water sources, the source shall be listed as "ground water."

IDAPA 37.03.01.060.02.c (emphasis added).

The "Martin-Curren Tunnel" is the name of Rangen's water source in local common usage. The question is: to what does the name refer? Rangen contends that the term "Martin-Curren Tunnel" as used in the decree means the spring water that forms the headwaters of

Billingsley Creek that Rangen legally appropriated and has been using to produce fish for the past 50+ years. IGWA contends that the term "Martin-Curren Tunnel" unambiguously refers to the hole in the canyon wall at the head of the Rangen hatchery and nothing else. Pocatello contends that Rangen's Partial Decrees are ambiguous (See, Pocatello's Response in Opposition to Rangen's Motion for Summary Judgment Re: Source), but argues that the ambiguity must be resolved by ruling that Rangen's water rights are limited to water emanating from the mouth of the Martin-Curren Tunnel itself and not any of the other spring water on the talus slope. The term "Martin-Curren Tunnel" constitutes a latent ambiguity that must be interpreted through the use of parol evidence. Based on the evidence presented at the hearing, the Director must conclude that the term "Martin-Curren Tunnel" includes the entire spring complex that forms the headwaters of Billingsley Creek.

The Idaho Supreme Court has explained that when interpreting decrees it uses the same interpretation rules it applies in contract cases. A&B Irr. Dist. v. Spackman, 153 Idaho 500, 523, 284 P.3d 225, 248 (2012). The Court recently explained that there are two types of ambiguities that can appear when interpreting contracts:

> There are two types of ambiguity, patent and latent. A patent ambiguity is an ambiguity clear from the face of the instrument in question. Idaho courts look solely to the face of a written agreement to determine whether it is patently ambiguous.
>
> * * *
>
> **A latent ambiguity exists where an instrument is clear on its face, but loses that clarity when applied to the facts as they exist.** *Cool*, 139 Idaho at 773, 86 P.3d at 487. **Although parol evidence generally cannot be submitted to contradict, vary, add or subtract from the terms of a written agreement that is deemed unambiguous on its face, there is an exception to this general rule where a latent ambiguity appears.** *Salfeety v. Seideman* (*In re Estate of Kirk*), 127 Idaho 817, 824, 907 P.2d 794, 801 (1995). Where the facts in existence reveal a latent ambiguity in a contract, the court seeks to determine what the intent of the

> parties was at the time they entered into the contract. *See Snoderly v. Bower*, 30 Idaho 484, 488, 166 P. 265, 266 (1917) ("It is not for the court or jury to make ***a*** contract for the parties, but only to determine what the parties intended the ambiguous terms to mean at the time they entered into the agreement.").

Knipe Land Co. v. Robertson, 151 Idaho 449, 455, 259 P.3d 595, 601 (2011) (citations omitted) (emphasis added).

There is a two-step process for addressing a latent ambiguity:

> It will be seen from this rule that the process in explaining latent ambiguity is divided into two parts: First, the introduction of extrinsic evidence to show that the latent ambiguity actually existed, and second, the introduction of extrinsic evidence to explain what was intended by the ambiguous statement.

Snoderly v. Bower, 30 Idaho 484, 487, 166 P. 265 (1917).

The Idaho Supreme Court applied the latent ambiguity rules in Williams v. Idaho Potato Starch Co., 73 Idaho 13, 20, 245 P.2d 1045, 1048-49 (1952). In Williams, a well driller agreed to drill a well to supply water to a potato processing plant. The parties' agreement stated that that the well driller would drill a hole "sufficiently straight to accommodate a ten inch pump at a sufficient depth below the water level to insure a continuous flow of water." Id. at 17, 245 P.2d at 1047. The well driller started work on the well and drilled to over 200 feet. He demanded payment for his work, but the potato processer refused to pay claiming that the well was not straight enough to accommodate a water-lubricated pump.

The Idaho Supreme Court found that the testimony at trial demonstrated that the term "ten inch pump" was susceptible to different meanings and that the ambiguity had to be resolved by extrinsic evidence:

> Where a writing contains a reference to an object or thing, such as a pump, and it is shown by extrinsic evidence that there are two or more things or objects, such as pumps, to which it might properly apply, a latent ambiguity arises; *Queen Insurance Co. v. Meyer Milling Co., 8 Cir., 43 F.2d 885*; *Meinhardt v. White, 341 Mo. 446, 107 S.W.2d 1061*; *Hall v. Equitable Life Assurance Co. of the U. S., 295*

> *Mich. 404,295 N.W. 204*; *Zydel v. Clarkson, 29 Ohio App. 382, 163N.E. 584*; *Koplin v. Franklin Fire Ins. Co., 158 Pa.Super.301, 44 A.2d 877.* See also 32 C.J.S., Evidence, § 961, page 917, and Jones on Evidence, 4th Ed., Vol. 4, Sec. 472, p. 902, wherein the general rule is recognized that parol evidence cannot be received to contradict, vary, add to or subtract from the terms of an unambiguous written agreement, but where it is also recognized that there are some well recognized exceptions to this rule which includes, as does this case, a situation where a latent ambiguity might not appear upon the face of the contract, but lies hidden in the subject to which it has reference: Where such ambiguity is thus disclosed by extrinsic evidence such as was disclosed by the appellant through his testimony, such ambiguity may be removed by the same means, that is, extrinsic evidence to show which type of pump the description related to. Jones on Evidence, 4th Ed., Vol. 4, Sec. 472, p. 902.

Id. at 20, 245 P.2d 1048-49. The evidence in this case demonstrates that the term "Martin-Curren Tunnel" in Rangen's Partial Decrees constitutes a latent defect, and that the ambiguity must be resolved in Rangen's favor by finding that it includes the spring complex that forms the headwaters of Billingsley Creek.

3. The Evidence Shows that the Term "Martin-Curren Tunnel" Constitutes a Latent Ambiguity that Must be Resolved in Rangen's Favor.

There is no dispute that Rangen has been using the spring water that forms the headwaters of Billingsley Creek to raise fish for more than fifty years. Tim Luke is a Water Compliance Bureau Chief for the Department. (Tr., p. 1129, l.23 - p. 1130, l. 3). He has been out to the Research Hatchery on numerous occasions since 1992. (Tr., p. 1130, l. 22 – p. 1131, l. 2). Luke testified that Rangen diverts and uses not only the water from the mouth of the Martin-Curren Tunnel, but also from the springs on the talus slope where the tunnel is located. He testified:

> Q. Okay. And to be sure, the way Rangen collects water they collect water not only from the Curren Tunnel, but all the spring sources located on the talus slope; correct?
>
> A. Yes.

Q. And all that water that's taken out of the Curren Tunnel and the talus slope is measured at the two points I just described; correct?

A. Yes.

(Tr., p. 1174, l. 7-15).

Luke testified that Rangen diverts and uses the water the same way as it always has:

Q. Now, again, the full time you've been observing Rangen, you know that all the water that's collected off the slope goes through their facility? You're aware of that?

A. Yes.

Q. IDWR is aware of that; correct?

A. Yeah. **They're diverting the water the same as they always have. And the water rights used to be -- at one time they didn't say Curren Tunnel. They said springs.**

(Tr., p. 1177, l. 22 - p. 1178, l. 6) (emphasis added).

IDWR has never told Rangen that it is not within its rights to use the spring water from the talus slope:

Q. And so, Mr. Luke, there's been no purpose or occasion by you or anyone else to say "Rangen, you're using your water rights illegally"? No one's ever done that, have they?

A. No, not to my knowledge.

(Tr., p. 1177, l. 22 – p. 1178, l. 11). This is not a case where IDWR has not examined Rangen's water use. The Department investigated Rangen's water use in 2003 when Rangen made its first Delivery Call. Cindy Yenter and Brian Patton were the Department employees who lead the 2003 investigation. (Tr., p. 547, l. 17-25). See, Exh. 1129 for a copy of Yenter's investigation memo. Ms. Yenter explained that as part of the investigation, she and Mr. Patton examined how

the water traveled through the facility, where the diversions were made, sufficiency of the water supply, and interconnection of the raceways:

> Q. Cindy, go over kind of procedurally what you did when Director Dreher asked you to go down to the Rangen facility in 2003.
>
> A. Okay. As I recall, we just did a basic walk-through of the facility, starting at the diversion, worked our way down through the facility, discussed how water traveled through the facility, where the measurements were made, where each use was diverted, you know, where the water discharged. Just -- and that's pretty standard when we go out to do an investigation, is kind of start at the top, work your way down. But we just went down through and asked questions related to, you know, sufficiency of the water supply and what was the -- you know, where did they divert their irrigation water and the interconnection between the raceways, because sometimes in a hatchery that's obvious and sometimes it's not so obvious.

(Tr., p. 550, l. 19 – p. 548, l. 4). Following Ms. Yenter's investigation, the Department recognized in paragraph 54 of its findings in the Second Amended Order issued on May 19, 2005 that Rangen is legally entitled to appropriate water from the spring complex that forms the headwaters of Billingsley Creek. In that Order, the Department found:

> **The flow measurements that are considered to be representative of the total supply of water available to the Rangen hatchery facilities under water right nos. 36-15501, 36-02551, and 36-07694, consist of the sum for the discharge from raceways designated by Rangen as the "CTR" raceways and the flow over the check "Dam."** The dam is sited upstream for the discharge points from the CTR raceways and downstream from the discharge points from raceways designated by Rangen as the "Large" raceways. The sum of the discharge from the CTR raceways and the flow over the check dam is considered to be representative of the total supply of water available even though that at times some of the flow over the check dam may include water flowing from small springs downstream from the diversion to the Large raceways, water discharged from the Large raceways that was not diverted though the CTR raceways and irrigation return flows.

See, Second Amended Order dated May 19, 2005 (attached to Haemmerle Affidavit in Support of Motion for Partial Summary Judgment re: Material Injury). See, Exh. 1074 for a diagram showing Rangen's measurement points discussed above.

IGWA contends that the phrase "Martin-Curren Tunnel" is simple to understand – the tunnel is the hole in the canyon wall and nothing else. The phrase "Martin-Curren Tunnel," however, "loses clarity" when examined in light of the fact that IGWA and Pocatello now contend that Rangen has no right to any water except the flow from the mouth of the tunnel itself even though Rangen has beneficially used the water that forms the headwaters of Billingsley Creek for 50+ years and IDWR determined in 2005 that the flows available under Rangen's water rights are those historical flows. If a term "loses clarity" when applied to the facts of a particular situation, then there is a latent defect in the instrument which must be resolved using parol evidence. Knipe Land Co. v. Robertson, 151 Idaho 449, 455, 259 P.3d 595, 601 (2011) ("A latent ambiguity exists where an instrument is clear on its face, but loses that clarity when applied to the facts as they exist.") (citations omitted). In this case, the ambiguity must be resolved by looking at parol evidence found in the backfiles to Water Right Nos. 36-02551 and 36-07694.

Rangen submitted its application to divert 50 cfs of water (eventually decreed as Water Right No. 36-02551) in 1962. See, p. 32 of Exh. 1027A. Rangen's application designated the source of that water as "the headwaters of Billingsley Creek which is derived from underground springs." (Id.) When the State advertised Rangen's application, it designated the source of Rangen's water as the "headwaters of Billingsley Creek." See, page 22 of Exh. 1027A.

After Rangen completed the construction of its Research Hatchery, the State Reclamation Engineer advertised its intent to take proof of Rangen's Completion of Works and again

described the source of Rangen's water right as the "headwaters of Billingsley Creek." See, p. 18 of Exh. 1027A.

The Report of Engineer upon Completion of Works described the source as: "Water for ponds comes from a spring which is source of Billingsley creek, a 14" x 400' pipe feeds water from high on the rimrock where the spring emerges to the nursery ponds. A 36" x 1100' pipeline feeds the Research ponds from a lower pond." See, p. 57 of Exh. 1027A. It is evident from this description that Rangen had constructed a diversion structure to beneficially use all of the water coming from the head of its Research Hatchery – the water emerging from the Martin-Curren Tunnel itself as well as all of the springs around it which fed the lower pond. When the State issued a license to Rangen for the 50 cfs of water in 1967, it designated the source as "underground springs, a tributary of Billingsley Creek." See, p. 29 of Exh. 1027A.

Rangen applied for a supplemental permit to appropriate waters from the same source and using the same diversion structure in April 1977. See, p. 31 of Exh. 1029. Lynn Babbington explained that he was involved in the application process for this water right. (Tr., p. 182, l. 3-14). The application had a typewritten designation of source as "underground springs". See, p. 31 of Exh. 1029. The term "Curran Tunnel" was hand-printed right above the designation. (Id.) A diagram in the Department's backfile showed the diversion of multiple springs flowing from the canyon wall. See, Exh. 1029, p. 2.

After Gary Funderberg, the state examiner, did his field report, Mr. Babbington wrote to him asking him to allow Rangen to measure water flows at the outlets of its Research Hatchery rather than the inlets:

> Recently Gary Funderberg, senior water resources agent southern region, made a field examination of our water system so that our license could be issued. At

this time he noted that we did not have a measuring device at the inlet. With the terrain and collection system of the water it is not feasible to have a measuring device at the inlet.

All the water is run through steel or concrete \ponds and thru a measuring device at the outlet. I would like to request that the measuring device at the inlet be waived.

See, p. 52 of Exh. 1029. Mr. Babbington explained that it wasn't possible to have measuring devices at all of the "inlets" because the springs were all over the hillside at the head of the Research Hatchery:

Q. Do you remember what this letter was all about?

A. That was after Gary had been out – Gary Funderberg had been out and did his field exam and had said that we needed a -- it called for a measurement device at the inlet. **But the inlet was every place on the hillside, so to speak, with many springs, individual springs coming in that it wasn't feasible to measure those.** So I asked if we could measure at the -- at the exit of the ponds.

(Tr., p. 188, l. 20 – p. 189, l. 6). (Emphasis added). The Department entered an order approving the request. See, p. 30 of Exh. 1029.

When the State issued the license for water right 36-07694, **it designated the source as "water from springs, tributary to Billingsley Creek" and entered a note that the source (i.e., springs) is known locally as "Curran Tunnel".** See, p. 28 of Exh. 1029. When asked what he understood the term "Curran Tunnel" to mean, Mr. Babbington explained:

Q. Okay. And take a look now at page 29 of that license. And do you see the note there, the comment, it says, "Source known locally as Curren Tunnel"?

A. Uh-huh.

Q. You have to say "yes."

A. Yes.

Q. Okay. What did you understand was the Curren Tunnel?

A. **The Curren Tunnel was the -- up on the hillside, a tunnel there. But it was known to me to be all of the -- all of the water up there. Whether it be called Curren Tunnel or head of Billingsley Creek or Curren Springs, they were all -- all meant the same thing. It was the -- all the springs that was a source to the hatchery.**

(Tr., p. 190, l. 19 – p. 191, l. 2). (Emphasis added).

The lack of clarity and consistency pertaining to the name "Martin-Curren Tunnel" is also evident in the pre-printed flow measurement forms that IDWR has provided to Rangen over the years. Rangen receives two forms each year. In 1997, the year Rangen's Partial Decrees were entered, the forms read:

FORM A

Diversion Name or Facility: Rangen Pipe from Curren Tunnel

Water Source: Martin Curren Tunnel

FORM B

Diversion Name or Facility: Rangen Hatchery/Billingsley Ck Head

Water Source: Springs

See Exh. 1061.

In 1998 and 1999, the preprinted forms read:

FORM A

Diversion Name or Facility: Rangen Pipe from Curren Tunnel

Water Source: Martin Curren Tunnel

FORM B

Diversion Name or Facility: Rangen Hatchery/Billingsley Ck He

Water Source: Springs/Curren Tunnel

See Exh. 1061

From 2000 to 2005, the preprinted forms read:

FORM A

Water Source: Martin Curren Tunnel

FORM B

Water Source: Springs/Curren Tunnel

See, Exh. 1061.

After 2006, the Department appears to have eliminated the description of the source on the forms. See, Exh. 1061.

Mr. Luke pointed out during his testimony that at one time Rangen's water rights showed that the source was "springs". (Tr., p. 1177, l. 22 - p. 1178, l. 6). His testimony evokes the question why was it changed? The answer to that question lies in IDAPA 37.03.01.060.02.c which provides that in the SRBA surface water sources are supposed to be identified by their name in local common usage if there is no official name on the USGS Quadrangle map. It is evident from the testimony at the hearing that the phrase "Martin-Curren Tunnel" is a local identifier used to identify the spring water that forms the headwaters of Billingsley Creek. There is no dispute that Rangen has beneficially used this spring water for fifty years to raise trout at its Research Hatchery and that the Department previously found that these flows represented the water available under Water Right Nos. 36-02551 and 36-07694. As such, the Director should construe the Partial Decrees in Rangen's favor and find that the term "Martin-Curren Tunnel" encompasses the spring complex that forms the headwaters of Billingsley Creek.

4. Rangen's Decreed Point of Diversion is a Ten-Acre Tract that Encompasses All of the Springs that Form the Headwaters of Billingsley Creek.

Prior to the hearing, Rangen filed a Motion for Partial Summary Judgment seeking a declaration that its source includes all of the spring water that forms the headwaters of Billingsley Creek, not just spring water that emanates from the mouth of the Martin-Curren Tunnel itself. Director Spackman ruled that there were genuine issues of material fact which precluded summary judgment on this issue and included in his ruling the conclusion that Rangen cannot divert water from any source outside the ten-acre tract that is defined in its Partial Decrees. See, *Order Granting in Part and Denying in Part IGWA's Petition for Reconsideration and Clarification*, at ¶¶ 12 and 13.

Rangen's Partial Decrees identify the point of diversion as: T07S R14E S32 SESWNW (hereinafter referred to as "10 acre tract" or "Eastern Parcel"). Director Spackman's preliminary conclusion did not take into consideration the diversion structure that Rangen has in place or the Department's adjudication rules for identifying points of diversion at the time Rangen's Partial Decrees were entered. With all of the evidence now in the record, Director Spackman should rule that Rangen's Partial Decrees allow for the diversion and use of the all of the spring waters that form the headwaters of Billingsley Creek, not just the water that emanates from the mouth of the Martin-Curren Tunnel itself.

To analyze this issue it is important to begin with IDWR's adjudication rules as they existed when Rangen's water rights were decreed. As explained above, the Department uses its adjudication rules to make recommendations to the SRBA and those recommendations become the foundation for the decrees that are entered. Rangen's Partial Decrees were entered in 1997. At that time, the Department had a rule spelling out how points of diversion were to be identified. The rule stated:

05. Long Claim Form - Minimum Requirements. Claims filed on the long claim form shall contain the following information:

* * *

d. Location of point of diversion. For claims other than instream flows, the location of the point(s) of diversion shall be listed at item four (4) part (a) of the form. For claims to instream flows for public purposes, the beginning and ending points of the claimed instream flow shall be listed at item four (4) part (b) of the form.(7-1-93)

i. The location of the point of diversion shall be described to nearest forty (40) acre tract (quarter-quarter section) or government lot number, and shall include township number (including north or south designations), range number (including east or west designations), section number, and county. **The location of the point of diversion should be described to the *nearest* ten (10) acre tract (quarter-quarter-quarter section) if that description is reasonably available.** (7-1-93)

ii. If the point of diversion is located in a platted subdivision, a plat of which has been recorded in the county recorder's office for the county in which the subdivision is located, the claimant shall also list the subdivision name, block number and lot number in the remarks section of the form. (7-1-93)

iii. A claim to a water right that includes storage shall state the point at which water is impounded (applicable only to instream reservoirs) or the point at which water is diverted to storage (applicable only to offstream reservoirs), the point at which water is released from storage into a natural stream channel (applicable only where a natural stream channel is used to convey stored water), and the point at which water is rediverted (applicable only where a natural channel is used to convey stored water). (7-1-93)

iv. Only one (1) point of diversion shall be listed unless the claim is for a single water delivery system that has more than one (1) point of diversion, or the claim is for a single licensed or decreed water right that covers more than one (1) water delivery system. If more than one (1) point of diversion is listed and the claim is not for a single water delivery system that has more than one (1) point of diversion, and the claim is not for a single licensed or decreed water right that covers more than one (1) water delivery system, the claim will be rejected and returned along with any fees paid, and must be refiled as multiple claims. (7-1-93)

IDAPA 37.03.01.060.05.d (emphasis added).

As explained below in detail, Rangen has a diversion structure that begins at the mouth of the Martin-Curren Tunnel itself, continues down the talus slope, channels water into a pond which then supplies water through a 36" concrete pipeline to the Large Raceways. Rangen's diversion structure captures the spring water that forms the headwaters of Billingsley Creek, and Rangen has been using those waters to produce fish for fifty or more years.

Exhibit 1452 provides a starting place for understanding Rangen's diversion structure:

The mouth of the Martin-Curren Tunnel is shown in the upper left corner of Exhibit 1452 with multiple white pipes coming from it. There is a concrete box at the mouth of the tunnel which the parties have referred to as the "Farmer's Box." The concrete structure shown in the middle of Exhibit 1452 has been referred to as the "Rangen Box."

Exhibit 3278 provides a closer view of the Martin-Curren Tunnel and the Farmer's Box:

Exh. 3278. The pipes labeled "Irrigation Pipelines" were used historically for farmer irrigation. The 6" White Pipe takes water to Rangen's Hatch House (where eggs and fry are raised), the Green House (where research is done) and to the Laboratory. The other two white pipes labeled "Small Raceways" and "Lower" take water further down the talus slope as shown in the next photograph:

Exh.1453. The concrete structure in this photograph is the "Rangen Box" shown from above. One of the white pipes from the Farmer's Box feeds water straight into the Rangen Box. The other white pipe diverts water onto the talus slope where it is then channeled downhill. The following photograph shows the white pipe depositing water onto the talus slope:

Exh. 1454. Sullivan testified that there is actually a rock wall that channels this water into the Rangen Box. (Tr., 1460, l. 21 – p. 1462, l. 2).

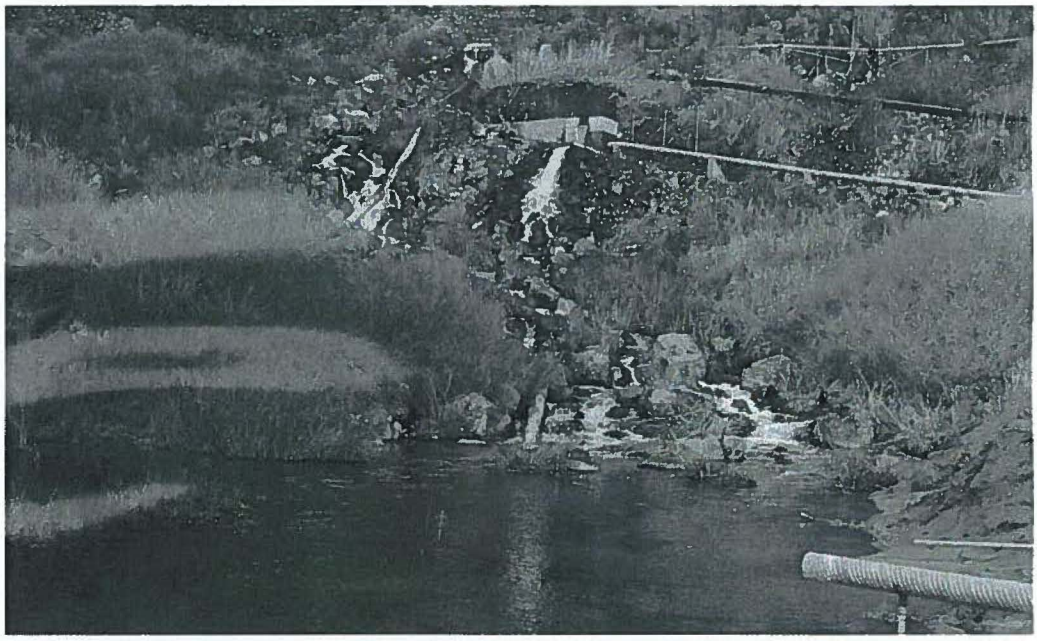
[Intentionally left blank]

The following photograph is a front view of the Rangen Box:

Exh. 1456. Water can be diverted from the Rangen Box to the Small Raceways using the steel pipe that is coming out of the right side of the concrete structure. Alternatively, water can be allowed to go through the opening and then channeled down to a pond that supplies water to a dam structure leading to the Large Raceways. (Tr., p. 1662, l. 25 – p. 1663, l. 6). Greg Sullivan testifies that water is channeled from the Rangen Box to what he called the Lower Diversion. The following photograph is an aerial view of the water coming out of the Rangen Box and being channeled down the talus slope to the pond that that goes to the dam structure:

[Intentionally left blank]

Exh. 1458. Water is channeled down the talus slope to a pond that forms the headwaters of Billingsley Creek. The following photograph shows water channeled from the talus slope into that pond:



Exh. 1017A, p. 9. There is a dam structure and 36" pipeline at the opposite end of the pond.

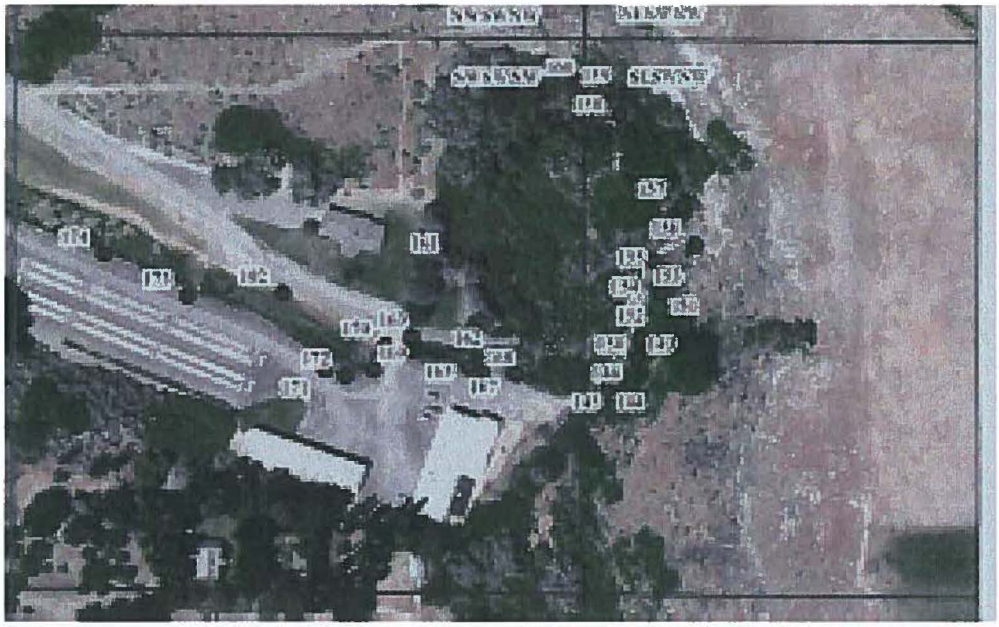
The following photograph shows the dam and pipeline to the Large Raceways:

Exh. 1446D-16.

While the opposing parties have characterized Rangen as having an "upper diversion" and "lower diversion," it is evident from the photographs and descriptions above that Rangen has a single diversion structure that carries water from the mouth of the Martin-Curren Tunnel itself to the Large Raceways and picks up additional spring water from Rangen's property along the way. Some of that spring water comes from the 10 acre tract and a small amount of that water comes from the tract next to it. Part of Rangen's diversion structure lies in the 10 acre tract and part of it does not.

Exhibit 1446C is an aerial photograph prepared by Dr. Chuck Brockway, Rangen's water resource engineer. Exhibit 1446C shows Rangen's Research Hatchery as it relates to the boundaries of Section 32 (hereinafter referred to as "Water Source Analysis"). The Water Source Analysis has been labeled with numbers which correspond to, among other things, various features of Rangen's diversion structure. A legend for the red dots is found on page 3 of Exhibit 1446A which explains the process that Dr. Brockway used for his Water Source

Analysis. Dr. Brockway shows that Rangen's diversion structure lies in two different quarter/quarter/quarter sections that sit next to each other:



See, Exh. 1446C. The Farmers Box, Rangen Box and talus slope sit in the 10 acre tract or Eastern parcel. The end of the pond with the dam, however, sits in the Western parcel (actually described as SWSWNW of Section 32).

Shortly after the hearing got started, Director Spackman ruled that:

> The point of diversion element decreed by the SRBA court unambiguously limits diversion to T07S R14E S32 SESWNW. Therefore, by the unambiguous terms of its SRBA partial decrees, Rangen is not authorized to divert water from sources outside T07S R14E S32 SESWNW. Without a water right that authorizes diversion outside T07S R14E S32 SESWNW, Rangen cannot call for delivery of water from sources located outside its decreed point of diversion.

See, *Order Granting in Part and Denying in Part IGWA's Petition for Reconsideration and Clarification* at ¶11. This ruling erroneously equates source with the point of diversion. A water right holder can have a source of water that is not within the tract identified for its point of diversion. Source and point of diversion are not the same thing and do not necessarily fall within

the same legal description. In addition, in Rangen's case, the 10 acre tract is the proper legal description for Rangen's diversion structure based on IDAPA 37.03.01.060.05.d. The Farmer's Box, Rangen Box and talus slope fall within the 10 acre tract. The dam where water is directed to the Large Raceways is located in the quarter/quarter/quarter section right next to it. As explained above, Department rules in place at the time Rangen's Partial Decrees were entered specified that "**[t]he location of the point of diversion should be described to the *nearest* ten (10) acre tract (quarter-quarter-quarter section) if that description is reasonably available.**" The nearest 10 acre tract for the dam is the parcel that is described in the Partial Decrees. This means that Rangen can legally divert and claim as a source all of the spring water that forms the headwaters of Billingsley Creek.

On a final note, even if Director Spackman rejects the arguments above, Rangen is still legally entitled to claim as the source of its water 97% of the spring water that feeds its Research Hatchery. After the Director's oral ruling at the Prehearing Conference on April 22, 2013, regarding the source and point of diversion, Dr. Brockway performed the Water Source Analysis discussed above to determine how much water emanates from springs in the Eastern parcel and how much water emanates from springs in the Western parcel. See, Exh. 1446A for a report of the process he used and his findings and Exh. 1446B for a spreadsheet showing his water measurements and water balance calculations.

Dr. Brockway went to the Research Hatchery and used a GPS to plot various springs and other features (including pipes) at the Research Hatchery. See, Exh. 1446A, p. 3 for a list of GPS points. He plotted these features on an aerial photograph showing the boundaries of the Eastern and Western parcels. See Exh. 1446C for Dr. Brockway's aerial photograph showing the GPS points and Exhibit 1446D for photographs of the GPS sites. Based on his inspection,

he determined that much of the spring water that emanates from the 10 acre tract can be identified, but not measured where it emerges because of difficult terrain. (Tr., p. 1046, l. 18 – p. 1047, l. 8). Water emanating from the Western parcel, in contrast, was more easily measured because it flows through pipes which flow into the pond that feeds the Large Raceways and forms the headwaters of Billingsley Creek. (Id.)

Dr. Brockway asked Rangen personnel to measure the flow of water through the entire facility as they usually do and then he subtracted out the springs flows that came from the Western parcel through the pipes that flow into the pond that feeds the Large Raceways and forms the headwaters of Billingsley Creek. Id. There was one pipe (GPS point 162) that flowed into the pond that carried spring water from both the Eastern and Western parcels (Tr., p. 1054, l. 10 – p. 1055, l. 6). Because of the terrain, Dr. Brockway had to make an estimate of how much water came from the Eastern parcel and how much came from the Western parcel. (Id.) He estimated that 20 percent of the water came from the Western parcel. (Id.). Dr. Brockway ultimately concluded that of the 12.44 cfs flowing through the facility on April 22' 2013, 12.06 cfs came from the 10 acre tract that is described as the point of diversion in Rangen's Partial Decrees.

C. Rangen is Being Materially Injured by Junior-Priority Groundwater Pumping in the Area Encompassed by the Boundaries of ESPAM2.1.

1. Rangen's Water Right Nos. 36-02551 and 36-07694 Are Not Being Filled.

Rangen's water rights at issue have a combined diversion rate of 74.54 cfs (48.54 + 26). Rangen's flows have been steadily declining for decades. See, Exh. 1075. In 2012, Rangen's measurements showed a yearly average flow of 14.1 cfs. Over the last ten (10) years, Rangen's average flow of water has been 14.4 cfs. (Id.) Wayne Courtney, Rangen's Executive Vice

President, testified on the first day of trial that the water measurements for the week of May 1, 2013, showed flows at 11.73 cfs. (Tr., p. 91, l. 15-22). The week before the flows had been 12.44 cfs. (Id.)

2. Rangen Has Been Measuring and Recording Water Flows at the Research Hatchery Since it Was Built.

Rangen's reported water measurements have been accepted ever since the measurements have been reported to IDWR. "Rangen submitted annual water measurement reports directly to IDWR from 1995 through 2009, and to Water District 36A from 2010 to 2012. IDWR has accepted these annual water measurement reports during this period of record understanding that Rangen estimates hatchery diversions or flows using fish raceway check boards as non-standard weir measuring devices." See, Exh. 3203.

a. Rangen's Measurement Methods.

Rangen has been measuring water flows at the Research Hatchery since 1966. See, Exh. 1075 for a summary chart of water measurements that Rangen maintains. Dan Maxwell, a fish culturist at the Research Hatchery, is currently responsible for taking the measurements. Mr. Maxwell went to work at the facility in February, 1992. (Tr., p. 266, l. 16-18). He started taking the measurements in January of 1999. (Tr., p. 268, l. 9-12). Mr. Maxwell takes the measurements every Monday. (Tr., p. 270, l. 1-6). In order to measure all of the water that flows through the Research Hatchery and is available for use, Maxwell takes two separate measurements and adds them together. He takes one measurement at the bottom of the top set of the CTR ponds and he takes the other measurement where the water flows over the Lodge Pond dam board. These two locations are shown as "measurement points" on the sketch attached as Exh. 1074. (Tr., p. 269, l. 1-5).

He takes the measurements by placing a metal yardstick at the top of the dam boards in both locations and reading the level of the flow as it passes over the dam boards. (Tr., p. 274, l. 18 – p. 275, l 1). The yardstick is placed so that the face is perpendicular to the water. (Tr., p. 275, l. 4-6). Dr. Brockway, a water resources engineer who has been involved in Idaho water since 1954, explained that the ruler method used by Rangen to measure the water flow is called "sticking the weir." (Tr., p. 920, l.17-20; p. 930, l. 14-23). "Sticking the weir" is used when a standard staff gauge has not been incorporated into the weir setup. (Tr., p. 930, l. 24 – p. 931, l. 8). Sticking the weir is a common measurement method that fish producers use in Idaho. (Tr., p. 931, l. 13-20). Dr. Brockway observed Mr. Maxwell taking water measurements and testified that Rangen's flow measurements are accurate and within industry standards. (Tr., p. 968, l. 17-22).

Frank Erwin, the local watermaster, testified that he has also observed Maxwell taking water measurements at the Rangen Hatchery and did not have any issues with the way it was done:

> Q. And have you ever watched him measure water out at the facility?
>
> A. Yes, I have.
>
> Q. And did you ever take issue with the way that Mr. Maxwell measures water out at Rangen's facility?
>
> A. No, I haven't. I think he does a good job.

(Tr., p. 244, l. 16-22).

In fact, Mr. Erwin testified that Mr. Maxwell was actually better at taking the measurements than he is:

> Q. (BY MS. BRODY): Did you ever have occasion to consider how well Mr. Maxwell reads the ruler measurements?

A. Yes. I think he does a good job.

Q. And have you ever compared his ability to read the ruler compared to your own?

A. I would put it this way: I think he probably does a little better job at it than I would be able to do.

Q. Rangen sends you annual reports of their water measurements; correct?

A. Yes.

Q. And have you ever taken issue with any of the measurements that Rangen has sent you?

A. No, I haven't.

(Tr., p. 245, l. 11-19).

Rangen provides its water measurements on an annual basis to the water master; Erwin has never taken issue with the measurements. (Tr., p. 245, l. 20-25). Mr. Erwin also confirmed at the hearing that when Maxwell takes the readings the ruler is somewhat perpendicular to the water flow. (Tr., p. 249, l. 21 – p. 250, l. 4). Lonny Tate, Rangen's other fish culturist, also testified that if he is required to take water measurements he turns the face of the ruler so that it is perpendicular to the flow. (Tr., p. 883, l. 15-22).

After reading the water flow level on the ruler, Maxwell records the water measurements to the nearest 1/8 inch on a notepad. (Tr., p. 279, l.3-10). See, Exh. 1095 for a sample of a weekly measurement notepad. He then takes the water measurements and converts them to cubic feet per second using a conversion chart. (Tr., p. 279, l. 11-23). See, also Exh. 1068 for the conversion chart Maxwell has used since he started taking measurements in 1999. He records the results on a chart such as Exh. 1094.

Douglas Ramsey, a Research Scientist at the Rangen Hatchery, then records Maxwell's converted measurements in the computerized spreadsheet that was admitted as Exhibit 1075. (Tr., p. 620, l. 14 – p. 624, l. 6). See also, Exh. 1075 for a copy of the computerized spreadsheet. Exh. 1075 demonstrates that Rangen's springs flows have been steadily declining for decades and that Rangen is presently receiving only a small fraction of the water that is allowed under its Partial Decrees.

b. Rangen's Water Measurements are Within Industry Standards and are Acceptable to IDWR.

Open channel water measurements are deemed acceptable if the measurements are within 10% of measurements taken by IDWR. In this case, IDWR has historically accepted Rangen's measurements because those measurements are within the acceptable +/-10 error range. In its Staff Report, IDWR concluded:

> Although the raceway check boards are not considered standard measuring devices, IDWR accepts measurements using these structures at Rangen and many hatcheries in the area because IDWR's standards allow an accuracy of +/-10 percent for open channel measuring devices when compared to measurements using standard portable measuring devices. Rangen likely under-measures actual flows, but an error up to -10% is acceptable pursuant to IDWR's *Minimum Acceptable Standards for Open Channel and Closed Conduit Measuring Devices.*

See, Exh. 3203, pgs. 13, 58-65. In fact, Rangen's measurements are well within the +/- 10% margin. IDWR in its Staff Report concluded:

> IDWR staff measured a total of 18.97 cfs at the Rangen hatchery based on sum of the Large raceways + Lodge Dam, or a total of 18.69 cfs based on sum of CTR raceways and Lodge dam. The 2003 measurement report submitted to IDWR by Rangen reports a total of 17.51 cfs on November 24, 2003, which is a difference of either 1.46 or 1.18 cfs, or a difference of -7.7% and -6.31% respectively. IDWR measured 0.48 cfs at the Lodge dam on November 25, 2003.

Id., p. 60, f/n 12.

Cindy Yenter also concluded that Rangen's measurement techniques are acceptable. (Tr., p. 569, l. 23 – p. 570, l. 2). Ms. Yenter concluded in her 2003 investigation memo as follows:

> It seems reasonable to conclude that, while Rangen's measuring techniques for the hatchery raceways may not be absolutely correct, they are fairly consistent and are resulting in reported measurements which are no more than about 10 percent lower than actual flows.

See, Exh. 1129, p. 4. At the hearing, Ms. Yenter explained that if she went out and made an excellent to good open-channel measurement, it would have an accuracy rating of around ± 5%. (Tr., p. 606, ll. 6-25). Ms. Yenter believes that Rangen's measurements fall within a 5-10% accuracy range. Id.

Of the 7.7% to 6.31% reported margin of error in measurements, IDWR concluded that less than 2% of the error was attributable to actual measurement error. Most of the error was attributable to using different weir coefficients and rating tables. When the same rating tables were used, IDWR concluded that there was less than 2% of error.

> When using the IDWR head measurements from November 25, 2003 with the Rangen discharge table, the flow at the Large raceways is 16.9 cfs and the flow at the CTR raceways is 16.2 cfs. The Yenter memo states that Rangen staff measured 16.6 cfs and 15.9 cfs at the Large and CTR raceways respectively on November 24, 2003, a difference of only 0.3 cfs between IDWR and Rangen when using the Rangen discharge table, or a difference of less than 2 percent at each set of raceways. The relatively minor differences between the IDWR and Rangen measurements when using the Rangen discharge tables indicates that the differences in flow measurements between IDWR and Rangen on November 25th and 24th, 2003, was due mostly to the use of different weir equations or rating tables, rather than differences in head measurements.

See, p. 61 of Exh. 3203.

To summarize, the measurements Rangen reports are still within the ± 10% accuracy requirement and have been accepted by the Department. As such, there is no basis for attacking Rangen's water flow measurements.[4]

3. Diminished Water Flows Hinder and Impact Rangen's Use of the Water at the Research Hatchery.

Rangen's Partial Decrees state that the purpose of use is "fish propagation." See, Exh. 1026 and 1028. Rangen has been raising fish continuously at its Research Hatchery since the facility was constructed in the early 1960s. The Research Hatchery is a licensed commercial fish operation. Rangen holds an NPDES permit which allows and regulates the discharge of effluent into Billingsley Creek, a Confined Animal Feeding Operation permit issued by Gooding County, and a Commercial Fish Rearing License issued by the State Department of Agriculture. See, Exh. 1140. Dr. Woodling, Pocatello's fish expert, testified that the Research Hatchery is a unique facility because Rangen operates its own feed mill and has the ability to sell the fish it raises, including the fish used for research; this reduces the overall cost of operating the facility. (Tr., p. 1266, l. 17 – p. 1267, l. 15).

Rangen raises fish for multiple purposes: (1) commercial sale; (2) conservation sale; and (3) research. (Tr., p. 440, ll. 11-17; p. 444, ll. 8-15). Lynn Babbington testified that the facility was in constant use while he was employed there from 1971-1991. (Tr., p. 173, l. 25 – p. 174, l. 2). He continues to go out to the facility 2-3 times per year and he has never been there when Rangen was not producing fish. (Tr., p. 236, L.. 6-14). Joy Kinyon, the General Manager of the aquaculture division, testified that the facility has always had fish. (Tr., p. 444, l. 8-15).

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[4] Pocatello's claim that Rangen is under-measuring its flows is ultimately an error that favors Pocatello and other groundwater users since the end result is that ESPAM2.1 would predict lower return flows in the event of a curtailment. See, p. 65 of Exh. 3203.

Mr. Babbington created a chart showing various performance factors during his 20 year tenure as manager of the Research hatchery. See, Exh. 1147. His summary shows that Rangen produced millions of pounds of trout during his employment. Mr. Babbington's summary also shows that the Total Water Changes per Hour decreased by nearly half from the time he started until he left. (Id.) When he started with the company it took about 1 hour for the water to completely fill up the hatchery. (Tr., p. 175, l. 6 – p. 176, l. 1). When he left it took twice as long for the water to fill up the hatchery, or, in other words, the water flow was about half as much. (Id.) This is significant because there has to be a constant source of running water to raise fish in a commercial setting. (Id.) A commercial fish producer cannot treat the raceways like a bathtub. (Id.) There has to be running water to carry oxygen to the fish. (Id.)

Exhibit 1161 is another summary of Rangen's fish production from 1972 to 2012. See, Exh. 1161. The summary shows that Rangen's production numbers have greatly declined over the years. (Id.) Mr. Kinyon, the General Manager of Rangen's aquaculture division, explained that as the spring flows have declined, so has Rangen's production numbers. (Tr., p. 450, l. 2 – p. 452, l. 12). For example, in 1972 Rangen raised 532,000 pounds of fish. See, Exh. 1161. In 2003, the year before Rangen selling fish to Idaho Power on a regular basis, Rangen raised approximately 265,000 pounds of fish. (Id.)

It is important to recognize that even though production numbers remained high during Mr. Babbington's tenure, the decreasing springs flows caused Rangen to seek out new facilities to lease to raise their fish during the summer months so that production levels could be maintained. (Tr., p. 192, l. 5 – p. 193, l. 9). A 1986 aerial photo shows water in all of Rangen's raceways. See, Exh. 1006. That is not the case today. Dan Maxwell testified that at the time he testified only 3 out of 10 Large Raceways were full because of water flows. (Tr., p. 267, l. 21 –

p. 268, l. 2); see also, Exh. 1011 for a diagram of the raceways. Dr. Woodling testified that at certain times of the year Rangen cannot utilize as many as 90% of the Large Raceways. (Tr., p. 1278, l. 24 – p. 1279, l. 11). Mr. Ramsey testified that only one row in the CTRs can be utilized at a time because of the limited water. (Tr., p. 663, l. 21 – p. 664, l. 9). Dr. Woodling also acknowledged that without water to fill up the raceways and keep them flowing, Rangen cannot produce fish. (Tr., p. 1279, ll. 7-11).

Rangen's inability to fill the raceways with water and produce fish has also impacted its ability to conduct research. Rangen has used the Research Hatchery to conduct myriad research projects over the years. Research was done primarily in the Large Raceways while Lynn Babbington was the manager. (Tr., ll. 8-14). Rangen uses the facility to run: (1) feeding trials to compare the performance of Rangen's feed against its competitors' products (Tr., p. 686, ll. 8-23; (2) feeding trials to test new ingredients in its feed or new formulations (Tr., p. 688, l. 13 – p. 689, l. 19); (3) research projects for outside companies such as BASF and Hofman-LaRoche (Tr., p. 675, ll. 3-5); and (4) government-sponsored research grants (Tr., p. 677, ll. 4-22).

Mr. Kinyon explained that conducting research is important to the entire Rangen operation because it enables Rangen to keep its competitive edge in the feed industry:

> Q. It is -- is the research that's done at the hatchery, is it important to the entire Rangen operation in the entire company?
>
> A. Yes, it is.
>
> Q. And why?
>
> A. **Because it supports our feed nutrition in the aquaculture division. It supports our customer base. They depend on our nutrition being leading edge. And it's -- we're losing ground in that area right now because we do not have the water flow to do the commercial size feed studies.**

(Tr., p. 528, ll. 4-17) (emphasis added).

Probably the most successful research project that Rangen ever conducted involved the development of a product called "Stay C," a stabilized form of vitamin C. Mr. Ramsey explained that fish need vitamin C and can only get it through what they eat. (Tr., p. 679, l. 11 – p. 680, l. 24). Vitamin C in its natural form is unstable and water soluble which means it does not hold up well through the feed manufacturing process. (Id.) Feed manufacturers had difficulty getting vitamin C into their feeds and knowing how much vitamin C was present after manufacturing. (Id.) Stay C involved the development of a form of vitamin C that is stable through the feed manufacturing process. (Id.) The development of this product cut down on manufacturing costs and waste. (Id.) Feed manufacturers around the world use the product today. (Id.)

Mr. Ramsey explained how diminished spring water flows have impacted Rangen's use of the water for research:

> Q. Mr. Ramsey, has Rangen's ability to conduct research at the research hatchery, has it been hindered or impacted by the declining water flows at the hatchery?
>
> A. Absolutely.
>
> Q. In what ways?
>
> A. It makes it very difficult -- please repeat the question.
>
> Q. Sure. Has Rangen's ability to conduct research at the research hatchery been hindered or impacted by declining spring flows at the hatchery?
>
> A. Yes, it has. And to answer your question, **one is timing is very difficult to get an experiment all set up and then going at this point with low flows.** We have a number of components that must come together all at once in order for an experiment to happen. And those will be, of course, having the flow available at the hatchery or the lab at that time. **Another component is the fish themselves. And we have to have a particular size of fish.** Typically, we're targeting, quite often, an ingredient in the feed or a size of feed that will require us to have a particular size fish. So that's another component that needs to be there at the same time. So the timing is a difficult thing.

> **Another problem with the low flows at this point is it's difficult to do experiments that start, say, in the hatch house and then are carried through out to the production ponds.** Quite often -- in an ideal world we'd like to test these diets from egg to market size in our fish just to see how it performs throughout the entire rearing cycle.
>
> And that's very difficult with these flows that are just not enough to have a block of ponds watered up or at least, you know, enough raceways watered up at that time that we can conduct that part of the experiment. **And then finally, along with the low flows and timing for that experiment that I explained just a minute ago is the problem with replication in our trials. Simply don't have enough water to have the number of replicates or rearing units to be able to do a statistically sound experiment.**

(Tr., p. 691, l. 10 – p. 693, l. 2) (emphasis added).

Declining spring flows have hindered and impacted Rangen's Research Hatchery in ways other than decreased fish production. Wayne Courtney testified that as a result of the decreased flows Rangen has had to lay off research and hatchery staff. (Tr., p. 90, ll. 11-22). In 1989, when Mr. Courtney went to work for Rangen, the Company had approximately 15-17 people working at the research center and hatchery combined. (Tr., p. 91, ll. 2-9). Today there are 3 people who work at the facility: (1) Lonny Tate, a fish culturist who has been there for 35 years; (2) Dan Maxwell, a fish culturist who has been there for 21 years; and (3) Doug Ramsey, a Research Scientist who has been with the company for 26 years and works at the Research Hatchery part-time and at the feed mill part-time. (Tr., p. 267, ll. 5-9; Tr., p. 612, ll. 20-22). The Research Hatchery operates without an on-site manager. (Tr., p. 417, ll. 15-22).

Declining flows have had a profound impact on Rangen's use of the water at the Research Hatchery. There is not enough water to fill all the raceways and keep them running. As a result, Rangen's fish production has declined and its research efforts have been seriously hindered.

4. Rangen has Made Substantial Effort and Incurred Significant Expense to Divert the Spring Water that Forms the Headwaters of Billingsley Creek.

Rangen has made substantial efforts to divert water for use at the Research Hatchery. Rangen's diversion structure is explained in detail in Section III.B.4, *infra*.

D. The Opposing Parties Have Not Carried Their Burden of Proving their Defenses by Clear and Convincing Evidence.

Most, if not all, of the Respondents' defenses are based on theories. When evaluating these theories, it is important to note that theories themselves have been rejected as meeting a clear and convincing standard of proof. Again, the Idaho Supreme Court stated:

> This court has uniformly adhered to the principle announced both in the constitution and by the statute that the first appropriator has the first right; **and it would take more than a theory, and, in fact, *clear and convincing evidence*, in any given case, showing that the prior appropriator would not be injured or affected by the diversion of a subsequent appropriator**, before we would depart from a rule so just and equitable in its application and so generally and uniformly applied by the courts. Theories neither create nor produce water, and when the volume of a stream is diverted and seventy-five per cent of it never returns to the stream, it is pretty clear that not exceeding twenty-five per cent of it will ever reach the settler and appropriator down the stream and below the point of diversion by the prior user.

A&B Irrigation District v. IDWR, 153 Idaho 500, 284 P.3d 225, 249 (2012), citing, Moe v. Harger, 10 Idaho 302, 77 P. 645 (1904) (emphasis added and in original).

1. The Opposing Parties Have Not Presented Clear and Convincing Evidence that Rangen Could Not Beneficially Use Additional Water.

The Respondents bear the burden of proving their defenses by clear and convincing evidence. See, Section II, *infra*. Over the years, Rangen has adjusted its operation to accommodate the steadily declining water flows. It has altered the facility in order to increase the reuse of water (e.g., added a pipeline allowing water to flow from the Small Raceways to the

Large Raceways), reduced staff, reduced research, and ultimately entered into an agreement to raise conservation trout for Idaho Power Company. Despite all of Rangen's efforts to keep its operation going, the opposing parties criticize Rangen and argue that Rangen does not "need" additional water to accomplish its beneficial use. Their position is not well taken and they certainly have not produced the clear and convincing evidence necessary for the Director to find that Rangen's Petition for Delivery Call should not be granted.

To begin with, Rangen's "need" for water is not the correct characterization of the legal issue that needs to be decided. The more accurate issue presented is whether Rangen can put the water to beneficial use. Moreover, the point needs to be made that even if Rangen's "need" for the water were at issue, that issue must be examined in the context of Rangen's historical use of the water and not what it "needs" now that it is only receiving 12 cfs out of its decreed rights of 76 cfs and has reduced its operation because of the reduction.

There should be no doubt that Rangen could put more water to beneficial use at its facility if it were available. It only makes sense that with so many empty raceways, Rangen could raise more fish if more water were available to fill the raceways and keep them flowing. Lonny Tate, a fish culturist who has been raising fish at the facility for 35 years, explained:

> Q. (BY MR. MAY): Lonny, would you be able to raise more fish at the Rangen hatchery if you had more water available?
>
> A. Yes.
>
> Q. And what do you base that on?
>
> A. Well, more water, you could open more ponds, and more pond space means more fish.

(Tr., p. 868, ll. 17-23).

Charlie Smith, Rangen's fish expert, also testified that Rangen could raise more fish with more water:

> Q. So in your opinion, if Rangen had more water available to fill up the empty raceways that it's got, would it be able to raise more fish?
>
> A. Yes.

(Tr., p. 868, ll. 10-13). Mr. Smith explained:

> Q. (BY MR. MAY): Mr. Smith, what would Rangen be able to do if it had more water?
>
> A. They would be able to open up more ponds having water going to those ponds. They would be able to raise more production fish. They could raise production fish. If they had enough water and enough ponds, they could do research. So this would free them up to do that. Plus it wouldn't interfere with the scheduling of fish. They could then maybe be starting more fish in the -- in the smaller raceways and moving them to these ponds that had been opened up because of more water.

(Tr., p. 828, l. 16 – p. 829, l. 3). Everyone understands the fundamental principle that more fish can be raised with more water.

There should also be no doubt that Rangen would raise more fish (i.e., put the water to beneficial use) if more water were available at the facility. Rangen has a fifty plus year history of raising trout at the Research Hatchery. As shown in Exhibits 1147 and 1161, Rangen has raised millions of pounds of trout over the years for commercial sale, research, and conservation. While the opposing parties have criticized Rangen for not having a formal business plan addressing what it would do with more water if it were available, Joy Kinyon testified that Rangen has no idea if it will ever receive more water or when it will receive more water. (Tr., p. 525, ll. 7-18). Rangen has been adjusting its business to deal with declining flows over the years, and Mr. Kinyon testified that he has no doubt that the Research Hatchery staff can adjust the operations to meet increasing flows as well. (Tr., p. 526, ll. 13-21).

IGWA tried to cast doubt on Rangen's ability to sell additional fish through the testimony of John Church, an economist. Church testified that the trout market has faced difficulty over the years. Church's testimony, however, does not provide clear and convincing evidence that Rangen cannot put additional water to beneficial use. To begin with, Dr. Greg Green, Rangen's economist, explained in his report that Church's analysis of the trout market is flawed and that his conclusion that trout farmers are facing increased competition is not tenable.[5] See, Exh. 1249 for a complete discussion of Dr. Green's analysis. Dr. Green also concluded that the trout industry understands the impacts of competition well within its industry. Exh. 1249, p. 4. Mr. Kinyon testified that Rangen understands the trout industry and has participated in it for fifty plus years:

> A. Well, obviously I think I have plenty of time to develop that plan at this stage. Once we have water, we're going to grow fish. Once we put fish in the water, we'll have time to create a more finite market plan to move those fish. **But we understand the markets today. We've grown fish for 50 years down there. We know what the market is. We know what the local processors are calling for. We deal with our customers every day who deal with the same processors. So we know what the market is. We know where the demand's at. It's a pretty easy call to make that we're going to have an outlet for those fish.**

(Tr., p. 525, l. 20 – p. 526, l. 9) (emphasis added). Mr. Kinyon has no doubt that Rangen could sell more fish. (Tr., p. 526, ll. 10-12). In fact, Rangen has actually had to pass up opportunities to sell fish simply because it did not have them to sell. (Tr., p. 526, ll. 22-25). Even Church had to admit that Rangen has a unique operation because it owns and operates its own feed mill to supply its Research Hatchery. (Tr., p. 1982, ll. 21-24). This means that Rangen's cost of running the Research Hatchery is less than other producers who are not similarly situated.

[5] The parties agreed that a redacted copy of Dr. Green's report would be introduced into evidence in lieu of his oral testimony. See Exhibit 1249 for a copy of his redacted report.

Church also admitted that Rangen is in the best position to judge its ability to sell fish, not an economist. (Tr., p. 1984, l. 23 – p. 1984, l. 5).

2. The Opposing Parties Have Not Presented Clear and Convincing Evidence that Rangen is Wasting Water.

IGWA and Pocatello contend that Rangen's Petition for Delivery Call should not be granted because Rangen is wasting the water it is receiving. Their argument is three-fold. First, that Rangen is producing fewer fish than the facility has the capacity to produce because of Rangen's contract with Idaho Power Company. Second, that Rangen should be matching their production to their peak flows. Finally, that Rangen could produce even more fish under the Idaho Power Company contract restraints. Their arguments are without merit.

It is well understood that a water user cannot waste water. In fact, it is a crime to "willfully" waste water. I.C. § 18-4309. The Idaho Supreme Court addressed the issue of waste in Beasely v. Engstrom, 31 Idaho 14, 169 P. 1145 (1917). In Beasely, the parties owned neighboring farms. Because of the slope of the land, Engstrom diverted more water than the soil on his farm could absorb. The excess water ran off Engstrom's land through a hollow and onto Beasely's property. Id. at 16-17, 169 P. at 1145. Beasely claimed that the runoff made his land swampy and damaged his farm. Id. Beasely sued Engstrom for damages and an injunction to prohibit his watering practices. Id. at 17, 169 P. at 1145.

The trial court ruled as a matter of law that Engstrom had obtained a prescriptive easement for use of the hollow and entered judgment in his favor. Id. at 17, 169 P. at 1146. Beasely appealed, alleging that Engstrom was wasting water and that such waste constituted a public nuisance:

> It is urged by appellant that respondent **wasted water** contrary to the provisions of secs. 3293 and 7144, Rev.Codes, and that such **waste** constituted a public

> nuisance which any person, specially injured thereby, might abate, and that a right to commit a public nuisance, or to violate a law, cannot be acquired by prescription.

Id. at 17-18, 169 P. at 1146 (emphasis added).

The Idaho Supreme Court rejected Beasley's argument, holding:

> In view of the evidence and the findings of the court, the use of the water by respondent and the drainage resulting therefrom cannot be deemed waste as contemplated by the statutes. He has a right to divert sufficient water to properly irrigate his land, and the fact that, because of its slope, it requires more than does land which is more nearly level, cannot defeat this right. From the evidence it also appears that he has adopted the methods of irrigation commonly employed in his locality, and that any means which would lessen the excess would be so expensive as to be prohibitive.
>
> **What constitutes a reasonable use of water is a question of fact, and depends upon the circumstances of each case, such as the size of the stream, the number of consumers, the character of the soil, the nature of the crops planted and other like considerations, and the method commonly used in the vicinity has a bearing in determining the amount of water to which a user is entitled.**

Id. at 18, 169 P. at 1146 (emphasis added) (citations omitted). It is clear from this analysis that when determining whether a water user is "wasting" water, the inquiry to be made is whether the user is using water reasonably. In other words, in order to find that Rangen is wasting water, IGWA and Pocatello have the burden of proving by clear and convincing evidence that Rangen's use of water is unreasonable. They have not carried this burden.

Rangen has entered into an agreement with Idaho Power Company ("IPC") to raise trout to satisfy IPC's mitigation requirements. (Tr., p. 647, l. 23 – p. 648, l. 5). Fish are lost as a result of IPC's dam projects so IPC is required to mitigate for those losses by restocking fish in the Snake River and American Falls Reservoir. (Id.). IPC has contracted with Rangen to raise these conservation fish. (Id.) The agreement between IPC and Rangen requires Rangen to raise the fish at a density and flow index that is lower than commercial producers use. (Tr., p. 648, l. 6

– 649, l. 13 and Tr., p. 1848, l. 25 – p. 1849, l. 8). Density and flow indices relate to the pounds and size of fish that can be grown in a particular rearing container. (Id.) Dr. Woodling, Pocatello's fish expert, testified that the density and flow indices in the IPC contract provide for healthier and more aesthetically pleasing fish when they are planted in streams and reservoirs. (Tr., p. 1288, ll. 15-19).

While IGWA and Pocatello contend that Rangen's decision to raise fewer fish than the facility's capacity constitutes waste, their experts recognize that Rangen's operation is reasonable. Tom Rogers testified that conservation hatcheries do NOT waste water:

> Q. Can you explain what you mean when you – what you were meaning when you were talking about waste, and waste in your opinions in this case?
>
> A. I believe I mentioned the fact that conservation hatcheries raise fish at a low flow index. **In other words, more water per fish to induce a better looking fish, one that's able to survive in the wild. And that would be considering a not wasteful situation, if you were trying to rear fish for that purpose.**

(Tr., p. 1848, l. 25 – p. 1849, l. 8) (emphasis added). Although Rangen is not a state-owned conservation facility, it is reasonably using its water resource to perform the same valuable public service.

Dr. Woodling also recognized that Rangen's decision to move into raising conservation fish is not unreasonable:

> A. But they are bringing in -- they are bringing in -- they are filling the hatch house twice a year. And they move those fish down. Which takes the small raceways, and then they move it into the large raceways. If they had smaller lots of fish going through there, then they would potentially have room in the large raceways to put additional fish. Okay?
>
> And they also would not be under the constraints of the Idaho Power contract, so they could be -- they could have stocked higher numbers. **So to a certain extent, they are choosing to run the hatchery the way they do. And I'm not saying, that they shouldn't do it. They are making a profit, and good for them. But they could do it in a different way to get more fish through with the water that they have.**

Q. **But as you just suggested, they are doing it in that way. And the way in which they are doing it is reasonable?**

A. **It seems to fit their needs, certainly. I'm not passing judgment on that.**

(Tr., p. 1293, l. 14 – p. 1294, l. 8).

IGWA appeared to levy some criticism of Rangen by having Tom Rogers testify to the fact that raising fish for conservation purposes is less labor intensive than for commercial purposes. (Tr., p. 1832, l. 19 – p. 1833, l. 13). IGWA did not establish, however, that there is anything wrong with having a less labor intensive operation. In fact, it makes sense in Rangen's case because it has had to lay off substantial numbers of workers and is now using two fish culturists and one half-time researcher to run its entire operation because of the diminished water flows.

The second waste argument that IGWA and Pocatello make is that Rangen should be matching their production to their peak flows. This is not possible given when the peak flow period occurs and the demands of the IPC contract.

Frank Erwin, the water master, explained that Rangen's flows typically go down in June after groundwater pumping starts and then go up again in the fall when the pumps are shut down:

> THE WITNESS: As -- as the irrigation season ensues from the start of the season towards the end of the season, the spring flows actually start out at the very lowest about in, generally speaking, around the end of May to the first of June. And towards the end of the season, depending on how much water the canals run, they may or may not stabilize by September to October. But their high point, as a general rule, is after the irrigation or the pumping season's over.
>
> And they get near their highest point, to my knowledge, in the middle of winter now. The lowest point in -- now is generally in June. I'm going to say that that period of time has rotated annually from when it used to be the lower point was -- was earlier in the year and the high point was a little earlier in the fall. I don't know if I'm making any sense here. But the high point used to come earlier in the year than what it does now.

Tr., p. 236, l. 25 – p. 237, l. 18.

Lonny Tate explained that Rangen raises three lots of fish for IPC. (See Tr., p. 859, l. 23 – p. 860, l. 18). Timing the hatching and growth of those lots is critical because the IPC contract requires fish of a particular size (e.g., 10 inch) to be "planted" in the river or reservoir at a specific time:

> Q. Sure. In addition to affecting when you order the eggs, you have to order them a year and a half in advance, does it also affect when you would put them in the hatch house?
>
> A. Well, the timing issue is the big question, because you have to -- you have to hatch them so far -- you have to figure out how many months you need to get that fish from point A to point B, 10 inches.
>
> Q. When do you -- when do you put the fish in the hatch house? In other words, when do you put the fish in the hatch house for the October plant?
>
> A. They're put in in March.
>
> Q. Okay. And for those fish that you are going to be planting in March, when do those fish get put in the hatch house?
>
> A. They come in in August, the year before.
>
> Q. Okay. And those fish that you're going to be planting at the end of May, when do those go in the hatch house?
>
> A. The end of November, first part of December.

(Id.)

There is no way that Rangen can match their production to their peak flows and still meet the requirements of the IPC contract. Tom Rogers testified:

> Q. If Rangen was able to change the timing of when it could purchase its eggs, if it wasn't constrained by the requirements under the Idaho Power contract, in your opinion, could they raise more fish at their facility?
>
> A. Yes.

(Tr., p. 1863, ll. 20-25). Again, IGWA and Pocatello's fish experts both admit that Rangen's decision to raise conservation fish for IPC was reasonable. Part of that decision involves living with the timing requirements set forth in the agreement. There is nothing unreasonable with Rangen's production schedule given the obligations it has to IPC.

The final waste argument that IGWA and Pocatello make is that Rangen should be raising more fish at its facility even with the density and flow indices required by IPC. The problem with this argument is that Idaho law does not require perfect use of the water – it only requires reasonable use. Rangen does not raise fish just for IPC. It also raises fish to sell to commercial processors. Lonny Tate explained that when ordering eggs his goal is to raise as many fish as he can and still meet the IPC density and flow indices:

> Q. Okay. **And do you limit yourself to the amount of fish that are necessary for Idaho Power?**
>
> A. **No, not -- no**.
>
> Q. What is your goal when you're ordering the eggs? What are you trying to do? How do you -- what's your goal with that determination?
>
> A. **You're trying to raise as many fish as you can in the amount of water that you have and still meet your densities for the Idaho Power contract, and still get them to a 10-inch fish, you know, at the time that they need to be planted.**

(Tr., p. 865, l. 22 – p. 855, l. 7) (emphasis). This is a difficult process because Rangen has to predict what the flows will be and how many mortalities it will have eighteen months in advance. (Tr., p. 865, ll. 9-16).

Raising more fish at the facility is not as simple as just buying more eggs. Rangen has to be able to grow the fish within the density and flow indices as the fish move through each stage of the facility – the Small Raceways, Large Raceways, and the CTRs. Lonny Tate is responsible

for moving the fish through the facility. (Tr., p. 866, ll. 20-23). He described in detail the balancing act that Rangen does to move the fish and stay within the density and flow indices. (Tr., p. 859, l. 23 – p. 865, l. 8) Rangen has the most difficulty meeting the density index in the Small Raceways because at the time those fish need to be moved, the Large Raceways are full of other IPC fish waiting to be planted and there is not enough water to open up another set of Large Raceway ponds. (Tr., p. 662, ll. 5-9). If Rangen sees a window of opportunity to bring more fish onto the facility it does so by purchasing them from other growers such as the College of Southern Idaho. (Tr., p. 867, l. 24 – p. 868, l. 10). It's not that the facility does not have enough space to raise fish. It is simply a matter of fact that Rangen does not have enough water to use the existing space. If Rangen had more water it could open up additional raceways and raise more fish that are not subject to the IPC density and flow indices.

Rangen's decision to raise conservation fish for IPC was reasonable. It enables Rangen to use the limited water it has and its reduced staff to perform an important public function. It also enables them to continue to sell fish to commercial processors and perform some limited research. The bottom line is that IGWA and Pocatello have not produced clear and convincing evidence that Rangen's use of the water is unreasonable. As such, their waste argument is untenable and should be rejected.

3. IGWA and Pocatello Have Not Proven by Clear and Convincing Evidence that Rangen's Diversion Structure is Unreasonable.

The opposing parties contend that Rangen's diversion structure is unreasonable. They contend that before Rangen can make a delivery call it should be required to: (1) install a pump system at Rangen's dam to divert water that would otherwise go to the Large Raceways to the Small Raceways; (2) drill a horizontal well in the vicinity of the Martin-Curren Tunnel itself;

and/or (3) drill a vertical well. IGWA and Pocatello have offered no legal authority to support the proposition that a surface water user can drill a well to make up for lost surface water flows. Beyond this obvious legal issue, however, there are fundamental factual problems which undermine their position.

Rangen should not be required to install a pump at the dam structure to move water that would otherwise go to the Large Raceways to the Small Raceways. Pumping is not a solution because Rangen is short of water throughout the Research Hatchery – not just in the Small Raceways. Adding water to the Small Raceways would enable Rangen to raise more fish in those rearing containers, but Rangen does not have any place to put those fish once they outgrow the Small Raceways. Rangen has a limited number of Large Raceways that it can utilize because of its low water flows. Rangen uses the Large Raceways for the IPC fish and cannot add another lot of fish to them or they will run afoul of IPC's density and flow indices. Tom Rogers recognized this problem. (Tr., p. 1888, l. 18 – p. 1889, l. 16). Rogers suggested that Rangen could simply raise fingerlings, but offered no testimony about the market for that size of fish. (Id.) He also suggested that Rangen could raise the fish in the CTRs, but that suggestion has its own difficulties because of the oxygenation issue.

As Rangen's facility is currently configured, the Large Raceways receive first use water through the dam. The Large Raceways also receive water from the Small Raceways that has already been used three times. Taking away first use water from the Large Raceways and putting it through the Small Raceways creates oxygenation issues. Charlie Smith explained that as the water moves through each rearing container (e.g., from one pond in the Small Raceways to another pond in the Small Raceways) and as it moves from each section of the Hatchery to another (e.g., Small Raceways to Large Raceways) it loses oxygen. (Tr., p. 827, l. 3 – p. 838, l.

5). While the dissolved oxygen levels that Charlie Smith requested from Doug Ramsey show that the oxygen levels are presently acceptable when the water leaves the CTRs, Mr. Smith explained that Rangen would not want those oxygen levels to drop much further. (Id.). Taking away the first use water from the Large Raceways and sending it to be used three times through the Small Raceways will deplete oxygen from the water. Even Tom Rogers recognized that pumping may not necessarily lead to a more efficient operation:

> Q. So there is really no reason, in this facility, that you would want to pump into the small raceways?
>
> A. What we're talking about is efficiency of the use. I'm sure they are using it. But can you use it more efficiently? **Maybe so.** **Maybe** you can do that by pumping back up to the small raceways, adding to the first use water up there, and raising additional fish.

(Tr., p. 1891, l. 20 – p. 1892, l. 2) (emphasis added). Tom Roger's suggestion that "maybe" Rangen could increase its efficiency by adding a $200,000[6] pump does not satisfy IGWA and Pocatello's burden of proof. It is not clear and convincing evidence and should be rejected.

IGWA and Pocatello also suggest that Rangen should be required to drill a vertical well to access more water before being allowed to make a delivery call. Bern Hinckley, IGWA's geologist, testified that he did an investigation of the area surrounding Rangen and determined that there are "highly-productive" wells within two miles of the Rangen facility. (Tr., p. 2269, ll. 13-22). He did not investigate to whom the property belongs. (Tr., p. 2271, ll. 15-18). He did not investigate whether Rangen could actually obtain a permit to drill a well in any location. (Tr., p. 2270, ll. 7-11). He did not investigate whether Rangen could obtain easements to actually get well water to Rangen's facility. (Tr., p. 2271, ll. 19-23). Mr. Hinckley's assertion that

[6] It is important to note that IGWA's cost estimates just include the construction of the pump station alone. It does not include the installation of a second pump to allow for redundancy or a generator in the event of a power failure or the costs of ongoing maintenance or operation. (See Tr., p. 2121, l. 13 – p. 2122, l. 8).

Rangen could drill a vertical well is only a mere assertion. IGWA and Pocatello have not presented the clear and convincing evidence needed to support this proposed alternative, and, as such, it should be rejected.

The final proposed alternative that IGWA and Pocatello advance is that Rangen should be required to drill a horizontal well in the vicinity of the Martin-Curren Tunnel itself. Putting aside the very serious legal questions as to whether Rangen could ever receive permission to drill this type of well, there are serious practical problems as well. To begin with, Hinckley admits that drilling a horizontal well in the vicinity of the Martin-Curren Tunnel itself will likely "de-water" the tunnel:

> Q. And if you were to do that, if we were to drill a well lower below the tunnel, that would – that would most likely dewater the tunnel, would it not?
>
> A. I would expect it to have a significant effect on the tunnel flows, yes.
>
> Q. And so a significant effect, meaning that you would not -- you would no longer have the water flowing out of the tunnel that is present there now?
>
> A. That would be my expectation.
>
> Q. And one of the primary effects, then, of drilling a -- or excuse me, a well lower than the Curren Tunnel would simply be to redistribute that water that was coming out of the tunnel into the new -- the well that you've drilled?
>
> A. One's objective would be a net increase in water. But one would suffer a decrease in the flow of the tunnel, most likely.
>
> Q. And you would agree that that's a risk and will almost certainly happen?
>
> A. I think "almost certainly" would fairly characterize that.

(Tr., p. 2267, l. 9 – p. 2268, l. 7).

Rangen is not the only user of water from the Martin-Curren Tunnel – there are farmers as well who will likely be impacted if their diversion pipes no longer carry water. See, Exh.

3278 for a photograph showing the farmer irrigation pipelines. Hinckley also admitted that a horizontal well will impact other points of water discharge such as wells and springs in the area. (Tr., p. 2282, ll. 12-20). He did not do any investigation on the impact that a horizontal well would have on other water users. (Id.)

Hinckley theorizes that there would be a "net gain" by drilling a horizontal tunnel (i.e., even though water would be lost from the Martin-Curren Tunnel more water would be gained through the horizontal well), but did nothing to quantify how much more water would actually be gained. (Tr., p. 2268, ll. 13-15). With all of the risks involved in drilling a horizontal well (e.g., risk of injury to Rangen's water supply and other users), the horizontal well alternative should be rejected. IGWA and Pocatello have not carried their burden of proving that Rangen's current method of diversion is unreasonable.

E. The Director Should Strike Evidence of the Economic Impact of Curtailment.

During the hearing, IGWA was permitted to put on evidence of the economic impact of curtailment. Specifically, Mr. Deeg (Tr., p. 1745, l. 5 – p. 1746, l. 18) and Mr. Carlquist (p. 711, l. 7 – p. 1712, l. 21) were allowed to testify concerning the economic impact of curtailment on farmers. IGWA was also allowed to put on evidence through John Church, IGWA's economist, of the difficulties that the trout market has had historically (Tr., p. 1963, l. 2 – p. 1975, l. 25). The testimony of these witnesses was improper and should be stricken from the record.

Shortly after IGWA disclosed John Church as a witness, Rangen filed a Motion in Limine seeking to strike his testimony. See, Motion in Limine to Exclude Testimony of John S. Church and Request for Hearing dated August 12, 2012. Rangen based its Motion in Limine on the Idaho Supreme Court's decision in Clear Springs Foods, Inc. v. Spackman, 150 Idaho 790, 252 P.3d 71 (2011). The Court in Clear Springs held that: "***A delivery call cannot be denied on***

the ground that curtailment of junior appropriators would result in substantial economic harm." 150 Idaho at 803, 252 P.3d at 84 (emphasis added). On September 20, 2012, Director Spackman granted Rangen's Motion in Limine in part. Director Spackman ruled:

> The Court in Clear Springs plainly rejected the argument that the Director must balance the economic interests of the senior and junior water users. Clear Springs, 150 Idaho at 803, 252 P.3d at 84 ("A delivery call cannot be denied on the ground that curtailment of junior appropriators would result in substantial economic harm.") ***As such, IGWA is foreclosed from trying to raise this argument again in this proceeding and it is proper to exclude evidence (including testimony) that goes to the economic balancing argument.***

See, *Order Partially Granting Motion in Limine*, pp. 1-2. The only door that the Director left open for economic testimony was concerning the cost of diversion systems. See Id.

Despite the unambiguous terms of the Director's ruling, IGWA disclosed a report from John Church that included extensive information concerning the alleged economic harm of a curtailment and evidence of the difficulties that the trout market has had historically. Rangen filed a Motion to Strike portions of Church's report. Rangen's Motion was granted in part and denied in part.[7] It should have been granted in its entirety because the portion of Church's report addressing trout market difficulties goes directly to the balancing of economic interests in a curtailment – evidence that the Director previously ruled was excluded. IGWA was allowed to present Church's testimony over Rangen's objections.

The Idaho Supreme Court's ruling in Clear Springs was clear. The Department should not consider the economic impacts of a curtailment when evaluating a senior user's delivery call. The testimony identified above was improper, and, as such, it should be stricken from the record.

[7] As ordered by the Director during the hearing (Tr., p. 1981, l. 21 – p. 1982, l. 8), Rangen has requested that IGWA submit a redacted version of Church's report which reflects the Director's ruling on Rangen's Motion to Strike.

F. IGWA and Pocatello Have Not Demonstrated That They or any of IGWA's Members are Using Water Efficiently and Without Waste.

Rule 40.03 states that the Director ***will*** consider whether the junior-priority groundwater pumpers are using water efficiently and without waste when evaluating Rangen's Petition for Delivery Call. The rule states in relevant part:

> The Director will also consider whether the respondent junior-priority water right holder is using water efficiently and without waste.

IDAPA 37.03.11.040.c. IGWA called Lynn Carlquist, the chairman of the North Snake Groundwater District, and Tim Deeg, the chairman of IGWA, to testify. These representatives did not present any evidence of their members' efficient use of water. In fact, Carlquist testified that the North Snake Groundwater District does not do anything to evaluate the efficiency of its farmers. (Tr., p. 1726, ll. 20-23). Likewise, it does not do anything to evaluate whether its groundwater pumpers are using water without waste. (Tr., 1727, ll. 4-7). The District has no information concerning whether its pumpers are using their water within their legal rights. (Tr., p. 1728, ll. 1-5). Mr. Deeg testified that IGWA does not monitor the efficiency of its members' groundwater systems. (Tr., p. 1763, ll. 7-9). Likewise, IGWA does not monitor waste. (Tr., p. 1767, l. 11 – p. 1768, l. 3). Pocatello called Justin Armstrong to testify on behalf of the city. He did not testify about the efficiency or waste of Pocatello's water systems. The opposing parties have not demonstrated that they or any of IGWA's members are using water efficiently and without waste. As such, the Director should rule in favor of Rangen on this issue.

Pursuant to IDAPA 37.03.11.040.c the question of whether a junior is using water efficiently and without waste is a threshold question. Evidence of efficient use is a prerequisite for any junior user that wants to be excluded from curtailment.

IV. ARGUMENT (IMPACTS- ESPAM2.1)

A. The Exercise Of Junior-Priority Ground Water Rights Individually Or Collectively Has Affected, And Continues To Affect, The Quantity And Timing Of Water Available To Rangen.

As a matter of law and fact, groundwater pumping in the ESPA impacts Rangen's use of its decreed water rights. There is no dispute that Rangen would receive more water if junior groundwater pumping for the ESPA were curtailed. The only dispute appears to be precisely how much additional water would be available. Generally, "**Any *interference with a vested right to the use of water,*** whether from open streams, lakes, ponds, percolating or subterranean water, would entitle the party injured to damages, and an injunction would issue perpetually restraining any such interference." Clear Springs Foods, Inc. v. Spackman, 150 Idaho 790, 811, 252 P.3d 71, 92 (2010), citing, Bower v. Moorman, 27 Idaho 162 at 181, 147 P. 496 at 502 (1915) (emphasis added).

First, as a matter of law, the interconnection between Rangen's spring water flows and junior-priority groundwater pumping in the Eastern Snake Plain Aquifer has been established. The SRBA Court decreed General Provision 5 for rights in Basin 36 in 2002.[8] That General Provision reads: "Except as otherwise specified above, all other water rights under Basin 36 will be administered as connected sources of water in the Snake River Basin in accordance with the prior appropriation doctrine as established by Idaho law." See, Exh. 1448. No exceptions were

[8] General Provision 5 was decreed based on IDWR's Director's Report which stated: "ADMINISTRATION OF BASIN 36 RELATIVE TO THE SNAKE RIVER. The Eastern Snake River Plain Aquifer, the springs tributary to the Snake River or other surface tributaries, and surface tributaries to the Snake River in Basin 36 downstream from the Milner Dam are hydrologically interconnected to varying degrees. . . Basin 36 water rights for surface and ground water, and Snake River water rights will be administered conjunctively, pursuant to law, with due consideration as to the actual impacts or ground water diversions on senior water rights."

identified. Id. The SRBA Court explained in its November 2010 Memorandum Decision in the A&B Irr. Dist. matter that the effect of the General Provision is:

> Thus, unless water rights are listed as "otherwise specified" in the *Partial Decree for Connected Sources* for a given basin that the source from which a junior appropriator receives his water shall be administered separately from all other water rights in the Snake River Basin, the issue of whether or not the senior and junior divert water from a common source has already been answered in the positive.

A&B Irr. Dist. v. Spackman, *Memorandum Decision and Order on Petitions for Rehearing* entered on November 2, 2010, p. 12.

The Idaho Supreme Court recognized that groundwater pumping within the Eastern Snake Plain Aquifer ("ESPA") impacts the spring flows at Rangen's Research Hatchery in Musser v. Higginson when it stated: "The springs which supply the Mussers' water are tributary to the Snake River and are hydrologically interconnected to the Snake plain aquifer (the aquifer)." 125 Idaho at 394, 871 P.2d at 811 (1994).

Second, the interconnection has been established as a matter of fact. Every water resource engineer and lay witness who was asked testified that groundwater pumping in the ESPA impacts Rangen's spring flows. To begin with, Frank Erwin, the watermaster for Rangen's area, testified that pumping impacts spring flows in the Rangen area:

> Q. Just to clarify something that you went through with Ms. Brody. It was your testimony that you did not see a direct connection between the seasonal -- between when the irrigation rights would turn on each season and when they would turn off and the low – and the low-flow period and the fluctuations of the springs on an annual basis?
>
> A. On an annual basis, you bet I saw the fluctuation, yes. Maybe I misunderstood the original question. Evidently I did. But the effect that the pumping has on the spring is not direct. In other words, if you go out and turn all the irrigation wells on at eight o'clock in the morning, at nine o'clock the springs don't automatically go down. It takes a little more time than that. And that's why I

was trying to explain to you the difference in over the years of the cause and effect of what the pumping has had on the springs on the Billingsley Creek drainage. I don't think anyone can go out and say "Well, I turned my well on at nine o'clock, so Joe Blow spring went down at two o'clock." I can't confirm that, and neither can anyone else.

(Tr., p. 256, ll. 1-24).

Timothy Deeg, the President of Idaho Groundwater Appropriators, Inc., admitted that pumping has some impact on the spring flows at Rangen:

Q. You acknowledge that ground water pumping has had some effect on the flow at Rangen; correct?

A. **Ground water pumping at some points has an effect on Rangen's pump, on Rangen's facilities, yes.**

Q. Okay. You admit that?

A. Yes.

(Tr., p. 1750, ll. 2-7) (emphasis added).

Mr. Deeg also testified that there are no active programs to reduce pumping and that groundwater pumpers never reduce pumping:

Q. You have no active program to reduce pumping; do you?

A. Not in any of the programs that we currently have in place.

Q. And during your deposition, I think your quote was, pumpers never reduce pumping?

A. No, I don't believe that was the case.

Q. You didn't say that?

A. No, I did not say that.

Q. I believe, you did. Let's get out his transcript.

THE HEARING OFFICER: Off the record, Colleen. (Discussion held off the record.)

Q. (BY MR. HAEMMERLE) Mr. Deeg, the reporter has just handed you what is your transcript from your deposition in this case. Do you recall me deposing you previously; correct?

A. Yes.

Q. And you were placed under oath; correct?

A. Yes.

Q. And ask you to turn to page 32 of your deposition testimony.

A. Okay.

Q. Look at line 15. I ask you, "Is there any discussions amongst you as a group as to how to reduce pumping to replenish the storage in any way?" Do you see that?

A. Yes.

Q. **And your answer to that was, "You know, I -- we have never reduced pumping." That's your answer; correct?**

A. **That is the answer, but I think it goes on to further say –**

Q. **Go ahead. Read your whole answer. That's fine. From the very top.**

A. **"You know, I -- we have never reduced pumping. You know, I think one of the misnomers that is out there is that pumpers pump water freely. But there is a certain cost associated with pumping, that is, they are not going to just -- you are going to pump just a minimum amount of water to get by. There always has been a perception by most surface users, that just by the flip, you love to go flip that switch on, and I don't believe -- and we do not, believe me."**

(Tr., p. 1752, l. 11 – p. 1754, l. 4).

Dr. Brendecke, IGWA's water resource engineer admitted that pumping in the ESPA impacts the flow of water at Rangen's facility:

Q. And to be sure, Dr. Brendecke, there's also a hydrologic impact at the Rangen cell from pumping in the ESPA; correct?

A. I think there is an impact at Rangen from pumping, yes.

(Tr., p. 2123, ll. 19-23).

Greg Sullivan, Pocatello's water resource engineer, acknowledged that groundwater pumping affects Rangen's spring flows, but gave the opinion that the impact of Pocatello's pumping was about 6 gallons per minute -- about the flow of a typical garden hose. (Tr., p. 1482, l. 17 – p. 1484, l. 17). In effect, Sullivan's testimony was that the impact of Pocatello's pumping was *de minimis* or negligible. When evaluating this testimony it is important to recognize two things. First, this is a defense to Rangen's delivery call which Pocatello must prove with clear and convincing evidence. See, A&B Irr. Dist. v. Spackman, *Memorandum Decision and Order on Petitions for Rehearing,* p. 13. Second, and perhaps most importantly, there is no "*de minimis*" or "negligible" impact standard when evaluating material injury. A&B Irr. Dist. v. Spackman, Memorandum Decision and Petition for Judicial Review entered on May 10, 2010, p. 43. Rule 42 of the Conjunctive Management Rules recognizes that there is no *de minimis* impact standard and that the Director must consider the effects of collective impacts when determining material injury:

> Factors the Director may consider in determining whether the holders of water rights are suffering material injury and using water efficiently and without waste include, but are not limited to the following:
>
> * * *
>
> c. Whether the exercise of junior-priority ground water rights **individually or collectively** affects the quantity and timing of when water is available to, and the cost of exercising, a senior-priority surface or ground water right. This may include the seasonal as well as the multi-year and cumulative impacts of all ground water withdrawals from the area having a common ground water supply.

IDAPA 37.03.11.042 (emphasis added).

The bottom line is that there is no dispute either legally or factually that junior-priority groundwater pumping impacts the spring flows at Rangen's Research Hatchery. As such, the Director should find in favor of Rangen on this Rule 42 factor.

B. ESPAM2.1 Represents The Best Available Science For Determining Impacts Of Groundwater Pumping On Rangen's Use Of Its Senior Water Rights.

All of the parties in this case agree that there is a hydraulic connection between the ESPA and the Thousand Springs area including the Rangen spring complex. The connection has been established as a matter of fact and law. See, Section III(A), *infra*.. ESPAM2.1 predicts that curtailment of groundwater irrigation junior to July 13, 1962 within the model boundary, would increase discharge at the Rangen spring cell by 17.9 cfs. (Tr. p. 2359, l. 23 – p. 2360, l. 7; p. 2341, l. 20 – p. 2342 l. 5; p. 2412, l. 6-8) See also, Exh. 1284, p. 13, 21 and 26; Exh. 3203 p. 6. ESPAM2.1 represents the best available science for determining the effect of junior ground water pumping within the ESPA on discharge at the Rangen spring cell. Exh. 3203. p. 3.

Rangen has met its burden of showing that the amount of water available to fill its water rights has been reduced.[9] There is no serious dispute in this case that if junior groundwater pumping from the ESPA were curtailed, the discharge at the Rangen spring complex would increase. The only question is the precise amount by which the discharge would increase. A senior water holder is not required to show precisely the amount of impact caused by junior users. The senior's burden is simply to show that there is an impact. Again, generally, "**Any *interference with a vested right to the use of water,*** whether from open streams, lakes, ponds, percolating or subterranean water, would entitle the party injured to damages, and an injunction

[9] This reduction in the amount of available water impacts Rangen's use of its water rights. Other parties in this matter have argued that reduced availability of water does not by itself equal an impact to the use of a water right. Regardless of whether reduction alone is sufficient to constitute injury, it is clear that reduced availability impacts a water user's use of the water. Use of the reduced flows is addressed elsewhere in this brief.

would issue perpetually restraining any such interference." Clear Springs Foods, Inc. v. Spackman, 150 Idaho 790, 811, 252 P.3d 71, 92 (2010), citing, Bower v. Moorman, 27 Idaho 162 at 181, 147 P. 496 at 502 (1915) (emphasis added). Rangen has met this burden.[10]

1. Background on Development of ESPAM 2.1 Model.

The IDWR has developed several numerical ground water models of the ESPA. The purpose of these models is to evaluate and understand the interaction between groundwater and surface-water on the Eastern Snake Plain. Exh. 1273A, pg. 1. The current version of the model, ESPAM2.1, is the best available science for understanding the interaction between groundwater and surface-water on the Eastern Snake Plain. ESPAM2.1 incorporates the best knowledge of the aquifer system available at this time. Unlike previous version of the model, "ESPAM2.1 can be used to compute regional impact on selected individual springs because it was calibrated to spring-specific discharge measurements." Exh. 1273A, pg. 86-7. "ESPAM2.1 is a regional groundwater model and is suitable to predict the effects of junior groundwater pumping on discharge at the Rangen spring cell because the spring discharge responds to regional aquifer stresses, and junior groundwater pumping is a dispersed, regional aquifer stress." Exh 3203, p. 2. ESPAM2.1 demonstrates that curtailment of ground water pumping junior to Rangen's water rights would result in an increase of approximately 18 cfs at the Rangen spring complex.

The Department's model was developed in an open, collaborative environment, with guidance from the Eastern Snake Hydrologic Modeling Committee (ESHMC). Exh. 3203, p. 3.

[10] Precise quantification of the impact is only necessary in the context of junior users' potential defenses. For instance, a junior pumper may need to prove the quantity of impact in order to get a mitigation plan approved. A junior ground pumper may also need to quantify the impact of pumping in order to establish that a call is futile. Surprisingly, junior ground water pumpers in this case have taken the position that quantification of the impact of pumping is difficult, or impossible, with existing knowledge of the ESPA.

The ESHMC was formed out of the Idaho Technical Committee on Hydrology (the ITCH Committee) in approximately 2000 to serve as an advisory group for updating and improving the ESPA model. (Tr. p. 2294, l. 12 – p. 2295, l. 15).

Experts retained by parties to this call participated heavily in both the ITCH Committee and the ESHMC. Dr. Charles Brockway and Greg Sullivan were each members of the ITCH Committee. (Tr., p, 2294, l. 10-16; p. 1570 l. 6-10). Dr. Brockway and Mr. Sullivan became members of the ESHMC when it was formed in 2000. (Tr. p. 2300, l. 7 – p. 2301, l. 3). IGWA expert Dr. Charles Brendecke, Rangen experts Dave Colvin and Jim Brannon as well as Fremont Madison Irrigation District expert Bryce Contor were also members of the ESHMC. (Tr. p. 2400, l. 16-20; Exh. 1273A, p. 4).

> The ESHMC provided a forum for discussing model design, providing interested parties the opportunity for technical review and input throughout the model development process. Decisions regarding the conceptual model, model grid size, drain elevations, locations of transmissivity pilot points, spring discharge and aquifer head targets, the location of general head boundaries, calibration bounds, and other model features were presented to the ESHMC with opportunity for committee members to provide comments and suggest alternative approaches.

Exh. 3203, p. 3.

The Director of IDWR set forth a list of criteria to be completed prior to the adoption and use of the updated model that became ESPAM2.1. The list of criteria included calibration, validation, and an uncertainty analysis. (Tr. p. 2301, l. 25 – p. 2303, l. 19; Exh. 1318).

a. Calibration

"Model calibration involves the adjustment of model parameters including transmissivity, aquifer storage, riverbed conductance, drain conductance, general head boundary conductance, and components of the water budget until model generated aquifer water levels and discharges match observed values/calibration targets." Exh. 1273A, p. 70-1. The updated model was

calibrated utilizing a parameter estimation tool known as PEST. Exh. 1273A, pg. 71. "During calibration, PEST runs the modeling code thousands of times, comparing model-generated values with field observations. The calibration is optimized by minimizing the weighted sum of the squared residuals for the difference between model-generated values and field observations." Exh. 1273A, p. 71.

The Department used previous versions of its model, ESPAM1.0 and ESPAM1.1, to evaluate Rangen's first delivery call, which was initiated in October 2003. (Tr. p. 2295, l. 23 – 25). It was recognized that there were deficiencies in these earlier versions of the model. One of these deficiencies was an inability to simulate individual major spring flows.(Tr. p. 2296, l. 7 – p.. l. 18). These perceived deficiencies drove development of an updated version of the model. (Tr. p. 2296, l. 12 – p. 2297, l. 1).

One of the changes made for the updated model was the development and utilization of calibration targets for spring flow. (Tr. p. 2297, l. 23 – p. 2298, l. 2; Exh. 1273A, p. 73). The spring calibration targets are categorized into three groups based upon the nature of the available data. Group A springs include springs that are measured by the USGS or the IDWR. Group B springs are measured and reported by water users. Group C springs are not routinely measured or reported. Exh. 1273A, p. 75.

Monthly flow data from Group A and B springs were used to develop the spring discharge calibration targets. Exh. 1273A, p. 76. From 2005 through 2012, the ESHMC and the Department spent considerable time developing and reviewing both agency data and discharge data for those particular spring-flow targets. The data that was presented or collected by the Department or anyone else was reviewed by the committee. And where there were problems or decisions that had to be made, they were reviewed by the ESHMC. (Tr. p. 2298, l. 4 – p. 2299, l.

7). The Rangen spring complex was included as a Group B spring. (Tr. p. 2299, l.10; Exh. 1273A, p. 76).

Calibration of the updated model began in 2010. As calibration runs were completed, they were presented to the committee for review and discussion. (Tr. p. 2307, l. 17 – p. 2309, l. 3). In June or July 2012, the committee agreed upon a calibration of the updated model. (Tr. p. 2310, l. 4 – p. 2311, l. 3). This calibrated model is referred to as ESPAM2.0 and was adopted by the Director for use in this call. See, *Order Re: Eastern Snake Plain Aquifer Model and the Rangen, Inc. Delivery Call.*

After the adoption of ESPAM2.0, a data error was discovered in the water budget in the Mud Lake area. Exh. 1277, p. 3. The Mud Lake error was fixed and the updated model was recalibrated. (Tr. p. 2311, l. 4 – p. 2313, l. 14). This recalibrated updated model is referred to as ESPAM2.1. Exh. 1277, p. 3.

There was little difference between the calibration of ESPAM2.0 and ESPAM2.1. (Tr. p. 2314, l. 20 – p. 2315, l. 6). Like ESPAM2.0, ESPAM2.1 is a well calibrated model. (Tr. p. 2949, l. 21-22; p. 2315, l. 3 – 11; p. 1636, l. 10-15). ESPAM2.1 is well calibrated to the Rangen spring complex. (Tr. p. 2315, l. 8-11; p. 2682, l. 23 – p. 2683, l. 8; p. 2949, l. 15-21; Exh. 1285, p. 16).

b. Validation

ESPAM2.1 went through a validation process. "IDWR had no significant concerns or limitation regarding the use of ESPAM-2.1." (Tr. p. 2317, l. 4 – p. 2319, l. 7). The Department concluded that "[n]either the 2009-2010 nor the 1900 Validation Scenarios generated significant concerns or limitations regarding the use of the ESPAM2.1. The results of validation were made available to the committee and the committee did not object. (Tr. p. 2686, l. 14 – p. 2687, l. 5).

Sullivan admits that there is no information out there to invalidate the ESPAM 2.1 model. (Tr. p. 1636, l. 20-22). Experts Brockway, Colvin and Brannon "[a]gree with the IDWR conclusion and it is [their] opinion that these validation results further support the use of ESPAM 2.1 as the best available science." Exh 1284, p. 19.

c. Uncertainty

The Department performed an uncertainty analysis utilizing the "dual calibration" predictive analysis mode of PEST. This uncertainty analysis was not intended to provide a confidence interval range or probability distribution on the predictions of ESPAM2.1. However, the results of the uncertainty analysis provide confidence in the predictions of ESPAM2.1. (Tr. p. 2321, l. 13 – 21; p. 2325, l. 4 – 9). See also, Exh. 1284, p. 17-8. The best available predictions of junior pumping impacts to the Rangen spring complex are those made by ESPAM2.1. Exh. 1284, p. 17-8, 26. Regardless of the numeric value of uncertainty, the ESPAM2.1 prediction is currently the best available and most unbiased prediction. Exh. 3203, p.21.

The modeling process that went into producing ESPAM2.1 resulted in a very "robust model"; i.e. a high quality model with good calibration results and accurate predictions. (Tr. 2403, l. 7 – p. 1404, l. 5). The Mud Lake error provided an unintentional water balance uncertainty analysis demonstrating the robustness of ESPAM2.1. Hearing Transcript 5/14/2013, Pg. 2405 Ln 8-14. Despite the error in water balance input data, the calibration results between ESPAM2.0 and ESPAM2.1 are very similar. (Tr. p. 2405, l. 15-7).

The efforts of Dr. Brendecke and Bern Hinckley to create alternative models further demonstrated the robustness of ESPAM2.1. IGWA's experts, Dr. Brendecke and Bern Hinckley created three new models with significant changes near the Rangen spring complex. These three

new models were based in part upon Mr. Hinckley's speculations regarding the local hydrogeology near the Rangen spring complex. The purpose of these "alternative" models was to show that ESPAM2.1 has significant conceptual uncertainty by demonstrating that the different models would show different results from ESPAM2.1. However, the results of Dr. Brendecke and Mr. Hinckley's "heroic" efforts to change the model were predicted impacts at the Rangen spring complex similar to those shown by ESPAM2.1. (Exh 3203, p. 10-11; Tr. P. 2926, l. 1-5).

d. The Director Should Curtail Junior Users Under the Boundaries of the ESPAM2.1 Model

There is absolutely no disagreement in this case; groundwater pumping by junior users in the boundary of the ESPAM2.1 model is affecting Rangen's use of water. As such, the Director should curtail those users in the boundary of the model.

2. Use of ESPAM2.1 - ESPAM2.1 Represents the Best Available Science for Determining the Effect of Junior Groundwater Pumping Within the ESPA on Discharge at the Rangen Spring Cell.

With the assistance of the ESHMC, the Department performed the calibration, validation, and uncertainty analysis requested by the Director. Subsequently, the Department adopted ESPAM2.1 for use in this proceeding.

Dr. Brockway (Tr. p. 2340, l. 25 – p. 2341, l. 8), Bern Hinckley (Tr. p. 2487, l. 21 – 24), Dr. Brendecke (Tr. p. 2793, l. 11–14), Dr. Wylie (Tr. p. 2950, l. 3–9), Greg Sullivan (Tr. p. 1642, l. 2–15), and Bryce Contor (Tr. p. 2893, l. 20 – 22) all testified that ESPAM2.1 represents the best available science and is suitable for use in predicting the impact of junior ground pumping upon the use of Rangen's water rights.

Likewise, after consideration of all the expert reports submitted in this case, IDWR has concluded in its Staff Report that "ESPAM2.1 is the best developed scientific tool for predicting the effects of junior groundwater pumping on the Buhl to Lower Salmon Falls Spring reach and at the Rangen spring complex." Exh. 3203, p. 12.

C. No Trimline Is Justified.

There was no testimony from any party proposing the use of any trimline. Furthermore, all the experts who testified all agreed with Dr. Brendecke's paper entitled "Comments on Trim Line and Model Uncertainty," wherein Dr. Brendecke opined that, "The trimline has nothing to do with model uncertainty." Exh. 1369. To the extent all parties and IDWR agree that ESPAM2.1 is currently the best available science for determining impacts, any application of a trimline, which has nothing to do with science or modeling, would simply constitute an arbitrary or capricious act. "An action is **capricious** if it was done without a rational basis. It is arbitrary if it was done in disregard of the facts and circumstances presented or without adequate determining principles." American Lung Ass'n of Idaho/Nevada v. State, Department of Agriculture, 142 Idaho 544, 130 P.3d 1062 (2006), citing Enterprise, Inc. v. Nampa City, 96 Idaho 734, 536 P.2d 729 (1975).

V. CONCLUSION

Rangen has submitted with this Brief a proposed set of Findings of Fact and Conclusions of Law. Simply stated, however, Rangen has not received all of the water it is entitled to under water rights 36-02551 and 36-07694 because of groundwater pumping that is affecting Rangen's use of its senior water rights. Because Rangen is beneficially using its water without waste, Rangen respectfully requests that the Director needs to perform his duty and curtail all junior

groundwater pumping in the boundary of the ESPAM2.1 model. Curtailment would enable Rangen to receive is its Constitutionally protected water rights.

DATED This 21 day of June, 2013.

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By _____
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MAY, BROWNING & MAY

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CERTIFICATE OF SERVICE

The undersigned, a resident attorney of the State of Idaho, hereby certifies that on the 21 day of June, 2013 she caused a true and correct copy of the foregoing document to be served by email and first class U.S. Mail, postage prepaid upon the following:

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