Docket No. 37308-2010

IN THE SUPREME COURT OF THE STATE OF IDAHO

IN THE MATTER OF DISTRIBUTION OF WATER TO WATER RIGHT NOS. 36-04013A, 36-04013B, AND 36-07148 (Clear Springs Delivery Call)

IN THE MATTER OF DISTRIBUTION OF WATER TO WATER RIGHT NOS. 36-02356A, 36-07210, AND 36-07427 (Blue Lakes Delivery Call)

CLEAR SPRINGS FOODS, INC.,
Petitioner/Respondent/Cross-Appellant,

v.

BLUE LAKES TROUT FARM, INC.,
Cross Petitioner/Respondent/Cross-Appellant,

v.

IDAHO GROUND WATER APPROPRIATORS, INC., NORTH SNAKE GROUND WATER DISTRICT, and MAGIC VALLEY GROUND WATER DISTRICT,
Cross Petitioners/Appellants/Cross-Respondents,

v.

GARY SPACKMAN., in his capacity as Director of the Idaho Department of Water Resources; and the IDAHO DEPARTMENT OF WATER RESOURCES,
Respondents/Respondents on Appeal/Cross-Respondents,

v.

IDAHO DAIRYMEN'S ASSOCIATION, INC., and RANGEN, INC.,
Intervenors/Respondents/Cross-Respondents.

GROUNDWATER USERS' OPENING BRIEF

On Appeal from the District Court of the Fifth Judicial District
of the State of Idaho, in and for the County of Gooding.

Honorable John M. Melanson, District Judge, Presiding.

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STATEMENT OF THE CASE

I. Nature of the Case.

This is an appeal from two water right curtailment orders issued by the Director of the Idaho Department of Water Resources (the "Director") in response to water delivery calls made by Blue Lakes Trout Farm, Inc. ("Blue Lakes") and Clear Springs Foods, Inc. ("Clear Springs"). The orders permanently curtail or stop the use of groundwater by cities, farmers, homeowners and industries across southern Idaho's vast Eastern Snake Plain Aquifer ("ESPA").

This case marks the first time the Idaho Supreme Court has been called upon to review the Director's administration of surface water rights—that is, rights to divert from rivers, streams and other surface water sources—as against junior-priority groundwater rights whose pumping is alleged to injure the owners of senior-priority surface water rights. This appeal involves issues of first impression because it relates to the Director's application of three key directives that bear on the use and administration of the ESPA: the Ground Water Act, the Swan Falls Agreement, and the Idaho Department of Water Resource's ("IDWR") administrative *Rules for Conjunctive Management of Surface and Ground Water Sources* ("CM Rules")[1]. Each directive has been declared constitutional by this Court. *Baker v. Ore-Ida*, 95 Idaho 575, 584 (1973) (declaring the Ground Water Act constitutional); *Miles v. Idaho Power Co.*, 116 Idaho 635, 646 (1989) (holding that legislation implementing the Swan Falls Agreement does not violate due process or equal protection guarantees of constitution); *American Falls Reservoir Dist. No. 2 v. IDWR*, 143 Idaho 862, 883 (2007) ("*AFRD2*") (deeming the CM Rules facially constitutional).

[1] The CM Rules are found at IDAPA 37.03.11.

The magnitude of this Court's decision cannot be overstated. Its impact reaches far beyond the parties of this case, affecting thousands of groundwater users and a significant portion of Idaho's agricultural-based economy.

II. Procedural History.

In the spring of 2005, Blue Lakes and Clear Springs each sent letters to the Director asking that he curtail junior-priority groundwater rights. (R. Vol. 1, p. 45; R. Vol. 3, p. 487.)[2] In response, and without any input from junior-priority groundwater users, the Director ordered the permanent curtailment of groundwater rights that serve more than 70,000 acres of irrigated farmland as well as municipal, industrial, and commercial uses. (R. Vol. 1, p. 75; R. Vol. 3, p. 525.) Most of these groundwater users are members of Idaho Ground Water Appropriators, Inc., North Snake Ground Water District, and/or Magic Valley Ground Water District (collectively, the "Groundwater Users").

The curtailment orders were issued as "emergency" orders without a hearing under Idaho Code § 67-5247. (R. Vol. 1, p. 75; R. Vol. 3, p. 525.) The Groundwater Users petitioned for reconsideration and requested a hearing within two weeks after each order was issued. (R. Vol. 1, p. 161; R. Vol. 3, p. 547). The Groundwater Users reiterated their request for a hearing four more times before a hearing was finally granted. (R. Vol. 8, p. 1491). The curtailment orders remained in force for three irrigation seasons (2005-2007) before a hearing was finally held at the offices of IDWR from November 28 to December 13, 2007, before the Hon. Gerald F. Schroeder as hearing officer.

[2] Citations to documents in the agency record are identified herein as "R. ___." Citations to transcript from the agency hearing are identified as "Tr.__." Citations to the district court record are identified as "Clerk's R. __."

The hearing officer issued multiple orders during the course of the hearing. He accepted the findings and conclusions contained in the original orders issued by former Director Karl Dreher in 2005, unless his subsequent orders explicitly state otherwise. (R. Vol. 16, p. 3839.) The hearing officer's orders constitute a recommendation to the Director pursuant to Idaho Code § 67-5273. On July 11, 2008, former Director David Tuthill entered a final order (the "Final Order") adopting the findings and conclusions of the hearing officer with few changes. (R. Vol. 16, pp. 3950-51.) This appeal is taken from the Final Order, but since the Final Order accepts the recommendations of the hearing officer, and since the hearing officer accepted the findings and conclusions of the original orders issued in 2005, all such orders form the subject to this appeal.[3]

Blue Lakes, Clear Springs, and the Groundwater Users all petitioned for judicial review of the Final Order. (Clerk's R., pp. 1-20.) Judicial review was taken to the Gooding County District Court where Judge John M. Melanson entered an Order on Petitions for Judicial Review on June 19, 2009 (*Id*. at 44) and an Order on Petitions for Rehearing on December 4, 2009 (*Id*. at 112). The Groundwater Users filed a Notice of Appeal on January 15, 2010. (*Id*. at 126.) Blue Lakes and Clear Springs filed a Notice of Cross-Appeal on February 8, 2010. (*Id*. at 131.)

III. Standard of Review.

Judicial review of the Final Order is governed by the Idaho Administrative Procedure Act. I.C. §§ 42-1701A(4), 67-5270 et seq. Issues of disputed fact must be confined to the record created before the agency. I.C. § 67-5277. The Court must not substitute its judgment for that

[3] These orders are referred to collectively herein as the "curtailment orders." References to individual orders are given additional identification, such as the "Blue Lakes curtailment order" or the "Final Order."

of the agency as to the weight of the evidence on issues of fact. I.C. § 67-5279(1). The Court must affirm the Final Order unless the Court finds that the findings, inferences, conclusions, or decisions of the Director are:

(a) in violation of constitutional or statutory provisions;
(b) in excess of the statutory authority of the agency;
(c) made upon unlawful procedure;
(d) not supported by substantial evidence on the record as a whole; or,
(e) arbitrary, capricious, or an abuse of discretion.

I.C. § 67-5279(3). The Final Order should not be set aside unless substantial rights have been prejudiced. I.C. § 67-5279(4). If the Final Order is not affirmed, it shall be set aside in whole or in part, and remanded for further proceedings as necessary. I.C. § 67-5279(3).

IV. Statement of Facts.

A. The ESPA and historical development of groundwater.

Percolating beneath the Snake River Plain is a massive underground reservoir the size of Lake Erie called the East Snake Plain Aquifer ("ESPA"). (Ex. 429.)[4] It stretches from the Teton Range on the east to King Hill on the west and is one of the largest and most productive aquifers in the world. (Ex. 401; Brendecke, R. Supp. Vol. 3 pp. 4415-16.) It contains 100 to 220 million acre-feet of water—60 to 130 times the capacity of American Falls Reservoir—that can be easily pumped and used. (Ex. 429.)

Surface water from the Snake River and its tributaries were mostly appropriated by the early part of the twentieth century, leaving little room for additional water development. Around 1950, however, advances in pump technology, cheap electricity, and a proliferation of power

[4] Exhibit 429 is a publication of the Idaho Department of Environmental Quality that provides an easy-to-understand explanation of the ESPA and its hydrology. A color copy of Ex. 429 is attached hereto as Appendix A.

lines to rural areas combined to make groundwater irrigation economically feasible. (Carlson, R. Supp. Vol. 7, pp. 4849-50; Ex. 435 at 5.) This opened the door for a grand expansion of irrigated agriculture across southern Idaho.

Recognizing a great economic opportunity, the Legislature passed the Ground Water Act in 1951 to encourage and facilitate development of the ESPA and other groundwater resources. 1951 Idaho Sess. Laws ch. 200; I.C. § 42-226 et seq. But groundwater development still faced a major hurdle. Since groundwater pumping would naturally cause some lowering of the water table, owners of more senior water rights with shallow wells could block further groundwater development by using the doctrine of "first in time is first in right" to demand that the water table be kept at peak levels. The Legislature removed this impediment by amending the Act in 1953 to provide that "while the doctrine of 'first in time is first in right' is recognized, a reasonable exercise of this right shall not block full economic development of underground water resources." 1953 Idaho Sess. Laws, ch. 182, p. 278; I.C. § 42-226. The amended Act allows groundwater pumping to expand so long as it does not "result in the withdrawing of the ground water supply at a rate beyond the reasonably anticipated average rate of future natural recharge" (i.e. so long as the aquifer is not "mined"). I.C. § 42-237A(g).

Like owners of shallow wells, water users in the Thousand Springs area[5] who use over-flow from the ESPA could also block groundwater development by demanding that the water table be kept at peak levels. The ESPA is like an underground bathtub. (Ex. 429.) Hundreds of spring outlets in the Thousand Springs area act as an overflow valve for the ESPA, spilling water

[5] The Thousand Springs area is located between Twin Falls and King Hill along the southwest edge of the ESPA.

when the aquifer is full. *Id*. If the law of full economic development of groundwater resources did not exist, users of these spring flows could demand that the ESPA be managed to sustain maximum overflow. That is not the case. While spring users are entitled to use all available spring flows, section 42-226 of the Idaho Code precludes them from making a delivery call against groundwater users. (Dunn, R. Supp. Vol. 7, p. 4787; Carlson, R. Supp. Vol. 7, p. 4869.) This policy was incorporated into the first Idaho State Water Plan adopted in 1977:

> Aquaculture is encouraged to continue to expand when and where supplies are available and where such uses do not conflict with other public benefits. Future management and development of the Snake Plain aquifer may reduce the present flow of springs tributary to the Snake River. If that situation occurs, adequate water for aquaculture will be protected, however, aquaculture interests may need to construct different water diversion facilities than presently exist.

(Ex. 438 at 118.)[6]

In reliance on these assurances, nearly one million acres have been brought under irrigation by groundwater pumping. (Carlson, R. Supp. Vol. 7, p. 4849.) Idaho Power Company championed this development in literature of the day, with this account:

> A generation ago, with the opportunities for sound economic development of large scale gravity projects virtually exhausted, a significant change occurred in new land reclamation methods. Visionary men sank deep wells, tapping underground water to reclaim vast acreages where gravity systems were either impractical or impossible.
>
> Thus began a second phase of Idaho's growth . . . an ingenious and enormous land development that in less than 20 years has added over a million new acres under cultivation. It is an expansion which has been accomplished by individual enterprise without federal aid, and no tax dollar obligation. This growth has outstripped any federal reclamation project in America, including the famed Columbia Basin project in Washington. ...

[6] Spring flows in the Thousand Springs area are utilized almost entirely by fish farmers (aquaculture).

> Spreading new wealth into every southern Idaho community, new farm lands have vastly enriched the economy of the state. …
>
> Idaho's future may will depend on how well she encourages these men of initiative, imagination and faith in the future to continue the reclamation of new lands and strengthen the economy of this great, comparatively virgin western country.

(Ex. 435 at 1, 13.)

B. Swan Falls Agreement.

Ironically, Idaho Power filed a lawsuit in 1977 that sought to halt and undo the very groundwater development the Company had advocated. *Idaho Power Co. v. State of Idaho*, Ada Co. Civil Case No. 62237 (1977).[7] The suit threatened to shut down groundwater irrigation to thousands of acres across the Eastern Snake River Plain so that more water would spill from the ESPA and into the Snake River for use at Idaho Power's hydropower plant at Swan Falls Dam.

The economic consequences of Idaho Power's lawsuit, had it prevailed, would have been drastic. Therefore, the State of Idaho, acting in its own interest and on behalf of the thousands of defendant water users, settled the case by entering into the "Swan Falls Agreement." (Ex. 437.) The Agreement created "a comprehensive plan for management of the Snake River watershed" that provides for maximum beneficial use of the ESPA based on the maintenance of minimum Snake River flows. (Carlson, R. Vol. 8, p. 1510.)[8]

Thus, the State of Idaho promoted development of the ESPA through the Ground Water Act, the State Water Plan, and the Swan Falls Agreement. Groundwater appropriators were assured they would be protected in their development of the ESPA so long as the aquifer was not

[7] This suit was subsequently consolidated with Ada County Civil Case No. 81375.
[8] The Swan Falls Agreement is discussed further in section I of the Argument below.

mined and the minimum Snake River flows were met. The Groundwater Users responded by investing significant resources, including land, equipment, labor and livelihoods.

C. Curtailment orders in favor of Blue Lakes and Clear Springs.

In 2005, Blue Lakes and Clear Springs tried to do the same thing that Idaho Power had attempted a quarter of a century prior. Even though the minimum Snake River flows were met and annual recharge to the ESPA exceeded groundwater withdrawals (R. Vol. 3, p. 488; Dreher, Tr. Vol. 6, p. 1375-76.), Blue Lakes and Clear Springs filed delivery calls with the Director asking him to curtail groundwater pumping from the ESPA so that more water would overflow from their springs. To the dismay of groundwater users, the Director ordered the curtailment of irrigation to more than 70,000 acres[9] of farmland which had already been planted.

The curtailment orders aim to raise the water table of the ESPA and thereby increase the amount of water that spills from the ESPA from springs in the Thousand Springs area, the expectation being that a portion of the increased overflow will discharge from the spring outlets that supply Blue Lakes' and Clear Springs' water rights.

D. Water table of the ESPA.

Spring flows in the Thousand Springs reflect the water table of the ESPA: "changes in aquifer levels result in changes in spring flow." (Ex. 429.) During the first half of the twentieth century, the amount of water stored in the ESPA increased dramatically due to "incidental recharge" from flood irrigation practices that began on the Eastern Snake River Plain shortly

[9] The Director ordered the curtailment of 57,220 irrigated acres in response to Blue Lakes' delivery call. (R. Vol. 1 p. 61 ¶77.) He ordered the curtailment of 52,470 acres in response to Clear Springs' delivery call. (R. Vol. 3, p. 502 ¶ 72.) Due to overlap in the geographic areas of curtailment, the orders collectively require that more than 70,000 acres be permanently dried up. (*cf.* Ex. 44, 151, and 456.)

after the Civil War and continued through the 1950s. *Id.* Much of the water diverted into canal systems was not consumed by crops or evaporation and instead seeped into the ESPA. For example, North Side Canal Company diverts water from the Snake River into a large canal that runs north of the Snake River along the edge of Eastern Snake River Plain above the springs that supply Blue Lakes and Clear Springs. (Ex. 469.) While crops typically consume about two acre-feet per acre, as much as thirty acre-feet per acre was diverted into the North Side Canal during its early years of operation.[10] (Brockway, Tr. Vol. 7, p. 1622, L. 4-8.) Flood irrigation resulted in millions of acre-feet of surface water seeping into the ESPA as "incidental recharge." (Ex. 429; Carlson, R. Supp. Vol. 7, p. 4848; Brockway, Tr. Vol. 7, p. 1622.)[11] As a result, from about 1900 to 1950 the water table of the ESPA rose substantially, by as much as 100 feet. *Id.*

As the water table rose due to inefficient flood irrigation, so did overflow from the ESPA. (Ex. 154, 413, 415; Brendecke, R. Supp. Vol. 3, pp. 4421-32.) Exhibit 154 shows that spring discharges increased more than sixty-three percent (from 4,100 cfs[12] to 6,700 cfs) during the first half of the twentieth century. Discharges from the specific springs that supply Blue Lakes' and Clear Springs' water rights increased even more, rising by 89 percent (Crystal Spring), 188 percent (Blue Lakes Spring), and 255 percent (Clear Lakes Spring). (R. Supp. Vol. 3, p. 4431.) Without the application of large amounts of surface water through flood irrigation to farmlands north of the Snake River, much of the water appropriated by Blue Lakes and Clear Springs

[10] Today, North Side Canal Company diverts four to six acre feet per acre. (Brockway, Tr. p. 1626.)
[11] Lands irrigated by the North Side Canal are very leaky, with water percolating into the ESPA relatively quickly. (Brendecke Tr. pp. 1848-49; Tr. pp. 1633-35.) In fact, attempts to build the Jerome Reservoir failed because of the reservoir's inability to store water. (Ex. 467 at 2.)
[12] "Cfs" stands for "cubic feet per second" which is a rate of flow.

would have remained in the Snake River and flowed out of Idaho and been lost. Instead, the water was stored in the ESPA and spring discharges increased. (Brendecke, Tr. Vol. 8, p. 1799-1800.)

Spring flows began declining around 1960. (Ex. 154.) Changes from flood to sprinkler irrigation and the termination of winter canal flows are primarily responsible for the decline. (R. Vol. 1, p. 49 ¶ 17; R. Vol. 3, p. 492, ¶ 20.) Groundwater pumping also contributed to the decline, though to a lesser extent.

The water table of the ESPA is now at or near equilibrium (i.e. stabilized), for several reasons. (Brendecke, Tr. Vol. 8, p. 1889; Dreher, Tr. Vol. 8, pp. 1221-22.) First, relatively few groundwater rights were issued by the IDWR in the 1980s, as the best lands were already irrigated and electricity prices escalated. (Ex. 417.) Then in 1992, the IDWR issued a moratorium on groundwater development, putting an end to new appropriations. (Dreher, Tr. Vol. 7, pp. 1149-50.) The amount of water pumped from the ESPA has therefore experienced little change for three decades. (Brendecke, Vol. 8, Tr. p. 1889; Wylie, Tr., Vol. 5, pp. 845, 856.) Second, nearly all irrigated farmland has already converted from flood to sprinkler irrigation. (Brendecke, R. Supp. Vol. 3, p. 4441.) Consequently, changes in aquifer levels are now caused primarily by changes in precipitation and incidental recharge.[13]

[13] The peak spring discharge levels of the 1950s can never be restored absent the return of pre-1950 conditions which would require the elimination of sprinkler irrigation, the elimination of storage in Palisades Reservoir in favor of winter canal flows, and the elimination of groundwater pumping. (R. Supp. Vol. 3 p. 4432; Luke, Tr. p. 761.)

Despite the conversion from flood to sprinkler irrigation, extensive groundwater development, and record drought[14], annual recharge to the ESPA (7.5 million acre-feet) still far exceeds annual groundwater withdrawals (2.1 million acre-feet). (R. Vol. 3, p. 488 ¶ 4.) Consequently, current spring discharges in the Thousand Springs area remain well above natural levels. Whereas historic spring discharges were no greater than 4,100 cfs, current discharges average 5,300 cfs. (Brendecke, R. Supp. Vol. 3, p. 4431; Ex. 154.) In fact, spring discharges have increased in recent years as Idaho recovers from the record drought. (Ex. 155, 156.)[15]

Nevertheless, the Director ordered massive curtailment in an effort to raise the water table of the ESPA higher and thereby increase the amount of water that overflows from springs in the Thousand Springs area.

E. Effect of the curtailment orders.

In response to Blue Lakes' delivery call, the Director ordered the permanent curtailment of 57,220 acres[16] in an attempt to increase spring overflow to Blue Lakes by 10 cfs. (R. Vol. 1, p. 61 ¶ 77.) The curtailment of 57,220 acres eliminates the use of 1,144 cfs for irrigation. (Clerk's R., p. 73.) Blue Lakes is expected to eventually receive **less than one percent** of the water curtailed once steady-state conditions are reached. (See e.g. Ex. 462.)

In response to Clear Springs' delivery call, the Director ordered the curtailment of water to 52,470 acres in an effort to increase spring overflow to Clear Springs by 2.67 cfs. (R. Vol. 3,

[14] The drought that Idaho experienced in the early 2000s was the worst drought sequence on record, with a probability of it occurring once in more than 500 years. (Dreher, Tr. p. 1134, L. 12-19.)

[15] Contrary to some contemporary propaganda, the ESPA is not "over-appropriated" and is not being "mined" by groundwater pumping.

[16] The Director used a scientific model called the ESPA Model to determine how many irrigated acres to dry up. The Director's use of the Model is discussed further in Argument section V below.

p. 503 at ¶ 72.) The curtailment of 52,470 acres eliminates the use of 1,049 cfs for irrigation. (Clerk's R., p. 73.) Clear Springs is expected to receive only **one quarter of one percent** of the water curtailed once steady-state conditions are reached. (See e.g. Ex. 463.)

With Blue Lakes and Clear Springs expected to receive less than one percent of the water curtailed, more than ninety-nine percent of the water curtailed will either be lost downriver or used by other water users who are not entitled to additional flows. (R. Supp. Vol. 3, p. 4457.) Moreover, the impact of curtailment on groundwater users is immediate, while the anticipated increase in spring flows is not expected to fully accrue for more than 50 years. (Ex. 430, 463, 463; Wylie, Tr. Vol. 3, p. 875-76.)

Given the gross disparity between the amount of water curtailed and the fractional return to Blue Lakes and Clear Springs, the economic impact of curtailment is astonishing. Physical curtailment of groundwater rights junior to 1961 is projected to result in a net loss to Idaho's annual gross state product of $206.8 million during the first year of curtailment and $3.28 billion over the course of thirty years. (Ex. 442, pp. 26-28.)[17]

The only reason physical curtailment has not yet occurred is because the Groundwater Users have been able to temporarily and on a year-to-year basis mitigate the alleged injury to Blue Lakes and Clear Springs by expending millions of dollars to implement mitigation plans that provide replacement water. (Carlquist, R. Supp. Vol. 7, pp. 4837-40; Stevenson, R. Supp. Vol. 6, pp. 4823-25; Wylie Tr. Vol. 6, p. 1496; Brendecke Tr. Vol. 8, pp. 1907-09.)

[17] The economic harm from curtailment is scalable depending on the scope of curtailment. (Church, Tr. p. 1754-56.)

ISSUES ON APPEAL

1. Whether the Director erred by failing to administer the Eastern Snake Plain Aquifer in accordance with the comprehensive plan established by the Swan Falls Agreement.

2. Whether the Director violated the law of full economic development of groundwater resources (I.C. § 42-226) by shutting off irrigation water to more than 70,000 acres when less than one percent of that water is expected to reach Blue Lakes or Clear Springs.

3. Whether the Director erred by finding "material injury" without evidence that Blue Lakes and Clear Springs actually need additional water to accomplish their beneficial use.

4. Whether Blue Lakes' and Clear Springs' delivery calls are "futile" since there is no evidence that curtailment will enable them to produce more, larger or healthier fish.

5. Whether the Director erred by refusing to account for known uncertainties in the ESPA Model.

6. Whether the Director deprived the Groundwater Users of due process by curtailing their water rights for three years without a hearing.

SUMMARY OF THE ARGUMENT

This case is about Idaho's ability to make use of its largest water resource—the ESPA—and sustain the thriving agriculture-based economy that depends on it. Although the ESPA holds ample water to meet current demands, the Director ordered the permanent curtailment of groundwater irrigation for more than 70,000 acres of farmland. The curtailment orders aim to raise the water table of the ESPA and increase the amount of groundwater that overflows from springs in the Thousand Springs area, a few of which supply Blue Lakes and Clear Springs.

The Groundwater Users are devastated and face financial ruin by the curtailment orders. These farmers invested in groundwater development with the blessing and encouragement of the State of Idaho. The State passed the Ground Water Act, implemented a State Water Plan, and entered into the Swan Falls Agreement—all to facilitate maximum beneficial use of the ESPA and other groundwater resources. The curtailment orders fail to adhere to key tenets of these laws. Instead of maximum beneficial use, the orders aim to maximize the amount of overflow from the ESPA, setting the State down a dangerous course that minimizes beneficial water use, reverses decades of agricultural development, and threatens drastic economic fallout.

The curtailment orders should be set aside for six reasons. First, the orders violate the Swan Falls Agreement which requires administration of the ESPA based on minimum Snake River flows. Second, the curtailment orders violate the Ground Water Act which provides that "while the doctrine of 'first in time is first in right is recognized,' a reasonable exercise of that right shall not block full economic development of underground water resources." I.C. § 42-226. Third, there is no substantial evidence in the record to support the Director's finding of material

injury to Blue Lakes or Clear Springs. Fourth, the delivery calls are "futile" because there is no substantial competent evidence that curtailment will enable Blue Lakes or Clear Springs to produce more, larger, or healthier fish. Fifth, the Director abused his discretion by failing to account for known uncertainties in the ESPA Model. Sixth, the curtailment orders were issued in violation of due process and the Idaho Administrative Procedures Act.

ARGUMENT

I. The curtailment orders violate the State's commitment and obligation to administer the ESPA in accordance with the Swan Falls Agreement.

The Court should set aside the curtailment orders because they violate the comprehensive plan for administration of the ESPA established by the Swan Falls Agreement, which provides for administration of the ESPA basined on minimum Snake River flows.

In 1976, Idaho Power Company filed a lawsuit that threatened to curtail ground pumping to thousands of acres across the Eastern Snake River Plain. *Idaho Power Co. v. State of Idaho*, Ada County Civil Case No. 62237 (1977). The Company aimed to increase the amount of water that overflows from the ESPA into the Snake River for use at its hydropower plant at Swan Falls Dam. The economic harm from the threatened curtailment would have been enormous. As this Court remarked, the case held "large significance to the majority of the people of the state." *Idaho Power v. State*, 104 Idaho 575, 578 (1983).

The Swan Falls lawsuit challenged the general, longstanding belief that Idaho Power's water rights at Swan Falls were subordinate to upstream water development. Without subordination, a single hydropower plant could block all future water development by

appropriating the entire flow of the river. Subordination allows a hydropower plant to make use of all available water in the river without blocking future development.

The water rights for all of Idaho Power's hydropower facilities on the Snake River include subordination conditions, except for its facility at Swan Falls Dam. Still, Idaho Power, the State of Idaho, and water users always understood that the Swan Falls hydropower rights were subordinate to upstream water development just like other hydropower rights. As a result, even though Idaho Power's hydropower rights at Swan Falls authorize the diversion and use of 8,400 cfs, Idaho Power did not object to subsequent water development which by the early 1980s had caused Snake River flows to decline to around 4,500 cfs.

Snake River flows were expected to decline even further. The first Idaho State Water Plan adopted in 1977 set a minimum flow of 3,300 cfs at the Murphy Gauge (just downstream from Swan Falls Dam), allowing an additional 1,200 cfs worth of upstream water development. *Id.* at 582. The lawsuit filed by Idaho Power challenged the State Water Plan, and petitioned the court for "a decree that its Swan Falls rights were not subject to upstream depletions and that the state water plan was a taking of those rights." *Id*. The lawsuit threatened to undo the law of full economic development and the State Water Plan and eliminate much of the agricultural development that had occurred over the prior three decades by use of the ESPA.

The district court ruled against Idaho Power, holding that the subordination conditions in the hydropower licenses for Idaho Power's facilities in Hells Canyon also subordinated the Company's hydropower rights at Swan Falls Dam. *Id*. The Idaho Supreme Court reversed the district court on this point, but remanded the case for a determination of whether the Swan Falls

hydropower rights had nevertheless been compromised by forfeiture, abandonment, adverse possession, equitable estoppel or customary preference. *Id*. at 583.

The district court never decided those issues on remand because Idaho Power and the State of Idaho settled the controversy as part of the monumental Swan Falls Agreement. (Ex. 437.) In addition to settling the litigation, the Agreement initiated the Snake River Basin Adjudication (SRBA) and defined "a sound comprehensive plan for the management of the Snake River watershed ... a plan best adapted to develop, conserve, and utilize the water resources of the region in the public interest." (Ex. 437 at 5, ¶ 11.)

The comprehensive plan established by the Swan Falls Agreement bears directly on the delivery calls made by Blue Lakes and Clear Springs. First, it protects all water rights with a priority date prior to October 1, 1984 (*i.e.* all water rights existing at the time of the Agreement). (Ex. 437 at 4, ¶ D.) As explained by a member of the Idaho Water Resource Board in a public meeting concerning the Agreement:

> The agreement specifies that all current users, all people who have beneficially put the water to use by the signing of the agreement, are protected. That if nature didn't cooperate, … those people who were in place before the agreement were signed, would still be allowed to use their water right.

(Ex. 441 at 13.) This avoided the conundrum of curtailing the very groundwater rights that were developed in reliance on the historic minimum flow of 3,300 cfs and the State's assurance that the ESPA would be administered to achieve "full economic development of underground water resources." I.C. § 42-226.

Second, the Agreement required that the minimum flow at Murphy Gauge be increased by 600 cfs, from 3,300 cfs to 3,900 cfs. (Ex. 437 at 7, ¶ 13 and Ex. 6, ¶1.) This secured a greater water supply for Idaho Power as well as spring users in the Thousand Springs area. Because of the minimum flow of zero cfs at Milner Dam (located upstream near Burley), the Snake River is completely dried up at Milner during low flow periods. *Id*. Snake River flows below Milner Dam derive principally from spring overflow from the ESPA. (Dunn, R. Supp. Vol. 6, pp. 4795-97; Patton, Tr. Vol. 1, p. 409.) The Agreement effectively assured increased spring flows by requiring that the State Water Plan be amended to increased the minimum flow at Murphy Gauge to 3,900 cfs, As explained in the 1986 State Water Plan, "river flows downstream from [the Milner gauging station] to Swan Falls dam may consist almost entirely of groundwater discharge during portions of low water years. The Snake River Plain aquifer which provides this water must therefore be managed as an integral part of the river system." (Ex. 440 at 35.)

The new minimum flow of 3,900 cfs at Murphy Gauge was the result of a classic "split the baby" settlement. Since actual Snake River flows at Murphy Gauge had bottomed out at 4,500 cfs, a minimum flow of 3,900 cfs enabled 600 cfs worth of additional water development, while securing an additional 600 cfs for hydropower over the existing minimum flow of 3,300 cfs. (Dunn, R. Supp. Vol. 6, p. 4787.) This compromise was the crux of the Agreement. (R. Vol. 13 p. 2879, ¶¶ 6-7.) As explained by Governor John Evans, "[t]he new flows at the Murphy gage, coupled with the retention of a zero flow at Milner Dam will allow for significant new agricultural development without threatening minimum flows. It is important to the future of Idaho that we allow for some additional development." (Ex. 441 at 43.) This Court confirmed

as much not long after the Agreement was entered, stating that "[t]he purpose of the agreement concerning subordination was to make available more water for future appropriators and to assist in the expansion of other beneficial uses of the water in the Snake River." *Miles*, 116 Idaho at 637.

The comprehensive plan established by the Agreement did not just address delivery calls by Idaho Power, it "settled <u>all</u> water disputes upstream of Murphy Gauge." *Id*. at 4795 (emphasis added); see also *id*. at 4790. "So long as those minimum stream flows were met, then there was no need for curtailment of the river or the aquifer." *Id*. at 4794.

The expansion of groundwater use necessarily meant that spring flows in the Thousand Springs area would decline until the minimum flows were met. This was acknowledged and discussed at the time of the Agreement by the Idaho Water Resources Board at multiple public meetings held throughout the State. For example, in Burley the Board explained:

> It says that minimum flows established by the plan should supply water for the trout farming industry. That's because the water in the river below Milner Dam, at least in the low flow periods of the year, mostly discharge from 1000 Springs. Many of the fish culturists in the state are relying on the 1000 Springs discharge water. If we're gonna have 3900 going past the Murphy gage, we're gonna have to have the water coming up 1000 Springs. Therefore those guys are probably protected to some degree. It does specify, as does the existing water plan, however, that a water right is not a guarantee of your means of diversion. It say's you're entitled to the water as long as there's a legitimate way to get it. If the spring flows were to decline, some people, the trout farmers for example, may have to change their diversion works. In an extreme case some of them might even have to pump water. These water rights will still have its priority date … but his means of diversion are not necessarily protected.

(Ex. 441 at 17; see also *Id*. at 5.) The ramifications that management of the ESPA based on minimum flows held for aquaculture were expressly incorporated into the State Water Plan:

> The minimum flows established for the Murphy Gauging Station should provide an adequate water supply for aquaculture. It must be recognized that while existing water rights are protected, it may be necessary to construct different diversion facilities than presently exist.
>
> Aquaculture can expand when and where water supplies are available and where such uses do not conflict with other beneficial uses. It is recognized, however, that future management and development of the Snake River Plain Aquifer may reduce the present flow of springs tributary to the Snake River, necessitating changes in diversion facilities. (Emphasis added)

(Ex. 440.)

The foregoing language of the 1986 Idaho State Water Plan mirrored similar language contained in the 1977 and 1982 State Water Plans. The reality is that spring flows had not been protected against future development of the ESPA ever since the Ground Water Act was amended in 1953 to provide for "full economic development of underground water resources." I.C. § 42-226.[18] As explained by Ken Dunn, who was the Director of IDWR and part of the team that negotiated the Agreement:

> The Swan Falls Agreement does not specifically discuss the spring users water rights at Thousand Springs because it was understood by all parties to the Swan Falls Agreement and all interested parties involved in the negotiations that those water rights were non-consumptive and that the flows that supplied them were the same water that made up Idaho Power's non-consumptive rights. Although the spring users and the ground water users were part of the underlying lawsuit, it was understood that the spring users' water rights would have adequate water, so long as the minimum stream flows at the Murphy Gauge were met. Furthermore, the State Water Plan was in place and confirmed this understanding. For that reason there was no concern or expectation that spring users would be able to make a delivery call against the ground water users to improve their supplies so long as the minimum flows were met.

(R. Supp. Vol. 6, p. 4792.)

[18] The Ground Water Act is discussed further in section II below.

To the extent the Swan Falls Agreement required compromise by water users, the State acted within its constitutional authority to control and administer water resources. *Miles*, 116 Idaho at 645-46. Governor Evans signed the Agreement, the Legislature enacted legislation to implement the Agreement, and the Idaho Water Resource Board amended the State Water Plan to incorporate the comprehensive water plan established by the Agreement. The Agreement comports with longstanding precedent that "title to the public waters of the state is vested in the state for the use and benefit of all the citizens of the state under such rules and regulations as may be prescribed from time to time by the law making power of the state." *Walbridge v. Robinson*, 22 Idaho 236, 242 (1912); *see also* I.C. § 42-101; *Washington State Sugar Co. v. Goodrich*, 27 Idaho 26, 36 (1915) (holding that "[t]he state is the sovereign owner of the right to appropriate and use all of the stream waters which are within the jurisdiction of the state. The state, by enactment of appropriate laws, permits private persons to use its right to appropriate and use the flow of stream water."); *Nettleton v. Higginson*, 98 Idaho 87, 90 (1977) ("the water itself is the property of the state, which has the duty to supervise the allotment of those waters with minimal waste to the private appropriators"); *Speer v. Stephenson*, 16 Idaho 707, 712 (1909) (Article XV, §§ 1 and 3 demonstrate that "the people in adopting the constitution recognized that the public waters of the state should be committed to legislative control"); Idaho Const. art. XV, § 7 ("State Water Resource Agency shall have power to formulate and implement a state water plan for optimum development of water resources in the public interest").

The Director has the duty to administer the Swan Falls Agreement and to "exercise [his] duties in a manner consistent with the comprehensive state water plan." I.C. § 42-1734B(4).

Yet, the Director did not even mention the Swan Falls Agreement or the State Water Plan in the emergency curtailment orders issued in favor of Blue Lakes and Clear Springs in 2005. (R. Vol. 1, p. 45; R. Vol. 3, p. 487.)

Prior to the administrative hearing, the Groundwater Users filed a motion for summary judgment, asserting that "[p]ursuant to the Swan Falls Agreement and the Idaho State Water Plan, the Spring Users' water rights are clearly subordinate to groundwater rights, including [the] Groundwater Users' rights, so long as the minimum stream flows at the Murphy Gauge are maintained." (R. Vol. 9, p. 1786.) The hearing officer denied summary judgment on the basis that "the Spring Users were not parties to the Swan Falls Agreement … [and] the partial decrees entered in this case do not reflect any conditions or limitations attributable to the Swan Falls Agreement." (R. Vol. 14, p. 3240.) However, the hearing officer did not entirely foreclose the issue, but instead attempted to preserve it for another day, stating that "[i]f a decision is reached in an action in District Court concerning this issue contrary to this ruling, this decision will be revised." *Id*. at 3241

The hearing officer's decision is mistaken. Just because the partial decrees of Blue Lakes and Clear Springs do not reference the Swan Falls Agreement does not mean they are not subject to the Agreement. First, all water users are subject to the comprehensive plan established by the State, whether or not they are signatories to the Agreement. As explained by former Director Ken Dunn who helped negotiate the Agreement on behalf of the State, the State "was acting on behalf of all water users by its authority to regulate the use of water in the State of Idaho." (R. Supp. Vol. 6, p. 4791.)

Second, the partial decrees of Blue Lakes and Clear Springs are not yet final. The SRBA district court, in addition to defining the individual water rights, may define general provisions "to define and to administer all water rights." I.C. § 42-1411(3). General provisions may be decreed either before or after an individual partial decree is entered. Indeed, all decrees entered prior to the final SRBA decree are deemed "partial" for the very reason that they may be further defined by subsequent general provisions. In fact, when Blue Lakes and Clear Springs made their delivery calls, the SRBA court had already designated the following basin-wide issue: "To what extent, if any, should the Swan Falls Agreement be addressed in the SRBA or memorialized in a decree?" (Order Designating Basin-Wide Issue, *In re SRBA*, Twin Falls Co. Case No. 39576, Subcase No. 00-91013 ("Basin-Wide Issue No. 13") (Aug. 23, 2004)).

Even though the SRBA court has not yet ruled on that issue, the Director still has an obligation to apply the Swan Falls Agreement in his administration of water rights. The hearing officer's attempt to preserve the Swan Falls issue for the SRBA district court effectively became the decision of the court. With the curtailment orders having remained in force now for five irrigation seasons, the SRBA court cannot very well decide that the Agreement is a binding water administration criterion for the ESPA without upending the curtailment orders. In fact, basin-wide issue 13 has remained on hold in the SRBA pending the outcome of this case. With scant analysis by the hearing officer or the Director, this Court is left to decide the effect of the comprehensive plan established by the Agreement.

When this issue was raised on judicial review, Judge Melanson acknowledged that

> the State Water Plan and the Swan Falls Agreement establish at least on a macro scale what constitutes 'full economic development' of the ESPA. The intent of the Swan Falls Agreement was to provide for full development of the ESPA below Milner Dam and satisfy Idaho Power's hydropower rights by meeting the minimum flow requirements at the Murphy Gauge.

(Clerk's R. pp. 44-101.) (internal cites omitted). Nevertheless, he concluded that the Agreement and the State Water Plan "are not conclusive of full economic development in responding to individual delivery calls," *id*. at 83-84. He reasoned that since the Snake River is divided into sub-reaches[19], "pumping in one sub-reach may have no effect on the spring flows in a different sub-reach. Therefore, it is possible for groundwater pumping to disproportionately deplete a particular sub-reach without affecting other sub-reaches and still satisfy the terms of the Swan Falls Agreement." *Id*. at 83. This reasoning unfortunately does not reflect the realities of the Agreement or the aquifer.

Since groundwater pumping has a radial impact on the aquifer (i.e. the impact emanates 360 degrees), the effects of pumping cannot practically be limited to a specific sub-reach of the Snake River. (Ex. 461 at 6-7.) Indeed, it is the Snake River—not the ESPA—that is divided into sub-reaches. By allowing spring users in one sub-reach to demand curtailment even though the minimum flows are satisfied, the additional groundwater development that the Swan Falls Agreement intended to secure cannot be realized. The comprehensive plan established by the Agreement cannot be given effect on a macro scale if it is frustrated on a micro scale.

[19] The term "reach" means a section of the Snake River. The Snake River is divided into six sub-reaches, including the "Devil's Washbowl to Buhl Gauge" sub-reach where Blue Lakes is located and the "Buhl Gage to Thousand Springs" sub-reach where Clear Springs is located.

The district court further reasoned that the Swan Falls Agreement and State Water Plan have no bearing on spring rights because surface water from above Milner Dam could be used to temporarily sustain the minimum flow. (Clerk's R. p. 82.) The court stated that "until such time as the ESPA is administered on a long range basis to meet the minimum flows, the Swan Falls Agreement and State Water Plan are not conclusive of full economic development in responding to individual delivery calls." *Id*. at 83-84. The problem with this reasoning is that the ESPA will never be administered based on the minimum flows if the Director is permitted to order curtailment when the minimums *are* satisfied. While surface water could be used to meet the minimums flows temporarily, it is not being so used now, and surface water is incapable of sustaining minimums for any extended period in the event of a breach.

The stark reality is that the Director's failure to give effect to the Swan Falls Agreement has resulted in the very type of massive curtailment of groundwater rights that Idaho Power tried to accomplish a quarter of a century ago and that the Agreement was designed to avoid. Tens of thousands of acres of farmland remain under curtailment orders even though the minimum Snake River flows at Murphy Gauge are satisfied. The curtailment orders shut down groundwater rights with priority dates as early as 1964[20] even though the Agreement protects all groundwater rights with priority date before October 1, 1984. By ordering curtailment even though the minimum flows are met, the Director single-handedly defeated the benefit of the bargain that the State labored so heavily to secure. As testified by former Director Ken Dunn:

[20] The Blue Lakes curtailment order curtails water rights junior to December 28, 1973. (R. Vol. 1, p. 72.) The Clear Springs curtailment order curtails water rights junior to February 5, 1964. (R. Vol. 3, p. 523.)

> The central purpose of the Swan Falls Agreement would be ruined if spring water rights were entitled to increase surface water supplies above the minimum flows via the curtailment of ground water pumping. The State of Idaho and the Idaho Department of Water Resources entered into the Swan Falls Agreement only on condition that other water uses could continue or be developed so long as those minimum flows were maintained. The benefit of that bargain would be annihilated if spring users were entitled to command water flows above the minimum flows which were agreed to.

(R. Supp. Vol. 6, p. 4796.)

As a matter of law, the terms of the Swan Falls Agreement render any delivery call by spring users invalid so long as the minimum flows at the Murphy Gauge are maintained. Blue Lakes and Clear Springs cannot be permitted to force the State to abandon the Swan Falls Agreement and deprive the State of its ability to develop the additional water secured by the Agreement. The curtailment orders should be set aside because they fail to comply with the comprehensive water management plan established by the Swan Falls Agreement and State Water Plan. If the Court accepts this argument, it will be unnecessary to remand this case for further proceedings.

II. The curtailment orders violate the law of full economic development of groundwater resources set forth in Ground Water Act.

This Court should set aside the curtailment orders because they violate the overarching policy of the Ground Water Act ("Act") that "while the doctrine of 'first in time is first in right' is recognized, a reasonable exercise of that right <u>shall not block full economic development</u> of underground water resources." I.C. § 42-226 (emphasis added). The Act is acutely relevant to this case because it is the only place in Idaho's water code where the Legislature addresses the situation of a surface water user seeking to curtail a junior groundwater user. In fact, it was the

1953 amendments to the Act that first authorized the Director to administer groundwater rights for the benefit of surface rights. 1953 Idaho Sess. Laws, ch. 182. Prior to 1953, holders of surface water rights had neither a recognized right nor an administrative mechanism to seek priority administration against groundwater rights. As discussed below, this right to seek administration (through enforcement of priority) against groundwater rights is conditional.

To achieve this goal of full economic development, the Act provides that "appropriators of underground water shall be protected in the maintenance of reasonable ground water pumping levels." I.C. § 42-226 (emphasis added). The Act enables groundwater development to expand so long as it does not "result in the withdrawing of the ground water supply at a rate beyond the reasonably anticipated average rate of future natural recharge" (i.e. so long as withdrawals do not outpace inputs). I.C. § 42-237A(g).[21] Simply stated, if hydraulic conditions can sustain the existing diversions from the aquifer, the Act precludes curtailment. On this condition the Legislature made groundwater rights subject to curtailment by surface water rights.[22]

This administrative scheme is founded on precedent from this Court. As early as 1923, in a case involving groundwater, the Court held that a water user has "no right to insist the water-table be kept at the existing level in order to permit him to use the underground waters." *Nampa & Meridian Irrigation Dist. v. Petrie*, 37 Idaho 45, 51 (1923). The Court explained that "[t]o hold that any land owner has a legal right to have [] a water table remain at a given height … is not required by either the letter or spirit of our constitutional and statutory provisions in regards

[21] The Act even permits over-drafting of an aquifer in certain circumstances. I.C. § 42-237A(g).
[22] Notably, the water rights that Blue Lakes and Clear Springs used to make their delivery calls were appropriated *after* the Ground Water Act was amended to provide for full economic development in 1953.

to water rights." *Id*. As the Court later stated in *Nettleton v. Higginson*, "the entire water distribution system under Title 42 of the Idaho Code is to further the state policy of securing the maximum use and benefit of its water resources." 98 Idaho 87, 91 (1977).

The Act's attention to reasonable pumping levels and the balance between withdrawals and recharge reflect the Legislature's expectation that aquifer levels would decline as ground-water pumping expanded. With respect to the ESPA specifically, the anticipated lowering of the water table was also expected to result in an accompanying reduction in the amount of water that overflows from the ESPA through the springs in the Thousand Springs area. Therefore, the Legislature provided that the Act applies "[w]henever any person owning or claiming the right to the use of any surface or ground water right believes that the use of such right is being adversely affected by one or more users of ground water rights of later priority …." I.C. § 42-237B (emphasis added).

Former Director Ken Dunn testified that because of the Act's directive for full economic development of groundwater resources, "the Department would not have permitted spring users in the thousand springs reach to curtail ground water pumping on the Eastern Snake River Plain." *Id*. The policy was incorporated in the first State Water Plan adopted in 1977, which states:

> Aquaculture can expand when and where water supplies are available and where such uses do not conflict with other beneficial uses. It is recognized, however, that future management and development of the Snake River Plain Aquifer may reduce the present flow of springs tributary to the Snake River, necessitating changes in diversion facilities.

(Ex.440, Policy 5G) (emphasis added.)

The Act and its mechanism for achieving full economic development were challenged in 1973. *Baker v. Ore-Ida Foods, Inc.*, 95 Idaho 575, 576 (1973). An earlier decision of this Court suggested that "a senior appropriator of ground water is forever protected from any interference with his method of diversion." *Id.* at 581 (citing *Noh v. Stoner*, 53 Idaho 651 (1933)). Under *Noh*, "the only way that a junior can draw on the same aquifer is to hold the senior harmless for any loss incurred as a result of the junior's pumping." *Id*. In *Baker*, the Court recognized that its prior decision in *Noh* was problematic, since "[i]f the costs of reimbursing the senior became excessive, junior appropriators could not afford to pump the aquifer." *Id*.

In response, the Court reversed its prior holding, explaining that it was "inconsistent with the constitutionally enunciated policy of optimum development of water resources in the public interest." *Id*. at 583. The Court concluded that "the Ground Water Act is consistent with the constitutionally enunciated policy of promoting optimum development of water resources in the public interest." *Id.* at 584 (internal cite omitted); see also Idaho Const. art 15, § 3 (stating "[t]he right to divert and appropriate the unappropriated waters of any natural stream to beneficial use, shall never be denied…."). Further, the Court explained that

> A senior is not absolutely protected in either his historic water level or his historic means of diversion. Our Ground Water Act contemplates that in some situations senior appropriators may have to accept some modification of their rights to achieve the goal of full economic development.

Id. A water user is not entitled to curtail junior-priority groundwater rights simply because the water table has lowered. While this means that junior-priority groundwater pumping may have some negative impact on senior-priority water users, the Court explained that

> In the enactment of the Ground Water Act, the Idaho legislature decided, as a matter of public policy, that it may sometimes be necessary to modify private property rights in ground water in order to promote full economic development of the resource. The legislature has said that when private property rights clash with the public interest regarding our limited ground water supplies, in some instances at least, the private interests must recognize that the ultimate goal is the promotion of the welfare of all our citizens.

Id. (internal cite omitted); see also *Schodde v. Twin Falls Land and Cattle Co.*, 224 U.S. 107, 120 (1912) (holding that a water right "is not an unrestricted right, but must be exercised with some regard to the rights of the public"). The ultimate criterion of groundwater administration is "how best to utilize the annual supply without over-drafting the stock which maintains the aquifer's water level." *Baker*, 95 Idaho at 580.

That is not to say that the directive for full economic development does away with the right of priority. To the extent necessary to prevent over-drafting of the aquifer, priority of right still determines which water rights get shut off to maintain a stable water table. But the Act unquestionably places limits on the exercise of priority. *Parker v. Wallentine*, 103 Idaho 506, 512 (1982) (confirming that the doctrine that first in time is first in right "was modified in certain respects by the enactment of the Ground Water Act ….").

The CM Rules incorporate the Act and its policy of full economic development of groundwater resources:

> These rules integrate the administration and use of surface and ground water in a manner consistent with the traditional policies of reasonable use of both surface and ground water. The policy of reasonable use includes the concepts of priority in time and superiority in right being subject to conditions of reasonable use … and full economic development as defined by Idaho law.

CM Rule 20.03. In addition, the CM Rules specifically instruct the Director to consider "[t]he amount of water available from the source from which the water right is diverted" when responding to delivery calls made against groundwater rights. CM Rule 43.01.a.

This Court has considered and upheld the constitutionality of the CM Rules, and affirmed the Director's duty in conjunctive water administration to consider "the reasonableness of a diversion, the reasonableness of use and full economic development." *AFRD2*, 143 Idaho at 876. As explained by the Court, "[w]hile the prior appropriation doctrine certainly gives pre-eminent rights to those who put water to beneficial use first in time, this is not an absolute rule without exception." *Id*. at 880.

The Ground Water Act facilitates full economic development by protecting groundwater pumping so long as a reasonable aquifer levels are sustained. In addition, the Act lends support to common law prohibition of monopolistic water use. It also requires the Director to consider the economic impact of curtailment. When applied to the facts of this case, these considerations uniformly and powerfully show that the curtailment orders violate the law of full economic development of groundwater resources.

A. The curtailment orders require the water table of the ESPA to be maintained at an inflated level contrary to the Act.

The fact that (a) the spring water rights by which Blue Lakes and Clear Springs demand curtailment were appropriated when ESPA overflow was at an all-time high; (b) these peak flows cannot be restored without returning to flood irrigation, retiring Palisades Reservoir in favor of winter canal flows, and drying up nearly one million groundwater irrigated acres; (c) annual

recharge to the ESPA (7.5 million acre-feet) is far above annual groundwater withdrawals (2.1 million acre-feet); (d) current spring flows remain 1,200 cfs above natural levels; and (a) the ESPA is at or near equilibrium (See Statement of Facts pp. 13-15 *supra*.), clearly precludes curtailment based on the administrative scheme embodied in the Ground Water Act. The central premise of the Act is that the ESPA and other aquifers will be administered to achieve full economic development by protecting the use of groundwater provided reasonable, sustainable aquifer levels are maintained.

The original curtailment orders issued in 2005 cite the law of full economic development (R. Vol. 1, p. 63 ¶ 6; R. Vol. 3, p. 512 ¶ 6) and note the difference between recharge into and withdrawals from the ESPA (R. Vol. 1, pp.45-45, ¶¶ 3-6; R. Vol. 3 pp. 487-88, ¶¶ 3-6). However, the orders do not take the next step and apply the law of the Act to the foregoing facts. The orders do not address administration of the ESPA based on reasonable aquifer levels at all. Massive and permanent curtailment was ordered without any meaningful analysis of the most defining statutory criterion for administering groundwater rights in response to delivery calls made by surface water rights.

After the hearing, the hearing officer acknowledged that "'first in time is, first in right' is fundamental to water administration but is subject to consideration of the public interest," (R. Vol. 16, p. 3690), yet still offered no analysis of the aquifer level, the relationship between recharge and withdrawals, or the fact that spring discharges remain higher than historic levels.

On judicial review, the district court acknowledged that both the CM Rules and Idaho Code § 42-226 require analysis of full economic development, but the court refused to reverse the curtailment orders, explaining:

> Such a determination of "reasonableness" required the Director to balance the State's policy of full economic development, the exercise of senior priority rights, and the public interest. A determination of full economic development, as contemplated by the CMR and Idaho Code § 42-226, is not an analysis of the "highest and best" use of the water or the "best economic return" from the use of the water. Rather, full economic development denotes expansive utilization of the aquifer, and does not necessarily dictate a preference of a more profitable or popular water use over another. Applying the balancing test, the Director made findings that the Spring Users were employing reasonable diversion practices and that the amount of undeveloped water or "dead storage" in the aquifer was reasonable under the circumstances.

(Clerk's R. p. 121.) This conclusion is mistaken. First, full economic development is not a balancing test. While the Director may exercise discretion in defining a reasonable aquifer level, he cannot refuse to consider whether the rate of groundwater withdrawal exceeds the reasonably anticipated rate of future recharge, or refuse to administer the ESPA based on reasonable aquifer levels.

Second, the district court properly noted that "any public interest or full economic development analysis has to start with the premise that a certain amount of undeveloped water or 'dead storage' is acceptable" (Clerk's R. p. 79), but mistakenly assumed the Director actually made a determination of reasonable aquifer levels. While the Director recognized that annual recharge is greater than withdrawals, he not apply the fact to the law of the Act by making specific findings or conclusions concerning reasonable aquifer levels or the amount of "dead storage" required by the curtailment orders.

The district court further assumed that the Director actually made findings that the Spring Users' were not monopolizing the aquifer, but this assumption is equally untrue. *Id*. p. 78-79. While the district court was clearly troubled by the "overwhelming" evidence "that the curtailment of ground water does not result in a timely proportionate increase to spring flows" and that "the majority of the projected increases to the respective sub-reaches is water not used by the Springs Users and discharges from the aquifer through other spring complexes," *Id*. at 78, the district court ultimately affirmed the curtailment orders based on an assumption that the Director directly considered these issues.

Due to the lack of specific findings or conclusions concerning reasonable aquifer levels, we are left with nothing more than an <u>inference</u> that the Director must have believed that curtailment is consistent with administrative scheme embodied in the Act. But inferences are not enough to sustain the curtailment orders. The Director has a statutory duty to provide "a concise and explicit statement of the underlying facts of record supporting the findings." I.C. § 67-5248. This Court should not give deference to inferred findings and conclusions concerning facts that are at the very heart of this case. The lack of any meaningful analysis of the recharge/withdrawal balance and reasonable groundwater levels has resulted in the Act being utterly trivialized, with the Director now excused from making any meaningful application of the Act in the future.

Instead of the ESPA being administered for maximum sustainable beneficial use, the orders aim to maximize overflow from the ESPA, <u>minimizing</u> beneficial use of Idaho's most productive aquifer and encouraging additional delivery calls by spring users. Blue Lakes and Clear Springs have "no right to insist that the water table be kept at the existing level," *Petrie*,

37 Idaho at 51, yet the curtailment orders guarantee them an inflated water table that is impossible to restore without a total reversion to inefficient flood irrigation and a reversal of a half century's worth of groundwater development.

The curtailment orders should be set aside because they violate the Ground Water Act. With annual recharge into the ESPA far greater than withdrawals, the water table of the ESPA at or near equilibrium, and spring discharges well above natural levels, it makes no sense and is contrary to the directive for full economic development and the maintenance of reasonable pumping levels to permanently dry up more than 70,000 acres of farmland. This is precisely why the Act provides that senior water users may have to accept "some modification of their rights in order to achieve the goal of full economic development." *Baker*, 95 Idaho at 584.

B. The curtailment orders give Blue Lakes and Clear Springs an unreasonable monopoly over the ESPA.

Violation of the Act is further evidenced by the gross monopoly created in Blue Lakes and Clear Springs by the curtailment orders. It has long been "[t]he policy of the law of this State [] to secure the maximum use and benefit, and least wasteful use, of its water resources." *Poole v. Olaveson*, 82 Idaho 496, 502 (1960) see also *Parker v. Wallentine*, 103 Idaho 506, 650 P.2d 648 (1982) (stating that "it is clearly state policy that water be put to its maximum use and benefit"). Accordingly, the CM Rules precludes monopolistic water use by providing that "[a]n appropriator is not entitled to command the entirety of large volumes of water in a surface or ground water source to support his appropriation contrary to the public policy of reasonable use of water." CM Rule 20.03.

The policy against monopolistic water use is rooted in our constitutional guarantee that "[t]he right to divert and appropriate the unappropriated waters of any natural stream to beneficial uses, shall never be denied …." Idaho Const., Art. 15, § 3. As this Court explained more than a century ago,

> In this arid country where the largest duty and the greatest use must be had from every inch of water in the interest of agriculture and home-building, it will not do to say that a stream may be dammed so as to cause subirrigation of a few acres at a loss of enough water to surface-irrigate ten times as much by proper application.

Van Camp v. Emery, 13 Idaho 202, 208 (1907). The United States Supreme Court, applying Idaho law, relied on this same policy in the case of *Schodde v. Twin Falls Land and Cattle Co.* 224 U.S. 107. In that case, water diversions into the newly-constructed Twin Falls Canal had substantially reduced the flow of water in the Snake River, preventing Schodde from being able to divert his more senior water right and leaving him without any water for his 430-acre farm. *Id*. at 114-16. Though senior in priority, the Court denied Schodde any recourse because protecting his diversion would unreasonably impair the public interest in maximizing development of the Snake River. *Id*. The Court reasoned that a water right "must be exercised with reference to the general condition of the country and the necessities of the people, and not so to deprive a whole neighborhood or community of its use and vest an absolute monopoly in a single individual." *Id*. at 121 (quoting *Basey v. Gallagher*, 87 U.S. 670, 683 (1874)).

In *Schodde*, the Court justified its decision with the following hypothetical, which is remarkably relevant to this case:

> Suppose from a stream of 1000 inches a party diverts and uses 100, and in some way uses the other 900 to divert his 100, could it be said that he made such a

> reasonable use of the 900 as to constitute an appropriation of it? Or, suppose that when the entire 1000 inches are running, they so fill the channel that by a ditch he can draw off to his land 100 inches, can he then object to those above him and appropriating the other 900 inches, because it will so lower the stream that his ditch becomes useless? This would be such an unreasonable use of the 900 inches as will not be tolerated under the law of appropriation.

Id. at 119. It was patently unreasonable to the *Schodde* Court to curtail water to thousands of irrigated acres if only ten percent of the curtailed water could be used by the senior water user.

While the *Schodde* Court did not state what it believed to be a reasonable return on curtailment, the hypothetical certainly implies it must be greater than ten percent. The best evidence of a reasonable rate of return on curtailment in this case was given by Clear Springs' CEO Larry Cope who testified that he believed that at least a two-thirds (sixty-seven percent) return on curtailment within ten years is an appropriate standard. (Cope, Tr. Vol. 1, p. 159, L. 12-16.)

In this case, the scope of curtailment is so broad that Blue Lakes is projected to receive **less than one percent** of the water curtailed. (See Statement of Facts at p. 40 *supra*.) Worse yet, Clear Springs is projected to receive only **one quarter of one percent** of the water curtailed. *Id.* The disparity between the amount of water curtailed and the projected benefit to Blue Lakes and Clear Springs could hardly be more extreme. The return on curtailment of less than one percent simply cannot be squared with holding in *Schodde* that a ten percent rate of return is patently unreasonable, particularly given the testimony of Mr. Cope that a two-thirds return should be required.

The remaining ninety-nine percent of the curtailed water is turned into unusable "dead" storage that serves the sole purpose of propping up an inflated water table and spring discharges. (Clerk's R. pp. 77-78.) This massive surplus of unusable storage water is contradictory to the law of full economic development as well as the constitutional promise that "[t]he right to divert and appropriate the unappropriated waters of any natural stream to beneficial uses, shall never be denied …." Idaho Const. art. XV, § 3.

The Director's original curtailment orders fail to even mention, let alone make discrete findings or conclusions concerning, the disparity between the amount of water curtailed and the fractional return to Blue Lakes and Clear Springs, or the amount of groundwater that must be permanently stored in the ESPA to prop up the water table and support their inflated spring flows. Following the hearing, however, the hearing officer did note the stark imbalance:

> One of the most startling facts in these cases is the amount of acreage that must be curtailed in order to deliver water to the Spring Users facilities. It is not a one cfs to one cfs increase to the Spring Users ratio. The vast majority of the water that will be produced from curtailment does not go to the Blue Lakes and the Snake River Farm facilities. Perhaps it will go to beneficial use in Idaho, perhaps not.

(R. Vol. 16, p. 3690.) Still, it was not enough for the Director to change course and narrow the scope of curtailment. The hearing officer did cite *Schodde* and CM Rule 20.03 in response to the Spring Users' argument that even more acres should have been curtailed (R. Vol. 16, p. 3712), but neither the hearing officer nor the Director were willing to go one step further and question whether <u>fewer</u> acres should be curtailed given the tiny rate of return on the broad curtailment ordered in an emergency in 2005.

Of the thousands of pages of evidence in the record of this case, arguably nothing is more compelling than the fact that Blue Lakes will receive less than one percent of the water curtailed and that Clear Springs will receive less than one-quarter of one percent of the water curtailed. The monopoly given to Blue Lakes and Clear Springs is far worse than the ten percent rate of return that was deemed patently unreasonable in *Schodde*. This is the type of monopoly that CM Rule 20.03 precludes, and that the legislature intended to avoid by the enacting the Ground Water Act. The amount of "dead storage" required to prop up the inflated spring flows denies the constitutional right to appropriate the unappropriated waters of the State. Therefore, the curtailment orders should be set aside for violating the common law prohibition of monopolistic water use, CM Rule 20.03, Idaho Code § 42-226, and Idaho Const. art 15, § 3.

C. The severe economic impact of curtailment further demonstrates violation of the law of full economic development.

The Ground Water Act's stated policy goal of "full economic development" necessarily gives relevance to and requires the Director to consider the economic effect of curtailment when responding to delivery calls against groundwater rights. If curtailment will result in substantial economic harm, the senior's water delivery call must be rejected. I.C. § 42-226.

The Director made no analysis of the economic impact of curtailment before issuing the curtailment orders in 2005. Evidence presented at the hearing shows, as one would expect, that the economic harm mirrors the gross disparity between the amount of water curtailed and the fractional return to Blue Lakes and Clear Springs. (See Statement of Facts at 17 *supra*.) The

economic harm of physical curtailment is in the realm of hundreds of millions or even billions of dollars, wreaking the most havoc in the agriculture-based communities of southern Idaho. *Id*.

The hearing officer acknowledged that "the Director has a responsibility to the State to consider the [economic] impact of the requested curtailment." (R. Vol. 16, p. 3713.) Again, however, economic impacts were used to defend against the argument of Blue Lakes and Clear Springs that even more acres should be curtailed, but economic impact was not used to scrutinize the orders themselves, even though the original curtailment orders were made in a rush, without any evidence or consideration of the economic impact of curtailment.

In sum, the legislative mandate for full economic development of groundwater resources is unambiguous, and "the clearly expressed intent of the legislative body must be given effect." *Friends of Farm to Market v. Valley County, Idaho Bd. of Commissioners*, 137 Idaho 192, 197 (2002). "There is no indication that the words of the Ground Water Act should be interpreted in any way other than as they are normally used." *Parker v. Wallentine*, 103 Idaho 506, 510-11 (1982). Therefore, the Act's directive for full economic development, and its protection of reasonable aquifer levels, must be taken head-on.

The curtailment orders should be set aside because they violate the Ground Water Act's directive for full economic development and its mechanism for administering the ESPA based on sustainable aquifer levels. The undisputed facts are that annual recharge to the ESPA exceeds withdrawals, the ESPA is at or near equilibrium, and spring flows remain well above historic levels. Add to these the undisputed facts that Blue Lakes and Clear Springs are expected to receive less than one percent of the water curtailed, resulting in a drastic economic harm, and it

is all the more clear that the broad scope of curtailment violates Idaho Code § 42-226 and is arbitrary, capricious, and an abuse of discretion. If these curtailment orders do not block full economic development of the ESPA, then presumably nothing does.

III. The Director's findings of "material injury" to Blue Lakes and Clear Springs are not supported by substantial evidence in the record.

The curtailment orders should be set aside because there is no substantial evidence that Blue Lakes and Clear Springs are suffering material injury due to junior-priority groundwater pumping. The CM Rules require the Director to engage in fact-finding in response to a delivery call to determine whether the water user who is making the call is suffering "material injury." CM Rule 40.01. "Material injury" is defined as the "[h]inderance to 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." CM Rule 10.14 (emphasis added). The material injury requirement derives from the constitutional requirement that "[p]riority of appropriation shall give the better right as between those using the water." Idaho Const. art. XV, § 3 (emphasis added); *see also* I.C. § 42-104 (an appropriation of water "must be for some useful and beneficial purpose, and when the appropriator or his successor in interest ceases to use it for such purpose, the right ceases.")

CM Rule 42 contains a list of factors the Director should consider when determining whether material injury exists. In this case, the Director erred by failing to consider the material injury factor set forth in CM Rule 42.01.e, which instructs the Director to consider "[t]he amount of water being diverted and used compared to the water rights." This factor recognizes that an

appropriator's needs may be satisfied with something less than the maximum rate of diversion authorized under his or her "paper right."[23] As explained by this Court in its *AFRD2* decision,

> the Director 'has the duty and authority' to consider circumstances when the water user is not irrigating the full number of acres decreed under the water right. If this Court were to rule the Director lacks the power in a delivery call to evaluate whether the senior is putting the water to beneficial use, we would be ignoring the constitutional requirement that priority over water be extended only to those <u>using</u> the water.

143 Idaho at 876 (emphasis added). Further, the Court sustained the following conclusion of law made by the Director in that case:

> Because the amount of water necessary for beneficial use can be less than the decreed or licensed quantities, it is possible for a senior to receive less than the decreed or licensed amount, but not suffer injury. … depletion does not equate to material injury. Material injury is a highly fact specific inquiry that must be determined in accordance with IDAPA conjunctive management rule 42.

Id. at 868. CM Rule 42.01.e gives effect to the constitution by ensuring that junior-priority water rights are not curtailed to provide water to a senior water user whose needs can be met without curtailment.

One reason for the Director's duty to consider the senior's actual use of water is to protect against fraudulent delivery calls. For instance, some canal companies operate small hydropower facilities on their canals. The relatively late-priority water rights for these hydropower facilities are supplied simultaneously with water diverted under the companies' early-priority irrigation rights. These companies have an economic motivation to call for water under their early-priority irrigation rights in order to generate hydropower during times when

[23] The term "paper right" refers to the water right license or decree which identifies the elements of the water right and maximum parameters of authorized water use.

water is not needed for irrigation and would not otherwise be available under the later-priority hydropower rights.

Similarly, as explained above, Idaho Power owns hydropower rights at Swan Falls Dam that are precluded from making delivery calls against junior-priority groundwater rights that divert from the ESPA. If the Director fails to consider whether a senior-priority spring user needs additional water, Idaho Power could conspire with spring users or in other ways advocate delivery calls for additional water, in order to increase Snake River flows.[24]

Therefore, it is imperative that the Director consider the senior's actual water use before ordering curtailment.

The original curtailment orders issued in 2005 recite CM Rule 42.01.e, but do not include any findings of fact or conclusions of law concerning Blue Lakes' or Clear Springs' actual need for and use of water compared to their water rights.

Not convinced that Blue Lakes or Clear Springs need additional water to accomplish their designated beneficial use, the Groundwater Users sought to discover information concerning fish production. Apparently with something to hide, Blue Lakes and Clear Springs sought a protective order to avoid disclosure of all fish production information. (R. Vol. 10, p. 2021.) The hearing officer granted a protective order, but only on condition that "if that information is not produced in discovery Blue Lakes and Blue Springs [sic] may not introduce information from the records to support <u>any position they assert</u>; e.g. more water allows the production of more or larger healthy fish." (R. Supp. Vol. 3, p. 4402) (emphasis added). The hearing officer

[24] Notably, legal counsel for Clear Springs also represents Idaho Power in the SRBA and other matters.

recognized that concealment of such information would make it impossible for the Groundwater Users to challenge the Spring Users' bare allegations of material injury.

Blue Lakes and Clear Springs surprisingly chose not to disclose production information, and they were thereby precluded from presenting evidence that they need additional water. Not to be deterred, Blue Lakes and Clear Springs submitted a Pre-Hearing Memorandum replete with testimony and exhibits containing fish production information. (R. Vol. 15, p. 3263.) It was a blatant attempt to use as a sword the very information they had successfully shielded the Groundwater Users from discovering. In response, the Groundwater Users filed a Motion in Limine to prevent the Spring Users from presenting such evidence, which was granted at the outset of the hearing. (Tr. Vol. 1, p.59.) The hearing officer at that time noted that "production records might very well be the linchpin that prove or disprove a point. If information is necessary to rely upon those, then of course it will not be allowed. … If testimony appears to rely on production records, then of course it will be precluded." *Id.*

Without admissible evidence of Blue Lakes' and Clear Springs' water use or their need for additional water, there can be no finding of material injury. Yet, rather than hold Blue Lakes and Clear Springs responsible for concealing important information from both the Director and the junior-priority water users they sought to curtail, the hearing officer made a categorical conclusion—without any supporting evidence—that "[m]ore water allows the production of more fish. Less water accommodates fewer fish. Depletion of the water supply in the ponds and raceways limits the production of fish. That is material injury when the business is the production of fish." (R. Vol. 16 p. 3695.) In other words, the hearing officer decided that

depletion automatically equals injury—directly contrary to this Court's acknowledgement in *AFRD2* that "depletion does not equate to material injury." 143 Idaho at 868.

There is no evidence (let alone substantial evidence) in the record to support a conclusion that a decreased water supply automatically and always equals material injury. It assumes that fish farmers at all times need to operate their facilities at maximum capacity, as if irrigators never leave fields fallow for market or other reasons. The ruling simply says nothing of whether Blue Lakes' or Clear Springs' need additional water to achieve their beneficial use.

The hearing officer may have relied on generic testimony of Gregory Kaslo that Blue Lakes could grow more fish if they had more fish, which was erroneously allowed into the record over the Groundwater Users' objection:

> Q. If additional spring flows were made available to Clear Springs at the Snake River Farms facility, could that water be utilized in those dry raceways?
>
> A. Yes. If we had additional water, we would introduce the water to the empty raceways.
>
> Q. What would result if that additional water was put in the raceways?
>
> A. Obviously, we would stock those raceways with fish, and there would be additional production.
>
> MR. BUDGE: I'd object, Your Honor, and move to strike that question [sic] as being unresponsive. We got into the area where he said more water is more fish. The ruling was very specific that there couldn't be testimony that more water is more fish or bigger fish or healthier fish.
>
> THE HEARING OFFICER: That's relying on production records. This goes to the weight and without the production records to substantiate that it has less weight.

(Tr. p. 177, L. 5-24.) If Mr. Kaslo's statement that there would be "additional production" is credible, it is because the testimony is based on the very production records that were concealed from the Groundwater Users. The testimony must be given no probative value since it violates the hearing officer's discovery order and left the Groundwater Users with no way to challenge the testimony without soliciting and receiving for the first time at the hearing the production records they were denied from discovering before the hearing.

Further, the Director justified his assumption that more water automatically equals more fish because "[t]here is no contradictory evidence." (R. Vol. 16, p. 3840.) The injustice of this reasoning is inescapable, since the Groundwater Users were denied access to the information needed to put on contradictory evidence.

It would be one thing if Blue Lakes and Clear Springs had put on evidence of how their facilities are designed and constructed, how fish are reared, produced, and cycled, how much water is needed to fill a single raceway, how their water needs change during different periods of the years, what limitations exist in producing fish, and whether or to what extent the additional 10 cfs to Blue Lakes and 2.67 cfs to Clear Springs will enable them to meet legitimate production needs. It is quite another to excuse Blue Lakes and Clear Springs from putting on that evidence, make every assumption in their favor, and deprive the Groundwater Users of discovery of the information needed to prove otherwise.

The strategy of Blue Lakes and Clear Springs to conceal the information necessary for the Groundwater Users to properly defend against the delivery calls has so far paid off, with the CM Rules applied in a manner that turned their bare allegations of material injury into un-

rebuttable presumptions of material injury. The bar has been set so low that material injury exists any time a water user receives less than his or her maximum authorized rate of diversion, regardless of whether additional water will actually be put to beneficial use. Such a standard is not tolerated in the administration of surface water and should not be tolerated in the administration of groundwater.

The curtailment orders should be set aside because they violate CM Rule 42.01.e. There was no analysis of "[t]he amount of water being diverted and used compared to the water rights," ignoring "the constitutional requirement that priority over water be extended only to those using the water." *AFRD2*, 143 Idaho at 876.

IV. The Spring Users' delivery calls are "futile" because there is no substantial evidence that curtailment will enable them to produce more, larger, or healthier fish.

The curtailment orders should also be set aside because the delivery calls of Blue Lakes and Clear Springs constitute "futile calls." The futile call doctrine allows a water user to divert his water right even if a more senior water user is short of water "if due to seepage, evaporation, channel absorption or other conditions beyond the control of the appropriators the water in the stream will not reach the point of the prior appropriator in sufficient quantity for him to apply it to beneficial use …." *Gilbert v. Smith*, 97 Idaho 735, 739 (1976). The CM Rules incorporate the futile call doctrine by defining a futile call 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." CM Rule 10.08.[25]

The question of whether a delivery call is futile does not arise until after the Director has determined that material injury exists. Material injury asks whether the senior water user needs additional water, and if so, whether such needs can be met by employing conservation practices, alternate means of diversion, etc. Only after material is found does the question arise of whether curtailing juniors will satisfy the senior's needs within a reasonable time without undue waste of the resource. The Idaho Supreme Court explained this relationship in its *AFRD2* decision: "Once the initial determination is made that material injury is occurring or will occur, the junior then bears the burden of proving that the call would be futile or to challenge, in some other constitutionally permissible way, the senior's call." 143 Idaho at 877.

In this case, since Blue Lakes and Clear Springs chose to conceal their fish production records, there is no evidence in the record that curtailment will enable them to produce more, larger, or healthier fish. This makes their delivery calls "futile" as a matter of law. The Director ordered curtailment anyway, reasoning that "[t]he amount of water that would be delivered to the Spring Users' facilities is a usable quantity." (R. Vol. 16, p. 3710.) This conclusion is mistaken.

The futile call doctrine does not simply ask whether a usable quantity of water will reach the calling senior. It asks whether in fact the senior will use the water that shows up. Just because curtailment will at some future date provide water to the senior does not mean the water

[25] The futile call doctrine formed the basis for the Director's denial of a delivery call made by another spring users, Rangen, Inc. (*In the Matter of Distribution of Water to Water Rights Nos. 36-15501, 36-2551, and 36-7694*, Second Amended Order, IDWR, May 19, 2005.)

will arrive at a time and in a quantity that it will in fact be put to beneficial use. A major problem with the curtailment orders is that there is no evidence that Blue Lakes or Clear Springs can or will beneficially use the water that eventually may accrue to them from curtailment.

As explained above, the curtailment of more than 70,000 acres is expected to provide Blue Lakes with only 10 cfs and Clear Springs with only 2.67 cfs. Since Blue Lakes and Clear Springs decided to conceal fish production information, there is no evidence that these relatively small amounts of water will enable them to actually produce more fish. Even if they can produce more fish, it is important to know how many more fish can be produced, since the futile call doctrine takes into consideration waste of the resource.[26]

Indeed, the above-quoted testimony of Kaslo that "there would be additional production" is inadequate for the very reason that it fails to address the specifics of curtailment in this case. Simply stating that filling more raceways enables increased production of fish does not address how much water is needed to fill a raceway, what times of year water is needed to increase fish productions, or how many more fish can be produced.

Compounding the lack of evidence that the curtailed water will in fact be put to beneficial use is the amount of time it will take for that water to be realized. CM Rule 10.08. Whereas the drying up of more than 70,000 acres is immediate, the expected to benefit Blue Lakes and Clear Springs will take years to accrue. (Ex. 461, p. 9-10 and fig. 18-28 , 462, 463; Wylie, Tr. Vol. 3, p. 874-78; Ex. 442, p. 9 and 28-29 of 177.)

[26] The extent to which curtailment will enable Blue Lakes and Clear Springs to produce more fish is also relevant to the full economic development and material injury analyses. Blue Lakes and Clear Springs deliberately kept that information out of the record.

This time delay is important due to the likelihood that intervening events such as above average precipitation, managed aquifer recharge, or decreased water demand could nullify Blue Lakes' or Clear Springs' need or ability to use the water that results from curtailment. Spring flows rebound quickly in response to good water years. (Ex. 154, 155, 156.) Just a few years of above-average precipitation will have a greater affect on improving aquifer levels and spring flows than wholesale curtailment. (Wylie, Tr. Vol. 3, p. 845; Brendecke, Tr. Vol. 8, p. 1891-92, 1904-05; *cf.* Ex. 154 w/ Exs. 431 and 432.) In fact, Exhibits 156 and 158 show that Clear Springs' claimed "shortage" at Snake River Farms almost disappeared in the year 2006.

This problem again stems from Blue Lakes' and Clear Springs' concealment of their fish production records. The hearing officer created a presumption that curtailment will enable Blue Lakes and Clear Springs to produce more, larger or healthier fish (*i.e.* a presumption that their delivery calls are not futile), but denied the Groundwater Users discovery of the evidence needed to rebut the presumption. As with material injury, there is now an un-rebuttable presumption that delivery calls are not futile.

The curtailment orders should be set aside as "futile calls" because there is no substantial evidence in the record that the additional 10 cfs that is expected to accrue to Blue Lakes over time, and the additional 2.67 cfs that is expected to accrue Clear Springs from curtailment over time, will enable either of them to produce more, larger or healthier fish.

V. The Director erred by refusing to account for known limitations of the ESPA Model.

The curtailment orders should be set aside because the Director failed to account for all known limitations of the ESPA Model, resulting in a broader zone of curtailment than should

have occurred. The Director used a scientific model known as the "ESPA Model" to determine which groundwater rights to curtail to provide more water to Blue Lakes and Clear Springs. The Model, however, was not designed as a tool to predict the effect of curtailment on discrete spring flows. (Brendecke, R. Supp. Vol. 3, pp. 4454-56; Brockway, R. Supp. Vol. 7, p. 4881; Wylie Tr., Vol. 5, p. 812-15.) It was designed for the purpose of evaluating "the exchange of water between the Snake River Plain aquifer and the Snake River." (Ex. 461, p. 1.) While the Model can be used to predict the effect of curtailment on a given stretch or "reach" of the Snake River (Dreher, Tr. Vol. 5, p. 1166-67, 1227-28; Wylie, Tr. Vol. 3, p. 888, 819-20.), it cannot predict the amount of water that will discharge from a particular spring by curtailing a particular well or groups of wells (Wylie, Tr. Vol. 3, p. 857-58).

In order to use the Model to predict the effect of curtailment on particular springs, the Director apportioned "reach gains" between the various springs located within a given reach of the Snake River (this apportionment is referred to in the record as the "linear analysis"). (R. Vol. 1, p. 48-49, ¶ 15; R. Vol. 3, p. 491, ¶ 15; R. Vol.16, p. 3710; R. Vol. 16, p. 3952, ¶ 8.) After assigning a percentage of reach gains to the springs that supply Blue Lakes' and Clear Springs' water rights, the Director used the ESPA Model to calculate how many acres would need to be dried up to increase their spring flows by the desired amount.

The Model is the best science available for administering hydraulically connected surface and groundwater rights on the ESPA, but the Model is not perfect. The Director's use of the Model is inappropriate absent an accounting for known uncertainties. The futile call doctrine prevents the curtailment of a water right if curtailment will not provide additional water to the

calling senior water user. Arbitrary curtailment would also violate principles of due process. Prudent water administration, particularly in light of the statutory goal of full economic development, requires a reasonable degree of assurance that curtailment will actually provide additional water to Blue Lakes and Clear Springs.

In this case, the Director accounted for one limitation of the Model: stream gauge error. (Ex. 109.) Because there is a ten percent margin of error in the Snake River gauges that are used in the Model, the Director assigned an uncertainty factor of 10 percent to the Model. (Wylie, Tr. Vol. 3, pp. 819-20, 847-51, 888; Dreher, Tr. Vol. 5, pp. 1166-67, 1227-28.) The zone of curtailment was then extended to include any junior-priority groundwater right for which the Model predicts at least a ten percent return to the reach of the Snake River where Blue Lakes or Clear Springs is located. (R. Vol., 16, p. 3703.) Director Dreher did not account for any other limitations of the Model or linear analysis. (Ex. 109; Wylie, Tr. Vol. 3, pp. 817-18.)

At the hearing, all experts, including Dr. Brockway for Clear Springs and Dr. Wylie for the IDWR, agreed that all limitations of the Model must be accounted for in assigning a factor of uncertainty to Model calculations, and that stream gauge error is not the only limitation in the Model. (Wylie, Tr. Vol. 3, pp. 847-51.) Model uncertainty also derives from non-uniform geology of the ESPA, variations within the Model cells,[27] the assumption that well impacts are isotropic,[28] the assumption that all data was accurate and reliable, and the unaccounted for impacts of surface water diversions, precipitation recharge, and tributary underflow. (Ex. 460; R. Vol. 16, p. 3703; Wylie, Tr. Vol. 3, p. 842-43, 847-48, 888; Dreher, Tr. p. 1166-67; Land, Tr.

[27] The ESPA Model is divided into one-mile-by-one-mile grids or cells. (Ex. 433.)
[28] Isotropic means the same in every direction. (Wylie, Tr. p. 854, L. 7-9, p. 855, L. 8-14.)

Vol. 7, p. 1561-66; Brockway, Tr. Vol. 7, p. 1647-50l.) Limitations of the linear analysis also contribute to uncertainty in the curtailment predictions and must be accounted for. (Wylie, Tr. Vol. 3, p. 860.)

Former Director Karl Dreher, who issued the original curtailment orders in 2005, erred by failing to account for the other factors that contribute to Model uncertainty. At the hearing, he agreed in hindsight that ten percent is the minimum possible degree of Model uncertainty, and that actual uncertainty is likely higher. (Dreher, Tr. Vol. 5, pp. 1227-28.) Dr. Brendecke, who participated in developing the ESPA Model, estimated actual Model uncertainty of between twenty to thirty percent. (Brendecke, Tr. Vol. 8, pp. 1900-01.)

After the hearing, the hearing officer refused to assign any level of uncertainty to Model calculations on account of the limitations identified at the hearing. The hearing officer reasoned that the other factors "were not assigned a percentile of error that could be tested and peer reviewed." (R. Vol. 16, p. 3840-41.) He refused to accept Dr. Brendecke's expert opinion for lack of an "empirical basis." *Id*. The Director adopted the hearing officer's conclusion on this point without change.

The Director's rejection of known limitations in the Model is erroneous. Just because a known limitation is not mathematically certain does not mean it can be ignored entirely. Indeed, a key responsibility of the Director is to exercise judgment on technical matters. With respect to limitations in the Model, the Director did not exercise his best judgment; he refused to make *any* judgment.

Prudent administration of Idaho's water resources consistent with the directive for full economic development of groundwater resources cannot tolerate the curtailment of beneficial water use without reasonable certainty that Blue Lakes and Clear Springs will benefit therefrom. It is one thing to conclude that limitations in Model or linear analysis do not add to uncertainty in the resulting curtailment predictions; it is quite another to disregard the limitations altogether in deference to an emergency decision that was made without the evidence presented at the hearing.

Therefore, if the Court does not set aside the curtailment orders for any of the reasons set forth in the prior sections of the Argument, the Groundwater Users ask the Court to set aside the curtailment orders and remand them to the Director with instructions to exercise his judgment in accounting for all contributing factors of Model uncertainty, and to re-define the area of curtailment accordingly.

VI. The Director deprived the Groundwater Users of due process by curtailing their water rights for three irrigation seasons without a hearing.

Lastly, the curtailment orders should be set aside because they were issued in violation of due process and the Idaho Administrative Procedures Act. At the very least, the Court should confirm that due process requires a hearing before curtailment in the context of conjunctive water administration.

Both junior and senior water users have rights in water administration. The State owns water resources in its sovereign capacity "for the purpose of guaranteeing that the common rights of all shall be equally protected and that no one shall be denied is proper use and benefit of this

common necessity." *Poole*, 82 Idaho at 502. The Legislature has codified the State's obligations to both juniors and seniors:

> Water being essential to the industrial prosperity of the state, and all agricultural development throughout the greater portion of the state depending upon its just apportionment to, and economical use by, those making a beneficial application of the same, <u>its control shall be in the state, which, in providing for its use, shall equally guard all the various interests involved</u>. All the waters of the state, when flowing in their natural channels, including the waters of all natural springs and lakes within the boundaries of the state are declared to be the property of the state, whose duty it shall be to supervise their appropriation and allotment to those diverting the same therefrom for any beneficial purpose ….

I.C. § 42-201 (emphasis added). Accordingly, this Court has held that "individual water rights are real property rights which must be afforded the protection of due process of law before they may be taken by the state." *Nettleton*, 98 Idaho at 90.

Due process entitles property owners to "an opportunity for a hearing before he is deprived of any significant property interest." *Fuentes v. Shevin*, 407 U.S. 67, 82 (1972) (emphasis in original). The United States Supreme Court has aptly explained the reasons why a hearing is required:

> The constitutional right to be heard is a basic aspect of the duty of government to follow a fair process of decision making when it acts to deprive a person of his possessions. The purpose of this requirement is not only to ensure abstract fair play to the individual. Its purpose, more particularly, is to protect his use and possession of property from arbitrary encroachment—to minimize substantively unfair or mistaken deprivations of property, a danger that is especially great when the State seizes goods simply upon application of and for the benefit of a private party.

Id. at 80-81. The hearing requirement "is not intended to promote efficiency or accommodate all possible interests: it is intended to protect the particular interests of the person whose possessions are about to be taken." *Id*. at 90, fn 22.

Importantly, the opportunity for a hearing must be granted "*before* he is deprived of any significant property interest, except for extraordinary situations when some valid governmental interest is at stake that justifies postponing the hearing until after the event." *Id*. at 81 (quoting *Boddie v. Connecticut*, 401 U.S. 371, 378-79 (1971) (emphasis in original).) Whether circumstances are sufficiently extraordinary to delay the hearing requires consideration of

> the importance of the private interest at stake, the risk of an erroneous deprivation of rights given the processes at hand, the probable value, if any, of additional or substitute procedural safeguards and the government's interest and including the function involved and the fiscal and administrative burdens that the additional and substitute procedural requirements would entail.

LU Ranching Co. v. U.S. (In re Snake River Basin Adjudication Case No. 6), 138 Idaho 606, 608 (2003) (citing *Mathews v. Eldridge*, 424 U.S. 319, 335 (1976) (internal quotations omitted). The Idaho Administrative Procedures Act allows state agencies to take action without a hearing, but only "in a situation involving an immediate danger to the public health, safety, or welfare requiring immediate government action." I.C. § 67-5247. Thus, the bar is set high for justifying an after-the-fact hearing. As explained in *Fuentes*, due process almost always requires at least some form of hearing before the deprivation takes effect:

> Although the Court has held that due process tolerates variances in the *form* of a hearing appropriate to the nature of the case, and depending on the importance of the interests involved and the nature of the subsequent proceedings if any, the Court has traditionally insisted that, whatever its form, opportunity for that hearing must be provided before the deprivation at issue takes effect.

407 U.S. at 82 (emphasis in original; internal quotes and cites omitted).

Even if extraordinary situations warrant an immediate deprivation of property, a hearing still "must be granted at a meaningful time and in a meaningful manner." *Id*. at 80 (quoting

Armstrong v. Manzo, 380 U.S. 545, 552 (1965)). While the Idaho Administrative Procedures Act allows an agency to act without a hearing in limited circumstances, the Act requires the agency to "proceed as quickly as feasible to complete any proceedings that could be required." I.C. § 67-5247(4).

In *Nettleton*, the owner of a surface water right (Nettleton) argued that he is entitled to a hearing before his water right is curtailed. *Id*. The court rejected the argument on the basis that Nettleton had not been deprived of a "significant property interest" since his water right was merely a claimed "constitutional use" right which had not been proven or decreed. *Id*. However, the court did state in dicta that the administration of surface water by a watermaster under Idaho Code § 42-607 constitutes "extraordinary situations when postponement of notice and a hearing is justified." *Id*. at 92. The court provided little explanation for this statement, other than to quote the following statement from *Fuentes*:

> First, the seizure has been directly necessary to secure an important governmental or general public interest. Second, there has been a special need for very prompt action. Third, the State has kept strict control over its monopoly of legitimate force; the person initiating the seizure has been a government official responsible for determining, under the standards of a narrowly drawn statute, that it was necessary and justified in the particular instance.

Id. (quoting *Fuentes*, 407 U.S. at 91). Justice Bakes dissented, arguing that surface water administration by a watermaster does not meet the "extraordinary circumstances" threshold. *Id*. at 99-100. He asserted that the majority had failed to explain

> why there is a special need for prompt action in this case—had such a dispute arisen on a stream which was not part of a water district, no comparable statute would come into play … providing that an officer of an official or quasi-official agency shall shut off one user for another's benefit without notice and a hearing.

> Instead, litigation is allowed to run its course with the knowledge that if one user was wrongfully deprived of the right to water then he shall be entitled to damages against the other. Thus, I think it is clear that the case at bar does not involve an extraordinary situation within the meaning of the foregoing United States Supreme Court cases which justifies the postponement of notice and a hearing, nor is it being decided under a "narrowly drawn statute" serving important governmental or public interest purposes.

Id. at 100.

In any event, the majority limited their finding of "extraordinary circumstances" to "the present case" which involved the administration of surface water rights. *Id*. at 92. To the Groundwater Users' knowledge, no Idaho appellate court has decided whether due process requires a hearing before curtailment in the context of groundwater administration, though this Court has at least suggested that it does, and the Ground Water Act certainly contemplates a hearing before curtailment.

In *AFRD2*, the Idaho Supreme Court reversed the district court's conclusion that "when a junior diverts or withdraws water in times of water shortage, it is presumed there is injury to a senior," reasoning that the conclusion was based on precedent in *Moe v. Harger*, 10 Idaho 302 (1904), which was "a case dealing with competing surface water rights and this case involves interconnected ground and surface water rights." 143 Idaho at 877. The court pointed out that "[t]he issues presented are simply not the same." *Id*.

Groundwater administration presents unique technical, legal, and public policy issues that are not required of surface water administration, including:

- Groundwater is not confined to discrete channels, and cannot be readily observed, tracked, and directed to a calling senior water user. This Court has noted that ground-water administration has "the need for highly technical expertise to accurately

measure complex ground water data," *Baker*, 95 Idaho at 584, and that the issues are "extraordinarily complex," *AFRD2*, 143 Idaho 869.

- In the surface water context, the effects of curtailment are relatively easy to predict and usually well-established, whereas the effects of groundwater curtailment are very difficult to predict. This Court has pointed out that "proper management" of Idaho's interconnected ground and surface water system

  > Requires knowledge by the IDWR of the relative priorities of the ground and surface water rights, how the various ground and surface sources are interconnected, and how, when, where and to what extent the diversion and use of water from one source impacts the water flows in that source and other sources.
  >
  > *A&B Irrigation District v. Idaho Conservation League*, 131 Idaho 411, 422 (1997) (rev'd on reh'g on other grounds (1998)).

- In surface water administration, water that could have been used by the junior can be delivered directly to the calling senior. There is essentially a one-to-one ratio between the quantity of water curtailed and the quantity delivered to the senior. In contrast, groundwater pumping has a 360 degree impact on the aquifer, and a calling senior receives only a fraction of the water that could have been used by the junior. (Ex. 461 p. 6-7); see also *AFRD2*, 143 Idaho at 877.

- The effects of curtailment are immediate in surface water administration, whereas the effects of groundwater curtailment typically take years and even decades to be realized. The expediency required of surface water administration simply does not exist in groundwater administration. (Ex. 462, 463.)

- Surface water appropriations have been made with an understanding of the reliability of the priority date, enabling surface water appropriators to plan and exercise their rights accordingly. In contrast, groundwater appropriators invested in wells and pumps with the expectation that curtailment would not occur unless the source was being "mined," meaning the rate of recharge is exceeded by the diversion and use of water from the source. (CM Rule 10.19)

- As between surface water rights, the doctrine of "first in time is first in right" has few limitations, but with respect to groundwater rights the doctrine is expressly precluded from being exercised in a manner that blocks full economic development of groundwater resources. (Idaho Code § 42-226)

- With respect to non-irrigation uses such as fish propagation, the information needed to address issues of material injury and futile call cannot readily be obtained from watermaster records and aerial photographs. Blue Lakes and Clear Springs hold exclusive possession of information needed for the Director or junior groundwater users to challenge their delivery calls.

These differences led to the Idaho legislature's decision to enact separate legislation (the Ground Water Act) to address the special needs of groundwater administration. Importantly, the Act defines a special procedure for responding to delivery calls against groundwater rights which requires a hearing before curtailment. Unlike the administration of surface water which typically consists of a phone call to the watermaster, the Ground Water Act requires that any call against groundwater rights (whether made by a ground or surface water user) be made in writing, under oath, and include a statement of "the facts upon which the claimant founds his belief that the use of his right is being adversely affected." I.C. § 42-237b. If the Director finds that the call meets the minimum statutory requirements, he "shall issue a notice setting the matter for hearing before a local ground water board." *Id*. The board is charged, first, with evaluating the existence and nature of the competing water rights and then determining "whether the use of the junior right affects, <u>contrary to the declared policy of this act</u>, the use of the senior right." I.C. § 42-237c (emphasis added). Only after a hearing is held is a curtailment decision made. *Id*.[29]

[29] The traditional program of water administration is set forth in Chapter 6 of Title 42 originally contemplated only surface water calls directed to other surface water users—contests that typically involve hydrologically simple disputes. In 1992, Chapter 6 was amended to make it applicable to ground and surface water users within the same water district, which necessarily entails more complex hydrological analyses. 1992 Idaho Sess. Laws, ch. 339 §§ 2 and 4. Application of Chapter 6 as against groundwater users must be done in harmony with the Ground Water Act. It is not intended to be a rote, ask-no-questions application of priority as evidenced by the Legislature's instruction to the Director to adopt rules implementing procedures for delivery calls. I.C. §§ 42-603, 42-1805(8).

Thus, the right of a surface water user to seek priority administration against groundwater rights derives from the Act, and the Act specifies that this entitlement comes with conditions. The senior surface user must come forward with facts, show adverse impacts from junior groundwater pumping, and establish material injury. The senior, as the claimant seeking curtailment, necessarily carries the obligation to make at least a *prima facia* showing as to these elements. The Director must confirm these elements have been met, and if so, assure that any groundwater curtailment or mitigation requirements comport with the Swan Falls Agreement, the policy of full economic development, and give due consideration to all of the dependent factors the Legislature or this Court might establish. The CM Rules must be read to implement this protocol, which cannot reliably be completed without a hearing.

This is exactly how the IDWR proceeded in the delivery call of surface water users against aquifer pumpers that this Court reviewed in *Stevenson v. Steele*, 93 Idaho 4 (1969).[30] That case involved a delivery call filed by spring users against groundwater rights under the Ground Water Act. The case was brought at the beginning of the irrigation season, and an initial hearing was not concluded until the following October. The case was appealed to the district court for a *de novo* hearing; then to the Idaho Supreme Court. Throughout this process, neither the district court nor this Court ever suggested that curtailment was required before a hearing could be held.

This Court has repeatedly acknowledged the importance of fully examining delivery calls before ordering curtailment of groundwater use. In *Jones v. Vanausdeln*, the Court refused to

[30] To the Groundwater Users' knowledge, *Stevenson* is the only case the Court has decided that involved a delivery call by a surface water user against a groundwater user under the Ground Water Act.

curtail groundwater pumping for lack of clear evidence that the senior was injured, explaining that "very convincing proof of the interference of one well with the flow of another should be adduced before a court of equity would be justified in restraining its proprietors from operating it on that ground." 28 Idaho 743, 749 (1916). More recently, the Court explained in its *AFRD2* decision that

> [g]iven the complexity of the factual determinations that must be made in determining material injury, whether water sources are interconnected and whether curtailment of a junior's water right will indeed provide water to the senior, it is difficult to imagine how such a timeframe might be imposed across the board. <u>It is vastly more important that the Director have the necessary pertinent information and the time to make a reasoned decision based on the available facts</u>.

143 Idaho at 875 (emphasis added). The Court felt it "important to point out" that the district court properly rejected the argument "that water rights in Idaho should be administered strictly on a priority in time basis." 143 Idaho at 870. Rather, the Court upheld the Director's duty to consider other concepts in responding to delivery calls, "such as: material injury; reasonableness of the senior water right diversion; whether a senior right can be satisfied using alternate points and/or means of diversion; full economic development; compelling a surface user to convert his point of diversion to a ground water source; and reasonableness of use." *Id.* As the persons subject to curtailment, due process entitles junior groundwater users to participate in this process. and be heard prior to the deprivation of property (i.e. entry of curtailment orders).

The curtailment orders issued in this case vividly demonstrate why due process requires a hearing before curtailment in the context of groundwater administration. Blue Lakes and Clear Springs sent a letter to the Director, not made under oath, which alleged an impact from

groundwater pumping but included no facts to support the allegation. The Director issued curtailment orders a mere two months later. (R. Vol. 1, p. 45, ¶ 1 ; R.;Vol. 3. p. 487, ¶ 1.) The lengthy orders were made behind closed doors, without any input from affected groundwater users. Moreover, the orders were issued on May 19 (Blue Lakes) and July 8 (Clear Springs) during the heart of the farm season. The Groundwater Users had already planted their crops, utilized operating lines of credit, contracted to sell their crops, etc. The orders were unanticipated and threatened instant failure to hundreds of farmers, not to mention banks and other institutions tied to farming.

The Director dispensed with a hearing by classifying the orders as emergency orders per Idaho Code § 67-5247. (R. Vol. 1, p. 75; R. Vol. 3, p. 525.) Emergency orders are permitted only "in a situation involving an immediate danger to the public health, safety, or welfare requiring immediate agency action." I.C. § 67-5247. The delivery calls made by Blue Lakes and Clear Springs did not even come close to meeting that standard. Even if Blue Lakes' and Clear Springs' water supplies had declined slightly, they still were receiving most of the water authorized under their rights, and essentially the same amount of water that had allowed them to operate successfully in recent years. Their delivery calls do not *claim* that an emergency existed. (R. Vol. 1, p. 1; R. Vol. 1, p. 2.)[31] They merely express a fear that spring flows may decrease, potentially causing harm. *Id*.

There was certainly no "immediate danger to the public health, safety, or welfare" that prevented the Director from holding a hearing before curtailment. In fact, instead of remedying

[31] Nor were the delivery calls made under oath as required by Idaho Code § 42-237b.

an emergency, the Director *created* an emergency by curtailing water to more than 70,000 acres in the middle of the irrigation season. Since curtailment would provide no immediate benefit to Blue Lakes or Clear Springs, there is no reason the Director could not have followed a fair process by holding a hearing and considering all facts and defenses before enforcing curtailment. Instead, the Director took a "curtail now, ask questions later" approach that creates substantial risk of "unfair or mistaken deprivations of property, a danger that is especially great when the State seizes goods simply upon application of and for the benefit of a private party." *Fuentes*, 407 U.S. at 81.

The Groundwater Users filed petitions for reconsideration, requests for a hearing, and petitions for stay within two weeks after the curtailment orders were issued. (R. Vol. 1, p. 161; R. Vol. 3, p. 547.) Notwithstanding, the orders remained in force for three irrigation seasons without a hearing. This delay patently deprived the Groundwater Users of due process and violated the Director's statutory obligation to "proceed as quickly as feasible to complete any proceedings that could be required." I.C. § 67-5247(4). Pending the hearing, and to avoid the disastrous results of physical curtailment, the Groundwater Users were forced to expend millions of dollars to provide mitigation water to Blue Lakes and Clear Springs. (Carlquist, R. Supp. Vol. 7, p. 4837, L. 20-p. 4840, L.2; Stevenson, R. Supp. Vol. 6, p. 4823, L. 1-p. 4825, L. 6.)

Following the hearing, the hearing officer noted that immediate curtailment without a hearing is problematic, stating that "it is critical that procedures be adopted which define the immediate rights of the parties subject to emergency curtailment orders, or deny curtailment." (R. Vol. 16, p. 3716. .) On judicial review, Judge Melanson agreed that "the Director erred by

not holding a hearing when the Groundwater Users requested one." (Clerk's R. p. 122.) He outlined a better process whereby the Director would make an initial determination of material injury and issue an order, but would withhold curtailment until after an opportunity for hearing had been granted. (Clerk's R. p. 91.) ("stating that after the initial order is issued and, pursuant to the constitutional requirements of due process, the parties pursuant to notice and upon request are entitled to a hearing before the junior rights are curtailed and before the senior rights are injured further"). He further explained that the hearing could consider mitigation plans in addition to challenges to the initial order. (Clerk's R., p. 122.) This approach affords due process, avoids unnecessary curtailment, and furthers the goal of full economic development. However, Judge Melanson partially recanted on rehearing, stating that "[t]o the extent that the Court's June 19, 2009, *Order* can be read to hold that constitutional due process *requires* that the Director hold a hearing after the material injury determination is made, that portion of the opinion is withdrawn." (Clerk's R., p. 123.)

Had the Director had before him all of the pertinent facts and defenses *before* making a curtailment decision, the curtailment orders would probably never have been issued in the first place. Equally frustrating is that the orders, despite being made in haste behind closed doors, received great deference even after a full record was established. By the time a hearing was held, the orders had been executed for three irrigation seasons and were entrenched. Instead of a legitimate *de novo* review of the evidence presented at the hearing, the orders were given substantial presumptive weight, the hearing officer and the Director essentially applying an abuse of discretion standard. In reality, the likelihood of the Director changing course in a

meaningful way diminished with each season that the orders were enforced. The lack of a hearing for three irrigation seasons resulted in the deck being stacked against the Groundwater Users. This is precisely what the constitutional right to be heard before the property deprivation occurs is supposed to protect against.

Because the Groundwater Users' due process rights were violated, the curtailment orders should be set aside. At the very least, the Court should confirm that due process requires a hearing before curtailment is enforced in the context of conjunctive water administration.

CONCLUSION

The curtailment orders should be set aside for six reasons. First, the orders violate the Swan Falls Agreement which requires administration of the ESPA based on minimum Snake River flows. Second, the curtailment orders violate the Ground Water Act which provides that "while the doctrine of 'first in time is first in right is recognized,' a reasonable exercise of that right shall not block full economic development of underground water resources." I.C. § 42-226. Third, there is no substantial evidence in the record to support the Director's finding of material injury to Blue Lakes or Clear Springs. Fourth, the delivery calls are "futile" because there is no substantial competent evidence that curtailment will enable Blue Lakes or Clear Springs to produce more, larger, or healthier fish. Fifth, the Director abused his discretion by failing to account for known uncertainties in the ESPA Model. Sixth, the curtailment orders were issued in violation of due process and the Idaho Administrative Procedures Act.

RESPECTFULLY SUBMITTED this 4th day of June, 2010.

RACINE OLSON NYE BUDGE &
BAILEY, CHARTERED

_____/s/_____
Randall C. Budge
Candice M. McHugh
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CERTIFICATE OF SERVICE

I HEREBY CERTIFY that on this 4th day of June, 2010, the above and foregoing document was served in the following manner:

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/s/
THOMAS J. BUDGE

EXHIBIT A

Oversight Monitor
March 2006

State of Idaho
Oversight Monitor
The Eastern Snake River Plain Aquifer
March 2006

our changing AQUIFER

On the volcanically unique Eastern Snake River Plain, just like elsewhere, water flows from high country to low, channeled into streams, lakes, and rivers. But in the portion of the plain occupied by the Idaho National Laboratory (INL), rivers don't all flow to the ocean. Instead, something dramatically different happens. Streams like the Big and Little Lost Rivers simply disappear.

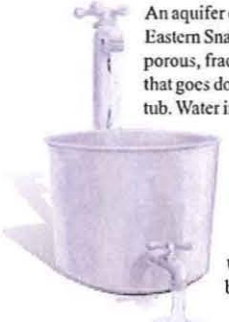
Here, where sediments deposited by the actions of wind and water overlay porous layers of basalt, rivers and streams disappear, losing their water to the Eastern Snake River Plain Aquifer. Decades later, the same water will reappear in the Magic Valley, issuing from the "Thousand Springs" stretch of the Snake River along the north canyon wall between Milner and King Hill.

The Lost River and the fascinating springs of the Magic Valley are but two features of the remarkable Eastern Snake River Plain Aquifer, which is not only the focus of this issue of the Oversight *Monitor*, but the primary reason that the INL Oversight Program exists.

Concern about how activities conducted at Idaho's nuclear laboratory affect the aquifer was the driving force behind the formation of a state oversight program. No matter what issue we're considering, we're thinking about the aquifer—when we're talking about building a nuclear reactor at the site, removing waste buried in pits and trenches, closing buildings that aren't needed any more—whatever it is, to Oversight, it is about Idaho's precious resource, the Eastern Snake River Plain Aquifer.

As we struggle to find the appropriate balance between competing demands for our state's finite water resources, it makes sense to begin with the source of much of Idaho's water: the Eastern Snake River Plain Aquifer.

Aquifer basics: the bathtub concept



An aquifer can be thought of as a bathtub—a bathtub that, in the case of the Eastern Snake River Plain Aquifer, consists of thousands of cubic miles of porous, fractured basalt. Water from the faucet **recharges** the tub, water that goes down the drain (or is splashed on the floor) is **discharged** from the tub. Water in the tub is stored until the drain is opened or water is splashed out. When more water is recharged to the tub than drains, the water level in the tub increases and more water is in **storage**.

The Water Balance for an aquifer is:

Recharge – Discharge = Change in storage

We'll first talk about changes in storage because it helps us understand where the recharge to the aquifer stays before it can become discharge.

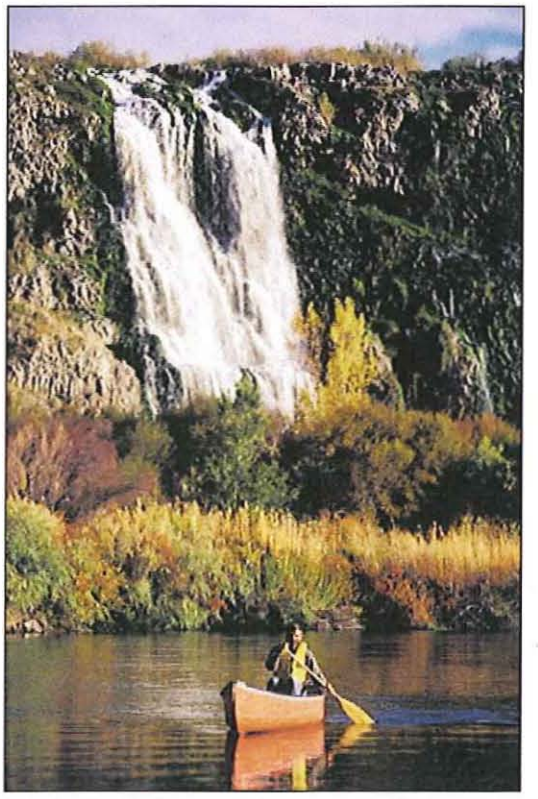
Aquifer Storage

The broken basalt and sediments of the Eastern Snake River Plain Aquifer contain a tremendous amount of water, as much as 1 billion acre-feet. This is enough water to cover the entire 10,800 square miles of the plain with nearly 145 feet of water, about the same amount of water as in Lake Erie.

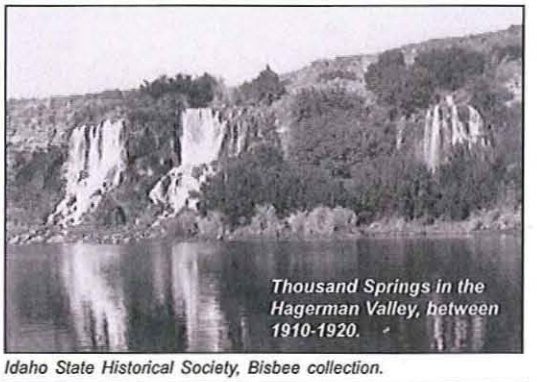
Though the aquifer can be compared to the volume of Lake Erie, the aquifer is not at all like an underground lake. Water is stored between the grains of sediments and in the open fractures between pieces of basalt of the Eastern Snake River Plain. The water-holding rocks of the aquifer are as much as 4000 - 5000 feet thick. However, not all of that water can be easily used. Only 100 to 220 million acre-feet stored in the top few hundred feet of the aquifer can be easily pumped and used.

Flood irrigation practices (the only way to get water to crops before sprinklers and electric pumps) add much more water to the crop than growing plants can use. The extra water soaks into the ground to add to storage in the aquifer, increasing the aquifer level beneath irrigated areas. An estimated 24 million acre-feet of water was added to the aquifer from 1880s to 1950s, with some places seeing water levels rise more than 100 feet.

But the longer we irrigated, the better we got at moving water to the places we wanted it. Irrigation methods changed from "flood" irrigation to more efficient sprinkler irrigation, and using only surface water to an increasing portion of pumped ground water. Increased pumping took more water out of the aquifer, and flood irrigation no longer provided as much recharge water. About 6 million acre-feet of water came out of

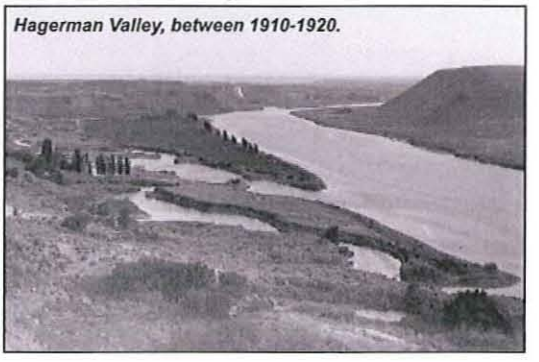


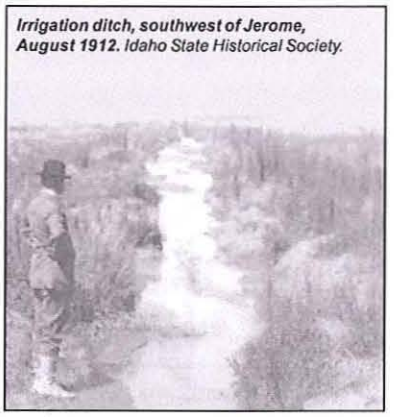
***Lost river found**: Above and below, some of the "thousand" springs in Idaho's Magic Valley. Most are along the north bank of the Snake River between Milner and King Hill. Spring water is used in fish hatcheries, for power production, drinking water, and habitat. © Steve Blyl IdahoStockImages.com*



Idaho State Historical Society, Bisbee collection.

Hagerman Valley, between 1910-1920.



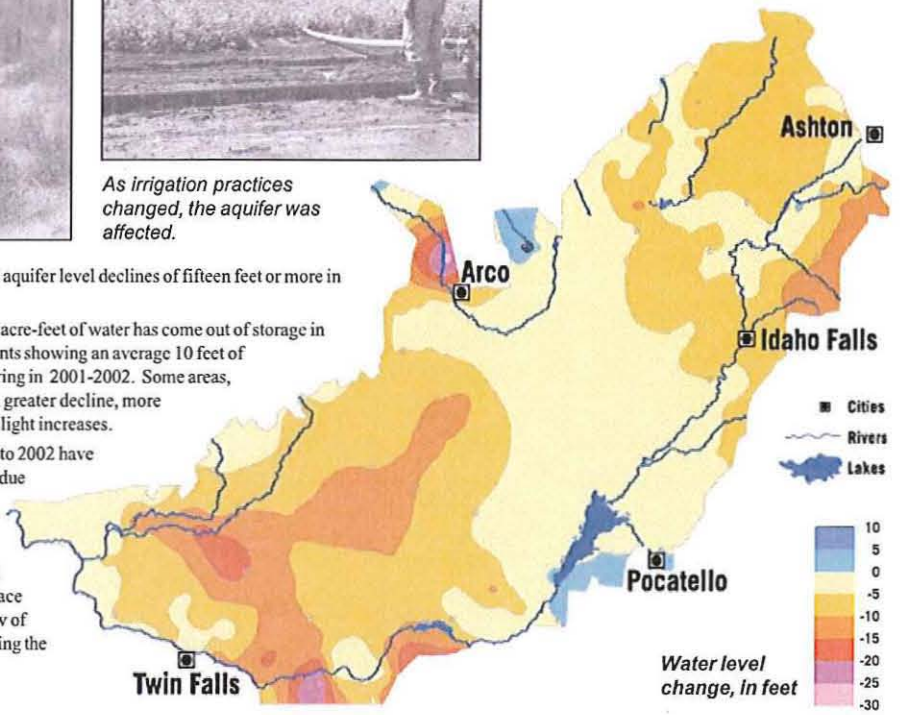


Irrigation ditch, southwest of Jerome, August 1912. Idaho State Historical Society.

Bean crop under irrigation from well, September 1950. Idaho State Historical Society.

As irrigation practices changed, the aquifer was affected.

Changes in aquifer level: 1980-2002

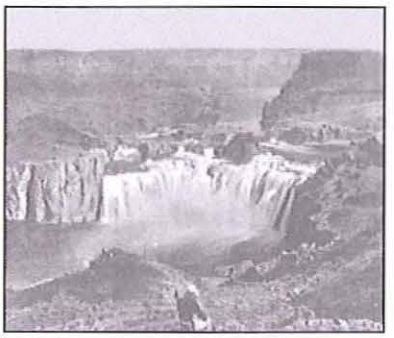


storage from the 1950s to 1980, leading to aquifer level declines of fifteen feet or more in some areas.

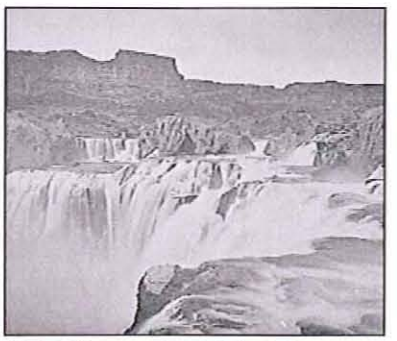
From 1980 to 2002, another 6 million acre-feet of water has come out of storage in the aquifer, with aquifer-wide measurements showing an average 10 feet of decline since 1980, with half of that occurring in 2001-2002. Some areas, such as near Arco, have experienced even greater decline, more than 60 feet, while other areas have seen slight increases.

Water level measurements from 2001 to 2002 have shown decreases in aquifer levels, largely due to the current drought. Less snow in the mountains means less water in the river to irrigate with, less water to recharge the aquifer, and greater reliance on ground water. In many years the demand for surface water consumes most, if not all, of the flow of the Snake River above Shoshone Falls during the irrigation season. The result, first seen in 1905, is a dry "Twin Falls."

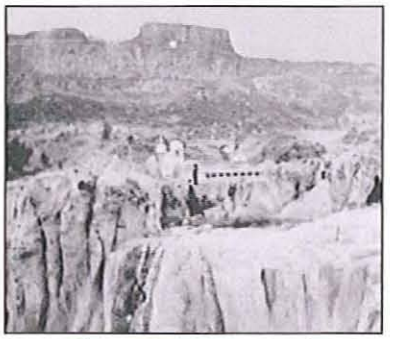
Shoshone Falls: *Nicknamed "the Niagra of the West," Shoshone Falls drops 50 feet farther than Niagra-- 212 feet. It is 1200 feet wide. You'll note in the historical and present day photos of Shoshone Falls on this page and the next that the flow of water over the falls varies. Like the water in the aquifer, it is affected by the amount of water used for irrigation.*



Drawing from REPORT OF THE GEOLOGICAL EXPLORATION OF THE 40TH PARALLEL, 1870-1880. Idaho State Historical Society.



1871. Settlers are arriving in Idaho, but few acres are irrigated. Surface water irrigation began to increase in the 1880s.



Irrigation diversions temporarily dried up the Falls for the first time in 1905. This photo was taken in 1941. Idaho State Historical Society

Aquifer Recharge

The water that fills the aquifer comes from a number of sources. The amount of water recharging the aquifer varies from year to year; however, the proportion of recharge from each source stays about the same. An estimated 8.06 million acre-feet of water recharged the Eastern Snake River Plain Aquifer in water year 1980. Because a great deal of measuring and sampling took place that year, it provides a good benchmark for comparison.

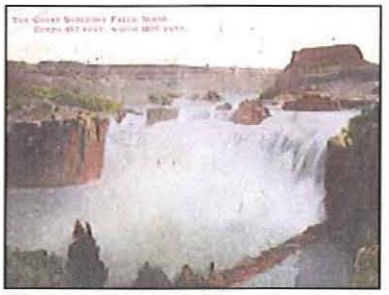
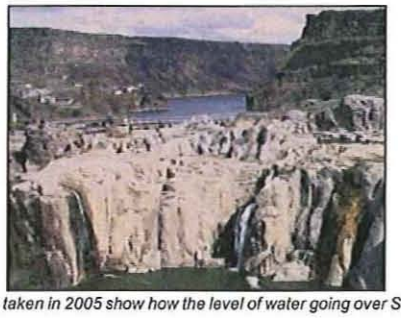
The largest source of water recharging the aquifer is irrigation. This leftover water seeps into the ground, and works its way to the aquifer. For the 1980 water year, this was 4.84 million acre-feet, or 60% of all recharge.

The next largest source of recharge to the aquifer is tributary basin underflow. That's ground water that flows to the aquifer from the tributary valleys along the margins of the plain. This includes recharge from the Henry's Fork and South Fork of the Snake River, and the valleys of Birch Creek, Big and Little Lost Rivers, Big and Little Wood Rivers, Portneuf and Raft River valleys, and other smaller valleys. This source added 1.44 million acre-feet, or 18% of recharge.

While the climate of the Eastern Snake River Plain Aquifer is semiarid, with less than 10 inches of precipitation each year, the timing of the rain and snow (snow cover melting and rain occurring in times of the year when there is less evaporation), and the scant soil cover over much of the basalts of the plain allows a significant amount of precipitation to recharge the aquifer in some areas. Direct precipitation on the plain accounts for 0.70 million acre-feet, or 9% of recharge.

Water infiltrating from the bed of the Snake River is also a significant source of recharge. Along some lengths ("reaches") of the Snake River, the riverbed is above the aquifer level; and therefore, water from the river seeps through the river bed to recharge the aquifer. These are called "losing reaches." Since aquifer levels can change during the year, some reaches of the river can "lose" during times of the year that the aquifer level is lower, and "gain" when the aquifer level is above the bed of the river.

In 1980, 0.69 million acre-feet, or 9% of recharge was from Snake River losses. Just like the Snake River, other rivers and streams, as well as canals, that flow out on to the Eastern Snake River Plain can recharge the aquifer. This recharge from tributary stream and canal losses added 0.39 million acre-feet, about 5% of the recharge for the 1980 water year.

This postcard published in 1909 and these two pictures taken in 2005 show how the level of water going over Shoshone Falls rises and falls.

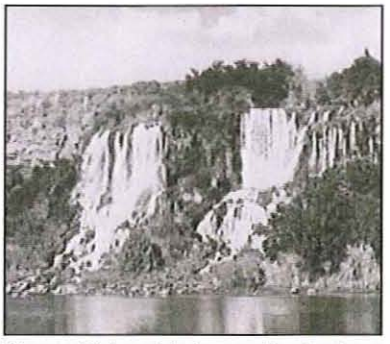
Aquifer discharge

Just like the bathtub metaphor, what goes into an aquifer as recharge is reflected in changes in aquifer levels and in water discharged. Water can be discharged as springs in the walls of the Snake River Canyon, or seep into the bed of the Snake River in "gaining reaches," or be pumped out of the aquifer for use on the land.

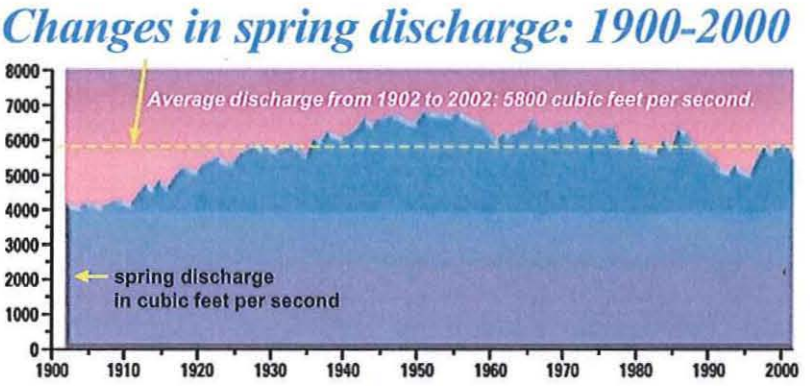
In 1980, 8.22 million acre-feet were estimated to have been discharged from the aquifer. Most of this discharge, 7.1 million acre-feet or 86%, occurred as seepage and spring flow to the Snake River. Major springs occur along three stretches of the Snake River, near St. Anthony, from Blackfoot to American Falls, and Milner to King Hill.

Most of the spring flow and seepage occurs from Milner to King Hill, often called the Thousand Springs reach. Here, 4.83 million acre-feet or 68% of the spring flow and seepage occurs. Seepage and springs from Blackfoot to American Falls account for 1.99 million acre-feet, or 28% of discharge. The remaining 0.28 million acre-feet, or 4% occurs near St. Anthony.

Ground water pumped from the aquifer accounts for 1.14 million acre-feet, or 14% of discharge. Nearly all of this ground water is pumped for irrigation (95%), about 3% is pumped for drinking water for cities and rural homes. The remaining 2% is pumped for industrial and livestock use.



Thousand Springs photo from an old postcard negative, date unknown. Idaho State Historical Society.



The pulse of the aquifer

Spring discharge is like the pulse of the aquifer; changes in aquifer levels result in changes in spring flow. Measurements in some of the springs between Milner and King Hill began as early as 1902.

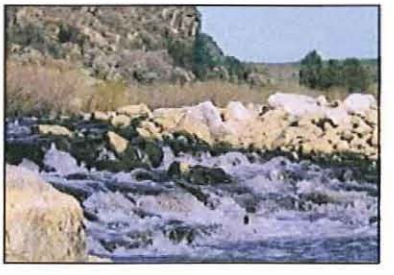
As irrigation began in the Eastern Snake River Plain, spring flows from springs along the north side of the canyon increased. Estimates of spring flow (based on analyzing the water budget for years prior to 1951) were 4,200 cubic feet per second or about 3 million acre feet per year in 1902, and continued to grow until the early 1950s. At the peak flow in 1951, the discharge was estimated at 6820 cubic feet per second, and 4.94 million acre-feet.

Between 1902 and the 1950s, irrigation with surface water spread across the Eastern Snake River Plain. The increased recharge and aquifer levels resulted in a substantial increase in discharge from these springs. From the 1950s through 1980, the measured discharge from these ten springs decreased to about 6000 cubic feet per second, or 4.42 million acre-feet per year.

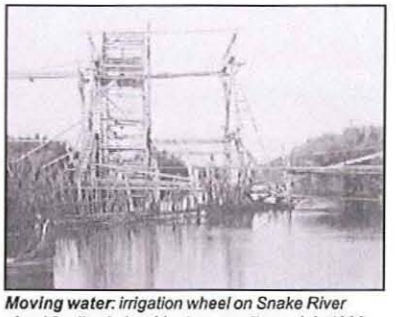
Flow measurements made through 2002 show a continued decline to about 5400 cubic feet per second and 3.9 million acre-feet per year. The average spring flow from 1902 through 2002 is about 5800 cubic feet per second, or 4.2 million acre-feet of discharge.

The increase in spring discharge from 1902 through 1951 appears to be relatively constant, however, the decline from 1951 through 2002 is not. The fluctuations correspond to drought years that had less water available for surface water irrigation and wet years of higher flows in the Snake River, while the overall trend of decreasing flow from the springs is due to more acres being watered from sprinklers and less by traditional flood irrigation.

Water users who designed their spring-dependent fish farms when flows were at their highest are now being affected by the decline in spring flows. However, the decline in spring flows, outside of weather patterns that can't be changed, is due to the irrigators on the Eastern Snake River Plain becoming more efficient with their water in some portions of the aquifer, and in other areas by irrigators pumping ground water for their crops.

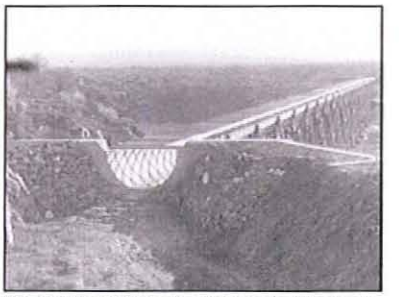


An **acre-foot** is the amount of water which would cover one acre of land with water one foot deep. An acre is a little less than a football field from goal line to goal line. To be precise, from one goal line to within a football-length from the nine yard line at the other end of the field. This is 326,000 gallons. Discharge of one **cubic foot per second** is the same as 449 gallons per minute. One cubic foot per second would fill a foot- ball field one foot deep in 12 hours and 8 minutes. One cubic foot per second flowing from a spring for a year is 724 acre-feet.



Moving water: *irrigation wheel on Snake River about 8 miles below Montgomery Ferry. July 1908. Idaho State Historical Society.*

Moving water for irrigation in the Magic Valley, between 1910-1920. Idaho State Historical Society, Bisbee collection.



Improved: *over time, we got better at getting water where we wanted it. Idaho State Historical Society, Bisbee collection, around 1910-1920.*

Irrigation *on the Eastern Snake River Plain Aquifer*

In the century and a half since Idaho water was first used to water crops, irrigation has changed the landscape of the Eastern Snake River Plain. Water in its many forms shapes Idaho's economy, culture, politics, and society. In recent years it has come to dominate the state's legal landscape as well.

It's not surprising that much of Idaho's concern relating to the INL centers around the Eastern Snake River Plain Aquifer. If activities at the lab were to result in irreparable harm to the aquifer, it could be a devastating blow to Idaho's economy and way of life.

The history of the aquifer is inexorably tied to the history of irrigation. A prime example is the difference between the Magic Valley being a semi-arid desert with farms along the river, and the extraordinarily productive agricultural area it is today. Because irrigation is the primary agent of change to the Eastern Snake River Plain Aquifer, the history of irrigation on the Eastern Snake River Plain provides vital insight into the factors that shape Idaho's concern over operations at the Idaho National Laboratory.

Agricultural "Growth"

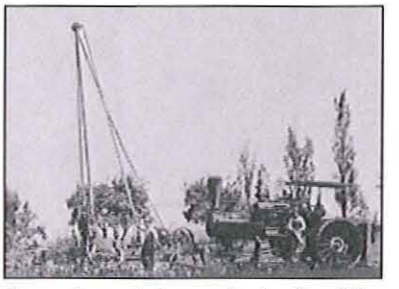
In 1890, the newly-admitted state of Idaho feared that all the land that could be developed for agriculture was already under the plow. Many miles of canals were already being used to take the natural flow of Idaho's waterways to fields. But serious and expensive efforts were needed to store and transfer the huge volumes of water that flowed down the Snake and other rivers throughout the year to the many acres of rich volcanic soils that were beyond the reach of canals or could be supplied with just the low river flows during southern Idaho's dry summers. It was feared that without these great efforts, Idaho's growth would run out of momentum. It could not have been imagined that just ten years later, total irrigated acres across the State topped 550,000, more than double that at the time of Idaho's statehood.

Development of the arid Snake River Plain was encouraged by the Carey Act (1894) and other federal legislation that provided government land at bargain prices to those that could bring that land under irrigation and into production. Private investment provided the capital to buy the lands and build canals. Among the first projects were canals near American Falls, and Milner Dam and associated canals near Burley and Rupert. Familiar landmarks such as Milner Dam, Perrine Bridge, Buhl, and Kimberly remind us of those that helped to finance these early projects. Still, the limiting factor for further development was how to store the melting snows and high spring flows for irrigation in the hot, dry Idaho summers.

Even with the help of wealthy investors, it became clear that the astronomical cost of building dams required more assistance from the federal government. The 1902 Newlands Reclamation Act allowed the Federal Government to finance the work of constructing dams and irrigation works beyond the ability of private investment. From this grew the Minidoka Project that eventually resulted in the Minidoka, American Falls, Palisades, Jackson Lake, and other major dams of the Upper Snake River Valley, as well as dams on other southeast Idaho streams. In addition to storing water for irrigation, these dams helped to tame the floods that often came with spring's melting snow.

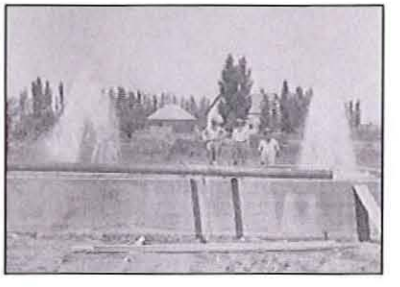
Irrigation on the Eastern Snake River Plain was underway by 1880, on lands immediately adjacent to the Snake River and other eastern Idaho streams. By 1899-1900, about 330,000 acres were under irrigation. From 1903 through 1938 Mindoka, Jackson Lake, Milner, American Falls, Henrys Lake, Island Park, and Grassy Lake Dams were constructed. Acres irrigated increased to about 1.54 million in 1929, and 1.7 million acres by 1945.

From 1945 to 1959, acres irrigated increased to 1.83 million acres. Although ground water had been used for irrigation since the 1920s in some areas on the Eastern Snake River Plain, the development of powerful and efficient electric pumps allowed significant ground water usage, with 400,000 acres irrigated from this "new" source. Surface water irrigation accounted for 1.43 million acres. By 1966, acres irrigated by ground water grew to 640,000, and by surface water, to 1.56 million acres, for a total of 2.20 million acres. Irrigated acres totaled 2.27 million in 1979. The source for irrigation water for some lands switched from surface water to ground water, with surface water the source for irrigation of 1.23 million acres, and ground water the source for 930,000 acres. Both surface and ground water resources were used to irrigate 110,000 acres.



From surface water to ground water: *Core drilling for water at an Idaho farm in 1916. Idaho State Historical Society.*

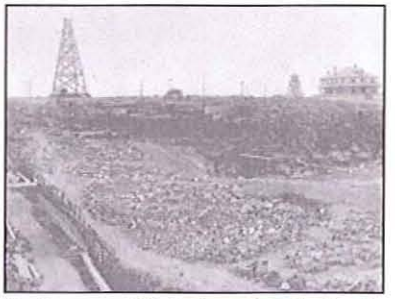
Irrigation wells at Artesian City in Twin Falls County, around 1910-1920. Idaho State Historical Society, Bisbee collection.



Resource from "Waste"

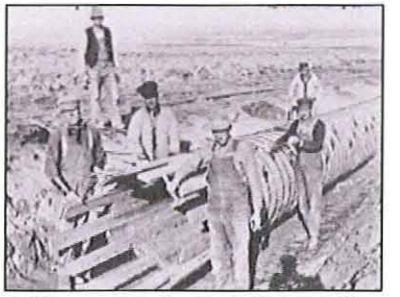
Flooding fields with water is a relatively inefficient means of providing water to crops. The amount of water applied to the fields and furrows prior to more modern irrigation methods was sometimes as much as 7 times what the crop could use. All that extra water, as much as 12 feet of water applied during the course of an irrigation season,
recharged the aquifer. This "waste" became water stored for later use, just like water stored behind a dam.

Water levels rose substantially in some areas, for example, ground water levels rose 60-70 feet from 1907 to 1959 in areas near Kimberly and Bliss, and as much as 200 feet in areas near Twin Falls. Across the whole of the aquifer, the average aquifer rise was about 50 feet. This rise in aquifer levels became most evident by the increases in discharge from the major springs along the Snake River. With the transition to irrigating with ground water and more efficient means of applying surface water to fields, less water was added to storage.



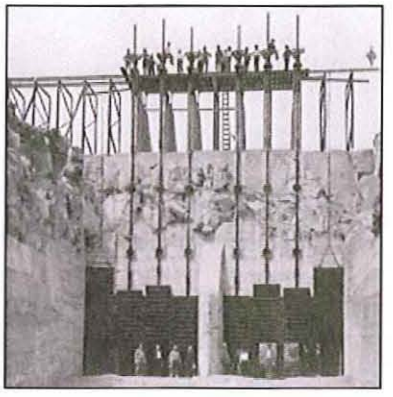
Breaking ground: *Early stages of construction at the Milner Dam, June 1903. Idaho State Historical Society,*

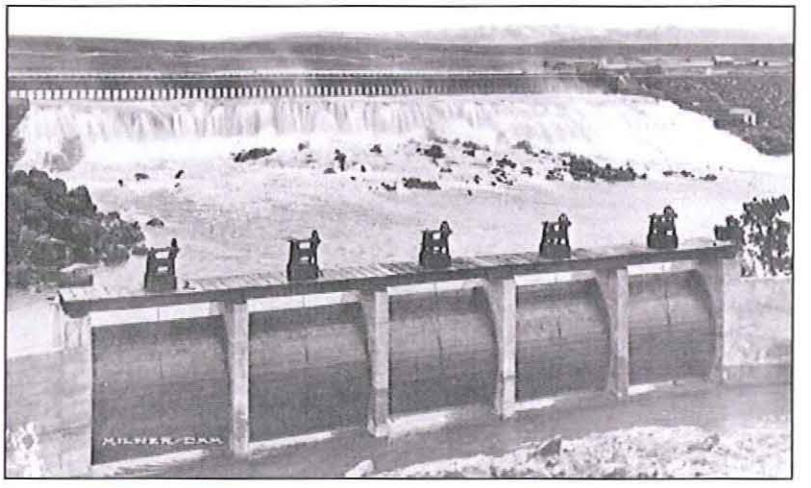
Diversion at Milner. Milner water first reached crops in 1905.



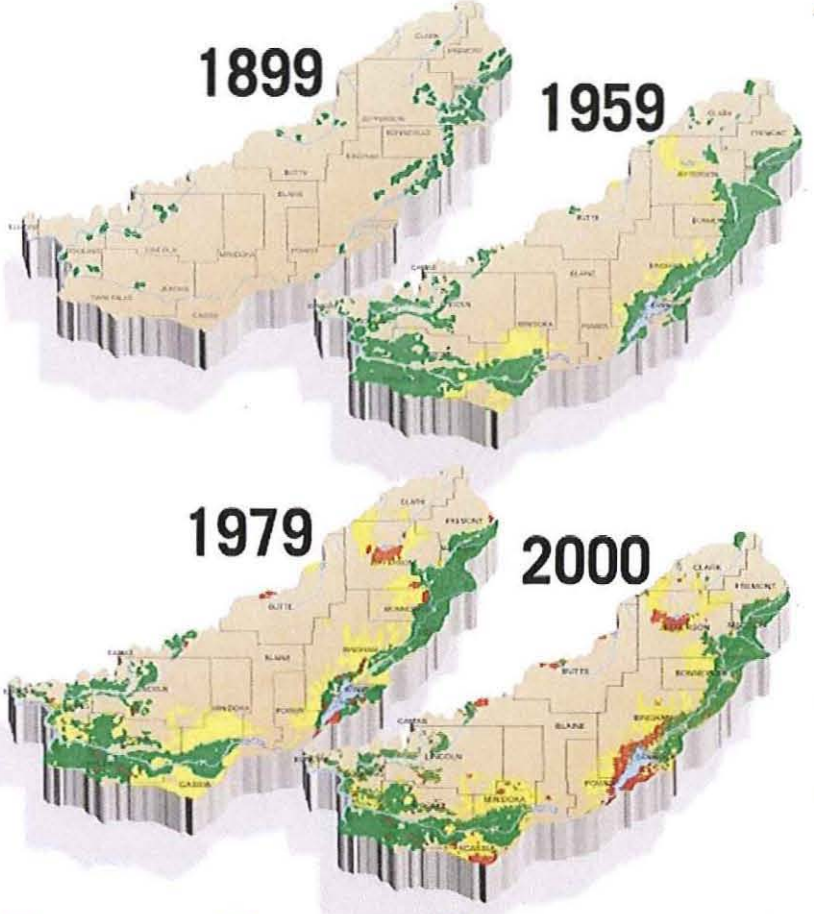
Building wood pipeline, *March, 1912. Part of the Milner project. Idaho State Historical Society.*

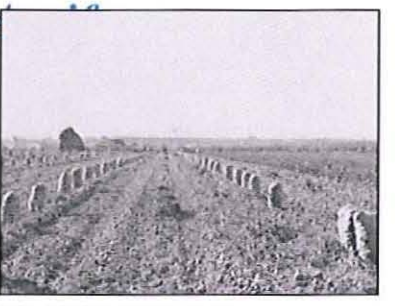
Below, late stages of construction on the Milner project. Idaho State Historical Society, Bisbee collection. Right, Milner Dam from old postcard negative. Idaho State Historical Society.





A century of irrigation on the Eastern Snake River Plain





Prize-winning potatoes: *in 1910, this farm a mile east of Twin Falls produced 645 bushels per acre, winning $500.00. Idaho State Historical Society.*

Over time, the primary source of irrigation water changed from diverted surface water to pumped ground water.

The primary method of irrigation also changed, from flooding fields to sprinkling. This allowed more acres to be farmed, but also resulted in less water available for recharge.

Modern agricultural methods deliver precise amounts of water at carefully timed intervals.

our changing AQUIFER

It's said that biology is destiny. For humans, that may be true. But for Idaho, geology is destiny, and much of that destiny is defined by the presence of the Eastern Snake River Plain Aquifer.

Rich mineral deposits brought miners to the area. Abundant water and fertile soil attracted homesteaders and farmers. Dams—many built in canyons—provide the hydroelectric power that fuels our homes, businesses, and economy. Majestic mountains and stunning landscapes lure those whose souls are fed by beauty. Idaho's history, and its destiny, have been shaped by these resources.

Lured west with the false promise that "the rain follows the plow," homesteaders traveling the Oregon Trail crossed the Snake River Plain. Some decided to stop, gravitating to the areas where water was plentiful—next to the Snake River and its tributary streams.

In time, Idahoans developed the technology and the infrastructure to thrive whether the rain followed or not. With the addition of pumps, canals, and dams, they tapped the aquifer and farms spread out. No longer tethered to just those areas adjacent to surface water, land was cultivated throughout the Eastern Snake River Plain, molding the arid stretch into one of the most productive agricultural regions in the world.

Today, the pure, cold spring water that flows from Thousand Springs supports a thriving aquaculture (fish-farming) industry; sixty-nine percent of the trout farmed in the United States come from Idaho. Twenty-nine percent of the nation's potatoes are grown in Idaho, and the state ranks sixth in the number of cattle produced. The Eastern Snake River Plain, once little more than a dry passage to the west, now helps feed people all over the world.

Balancing Water

Unfortunately, the rain still doesn't follow the plow. Nor does it follow the increasing demands for drinking water, habitat, agriculture, industry, production of electricity, fishing and boating, landscaping, or water left in rivers and lakes for its beauty. Demands on this vital resource continue to grow, but the amount of water available, much of it stored up in the aquifer, does not.

Some want more water for consumptive uses, such as industry, agriculture, or drinking. Others want water for production of electricity, for habitat, for recreation, or for other downstream uses.

The demands for water continue, defining Idaho's political landscape now just as surely as geology and hydrology have always defined the Gem State's destiny. An understanding of the way the aquifer gains and loses water can help us understand the conflicts inherent in the use of water and help define that balance.

Whether you are going to define the right balance for water users or understand the complexities of contamination, it is helpful to know how the aquifer works: the principles of storage, recharge, and discharge.

Demands on this vital resource continue to grow, but the amount of water available, much of it locked up in the aquifer, doesn't grow...

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