BEFORE THE DEPARTMENT OF WATER RESOURCES

OF THE STATE OF IDAHO

IN THE MATTER OF APPLICATION FOR TRANSFER NO. 79560 IN THE NAME OF NORTH SNAKE GROUND WATER DIST., MAGIC VALLEY GROUND WATER DIST., AND SOUTHWEST IRRIGATION DIST.	)	**FINAL ORDER APPROVING APPLICATION FOR TRANSFER**

BACKGROUND

On January 29, 2014, the Director ("Director") of the Idaho Department of Water Resources ("Department") issued the *Final Order Regarding Rangen, Inc.'s Petition for Delivery Call; Curtailing Ground Water Rights Junior to July 13, 1962* ("Curtailment Order").[1] The Curtailment Order recognizes that holders of junior-priority ground water rights may avoid curtailment if they participate in a mitigation plan which provides "simulated steady state benefits of 9.1 cfs to Curren Tunnel [sometimes referred to as the "Martin-Curren Tunnel"] or direct flow of 9.1 cfs to Rangen." Ex. 1018 at 42.[2] The Curtailment Order explains that mitigation provided by direct flow to Rangen, Inc. ("Rangen") "may be phased-in over not more than a five-year period pursuant to Rule 40 of the CM Rules as follows: 3.4 cfs the first year, 5.2 cfs the second year, 6.0 cfs the third year, 6.6 cfs the fourth year, and 9.1 cfs the fifth year." *Id.*[3]

On August 27, 2014, the Idaho Ground Water Appropriators, Inc. ("IGWA") filed *IGWA's Fourth Mitigation Plan and Request for Expedited Hearing* ("Fourth Mitigation Plan") "to provide additional ways of satisfying the mitigation obligation imposed by the [Curtailment Order] and

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[1] The Curtailment Order was appealed in *Rangen, Inc., v. IDWR*, Twin Falls County Case No. CV-2014-1338. Judge Wildman issued his *Memorandum Decision and Order on Petitions for Judicial Review* ("Decision") on October 24, 2014, which affirmed the Director on a number of issues, but held the Director erred by applying a trim line to reduce the zone of curtailment. *Decision* at 28. The Decision has been appealed to the Idaho Supreme Court, Docket No. 42772-2015.

[2] Exhibits in the 1000s referenced in this order are from the administrative record in CM-MP-2014-006. At the commencement of the hearing in this matter, the parties stipulated to admission of the entire record in CM-MP-2014-006. All other exhibits referenced herein were admitted at the hearing.

[3] The term "CM Rules" refers to Idaho's *Rules for Conjunctive Management of Surface and Ground Water Resources*, IDAPA 37.03.11.

thereby prevent curtailment of junior-priority groundwater use."[4] Ex. 1000 at 2. The Fourth Mitigation Plan proposed the "Magic Springs Project." Ex. 1000 at 3. The Magic Springs Project is comprised of multiple components including approval of a transfer application to change the place of use of a portion of water right no. 36-7072 from the SeaPac fish hatchery at Magic Springs to the Rangen fish hatchery on Billingsley Creek. *Id.* at 3-4. The Director held a hearing for the Fourth Mitigation Plan on October 8, 2014, at the Department's State office in Boise, Idaho. The Director issued the *Order Approving IGWA's Fourth Mitigation Plan* ("Fourth Mitigation Plan Order") on October 29, 2014.[5]

On September 12, 2014, North Snake Ground Water District, Magic Valley Ground Water District, and Southwest Irrigation District filed with the Department, through counsel for IGWA, Application for Transfer No. 79560 ("Application"). Ex. 4000. Notice of the Application was published beginning October 2, 2014. Rangen filed a *Notice of Protest by Rangen, Inc. to Water Right Transfer Application No. 79560* ("Protest").[6] The Director held a hearing on December 18, 2014, at the Idaho Department of Environmental Quality office in Twin Falls, Idaho. The parties offered testimony, expert reports, and other documents into the administrative record.

On January 27, 2015, the Director issued a *Notice of Taking Official Notice of Staff Memorandum* ("Notice"). The Notice explained that, after the hearing, the Director asked Department staff to review and analyze technical information contained in expert reports submitted in this matter, expert testimony offered at the hearing, and data and information in possession of the Department. The Director also asked staff to prepare a memorandum regarding the Application. *Notice* at 1-2. In response to the request, Department staff prepared and submitted a memorandum, a copy of which was attached to the Notice.[7] The Director informed the parties that official notice would be taken of facts and material contained in the staff memorandum and granted the parties two weeks to contest and rebut the facts or material officially noticed. *Id.* at 2. On February 10,

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[4] To date, IGWA has submitted five mitigation plans to address mitigation obligations imposed by the Curtailment Order. On May 16, 2014, the Director approved some mitigation credit for certain components of IGWA's first mitigation plan. *See Amended Order Approving in Part and Rejecting in Part IGWA's Mitigation Plan; Order Lifting Stay Issued February 21, 2014; Amended Curtailment Order* (CM-MP-2014-001). While the Director approved IGWA's second mitigation plan on June 20, 2014, in the *Order Approving IGWA's Second Mitigation Plan; Order Lifting Stay Issued April 28, 2014; Second Amended Curtailment Order* (CM-MP-2014-003), IGWA subsequently withdrew the plan. On December 18, 2014, IGWA filed *IGWA's Fifth Mitigation Plan and Request for Hearing* (CM-MP-2014-008). A status conference is scheduled for IGWA's third mitigation plan (CM-MP-2014-005) on March 17, 2015, at the Department's state office in Boise, Idaho.

[5] The Fourth Mitigation Plan Order was not admitted as an exhibit at the transfer hearing. However, that order is part of the Department's administrative record and will be referenced herein.

[6] The Protest was not admitted as an exhibit at the transfer hearing. However, the Protest is part of the Department's administrative record and will be referenced herein.

[7] By mistake, the staff memorandum attached to the Notice did not contain Table 1 and Table 2. Counsel for the Department emailed Table 1 and Table 2 to the parties on February 9, 2015, explaining the tables were intended to be incorporated into the staff memorandum. The staff memorandum attached to this order as Attachment A contains Table 1 and Table 2.

2015, Rangen submitted *Rangen, Inc.'s Expert Report in Response to Staff Memorandum* ("Expert Response") and *Rangen, Inc.'s Response to Staff Memorandum.*

After carefully considering all of the evidence in the administrative record, the Director finds, concludes, and orders as follows:

FINDINGS OF FACT

1. Water right no. 36-7072 bears a priority date of September 5, 1969, and authorizes the diversion of 148.2 cfs of water from Thousand Springs for fish propagation purposes. Ex. 1001 at 21-22.[8] "[A]ll water diverted under water right no. 36-7072 flows from the SeaPac fish hatchery to the Snake River over a distance of less than one mile." Ex. 4002 at 5.

2. The Application proposes to change the place of use of 10 cfs of water right no. 36-7072 from the SeaPac fish hatchery at Magic Springs to the Rangen fish hatchery located in the SWNE and SENE of Section 31, T07S, R14E and the SWNW of Section 32, T07S, R14E and to reflect "Fish Propagation/Mitig" as a nature of use. Ex. 4000 at 2-5. The Application does not propose any change in the point of diversion for water right no. 36-7072.

3. IGWA proposes that, if the Application is approved, up to 10 cfs of water right no. 36-7072 "will be delivered from Magic Springs to the Rangen hatchery per engineering details submitted in the Fourth Mitigation Plan, CM-MP-2014-006." Ex. 4002 at 4. These engineering details were admitted as Exhibit 1009 in CM-MP-2014-006 and were described in detail, along with conditions of approval, in the Fourth Mitigation Plan Order. In short, "spring water discharged from the [Eastern Snake Plain Aquifer] at Magic Springs [will] be pumped via buried pipeline approximately 2.5 miles to Rangen's place of use near the head of Billingsley Creek." Ex. 4000 at 14.

4. Water delivered to Rangen pursuant to the proposed transfer will be discharged into Billingsley Creek after leaving the Rangen fish hatchery. *Protest* at 2; Ex. 4002 at 5; Tr. at p. 11.

5. Expert witness reports and testimony presented at the hearing discuss potential impacts resulting from evaporation of water conveyed through Billingsley Creek pursuant to the proposed transfer, and from consumptive use by irrigators who divert from Billingsley Creek.

6. IGWA's expert reports estimate that, if 10 cfs of water from Magic Springs is conveyed to the Snake River via Billingsley Creek, approximately 0.039 cfs will be lost to evaporation prior to reaching the Snake River. Ex. 4002 at 11; Ex. 4003 at 15. Rangen's expert report criticizes the assumptions used by IGWA's expert in calculating evaporation from Billingsley Creek, but acknowledges "[t]he magnitude of additional evaporation is small and will be small, however it is calculated." Ex. 5019 at 7.

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[8] SeaPac also owns water right no. 36-8356 for fish propagation at Magic Springs which authorizes the diversion of 45 cfs from springs with a priority date of May 9, 1988. Rights 36-7072 and 36-8356 combined shall not exceed a total diversion rate of 148.2 cfs.

7. Neither IGWA nor Rangen attempted to quantify the percentage of the 10 cfs lost to consumptive use by water users once water leaves the Rangen facility. Frank Erwin, Watermaster for Water District 36A, testified regarding the complexity of water distribution in Water District 36A and explained that, given the complexity along with insufficient measuring devices and gauging stations and the possibility of diversions by downstream irrigators, it would "be a very difficult task to actually track that water." Tr. p. 21-35.

8. IGWA's expert acknowledged that "[w]ater delivered to the Rangen facility pursuant to the Application could, after leaving the Rangen facility, be consumptively used by other Billingsley Creek water users or evaporate from Billingsley Creek." Ex. 4002 at 5. IGWA's expert explained that, "[i]f this occurred at a time when minimum stream flows at the Murphy Gage are violated, it could contribute to enforcement of the Swan Falls Agreement, which may include curtailment of other water rights." Ex. 4002 at 5. However, IGWA's expert concluded that "the transfer does not present risk to the minimum flows called for in the Swan Falls agreement" because "ongoing IGWA mitigation activities substantially exceed the potential consumption of water added to Billingsley Creek from the Magic Springs transfer." Ex. 4003 at 14. IGWA's expert also concluded "it would be reasonable to include in the approval of the Application a condition that requires mitigation be provided sufficient to offset depletion of water right 36-7072 in the event of a violation of the Swan Falls minimums." *Id.* at 5.

9. IGWA's expert compiled results from ESPAM2.1 model runs performed by the Department in support of the order approving IGWA's first mitigation plan. Ex. 4003 at 13-17. Those model runs simulated aquifer enhancement activities (conversions, voluntary "dry-ups" through the Conservation Reserve Enhanced Program ("CREP"), voluntary curtailment, and recharge) performed by IGWA and Southwest Irrigation District between 2005 and 2013, with the assumption that 2013 conversions, CREP, and voluntary curtailment were continued in future years. Ex. 1020 at 8. IGWA's expert presented the total model-predicted benefit of the mitigation accruing to springs tributary to the Snake River between Kimberly and King Hill. Ex. 4003 at 17. IGWA's expert reported an average benefit of 48.6 cfs between April 2014 and March 2015, and an average benefit of 58.1 cfs between April 2018 and March 2019. *Id.*

10. The Department also compiled results of the ESPAM2.1 model runs of IGWA and Southwest Irrigation District's aquifer enhancement activities. *See Attachment A* at 2. The Department's results are slightly different from those reported by IGWA's expert in Ex. 4003 at 17. *See Attachment A* at 2. The Department's analysis concludes the average model-predicted benefit to springs tributary to the Snake River between Kimberly and King Hill is 48.5 cfs between April 2014 and March 2015, and 67.5 cfs at steady state. *Id.* at 3. These values are projections based on continuation of 2013 aquifer enhancement activities by IGWA and Southwest Irrigation District. *Id.*

11. On December 3, 2014, the Fifth Judicial District Court, in and for the County of Twin Falls, issued its *Memorandum Decision and Order on Petition for Judicial Review* ("Memorandum Decision") in CV-2014-2446. The court held the Department cannot recognize mitigation credit for future aquifer enhancement activities without sufficient contingency provisions to protect the senior water user in the event the assumed future aquifer enhancement activities do

not occur. *Memorandum Decision* at 6-10. Because of this decision, the memorandum prepared by staff also evaluated the aquifer enhancement activities of IGWA and Southwest Irrigation District without assuming a continuation of 2013 aquifer enhancement activities into 2014.[9] Specifically, the Department performed "an ESPAM2.1 simulation of 2005 through 2013 aquifer enhancement activities . . . to determine the minimum benefit provided by documented past activities" assuming no such activities occurred in 2014 and future years. *Attachment A* at 4. The simulation determined "[t]he model-predicted benefit to springs tributary to the Snake River between Kimberly and King Hill is 40.6 cfs between April 2014 and March 2015." *Id.*

12. Neither IGWA's nor Rangen's experts attempted to quantify the portion of the model-predicted benefit from IGWA and Southwest Irrigation District's aquifer enhancement activities that would actually reach the Snake River. In contrast, the Department analyzed data and information in possession of the Department to evaluate whether at least 10 cfs of the model-predicted benefits from IGWA and Southwest Irrigation District's past aquifer enhancement activities would reach the Snake River.

13. Baseflow represented by general head boundaries in ESPAM2.1 is subsurface discharge to the Snake River and can be assumed to be unavailable to surface water users. *Attachment A* at 3. The Department's modeled simulation of documented past aquifer enhancement activities through 2013 predicts an increase in baseflow between April 2014 and March 2015 of 2.4 cfs. *Id.* at Table 2.

14. "Increases in spring discharge have the potential to be intercepted by surface water users before discharging to the Snake River. If the increase in spring discharge is diverted for a consumptive use, such as irrigation, only a portion of the increase in discharge will reach the Snake River." *Attachment A* at 3. Many of the fifty spring reaches represented in ESPAM2.1 include springs diverted for irrigation use. *Id.* Some spring cells without irrigation use are predicted by ESPAM2.1 to benefit significantly from IGWA and Southwest Irrigation District's past aquifer enhancement activities. For example, "[t]he Box Canyon reach consists of two model cells without spring diversions for irrigation use." *Id.* "The Devil's Washbowl and Devil's Corral spring cells also do not contain springs diverted for irrigation use." *Id.*

15. "The average model-predicted benefit [of documented past aquifer enhancement activities] to the Box Canyon reach, the Devil's Washbowl and Devil's Corral spring cells, and the baseflow represented by general head boundaries is 11.1 cfs between April 2014 and March 2015." *Attachment A* at 4.[10] "Additional water is also expected to accrue to the Snake River from increases in spring discharge at spring cells with irrigation use, but cannot be quantified without a detailed analysis of irrigation demand and water availability at each spring source." *Id.* at 3. The portion of the average model-predicted benefit of documented past aquifer enhancement activities that can be

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[9] Documentation of 2014 IGWA and Southwest Irrigation District aquifer enhancement activities is not available as of the date of this order. *Attachment A* at 4.

[10] The Department also performed a steady-state analysis assuming the continuation of 2013 aquifer enhancement activities. This results in a model-predicted increase of 18.3 cfs at steady state. *Attachment A at* 3.

expected to reach the Snake River between April 2014 and March 2015 is between 11.1 cfs and 40.6 cfs. *Id.* at 4.

16. Even without including estimated benefits from 2014 and future activities, the benefits of IGWA and Southwest Irrigation District's past aquifer enhancement activities to the Snake River between Kimberly and King Hill are predicted to exceed the potential impact of the proposed transfer on flow in the Snake River between April 2014 and March 2015. *Id.* at 4-5.

CONCLUSIONS OF LAW

1. Idaho Code § 42-222 sets forth the criteria used to evaluate transfer applications:

> The director of the department of water resources shall examine all the evidence and available information and shall approve the change in whole, or in part, or upon conditions, provided no other water rights are injured thereby, the change does not constitute an enlargement in use of the original right, the change is consistent with the conservation of water resources within the state of Idaho and is in the local public interest as defined in section 42-202B, Idaho Code, the change will not adversely affect the local economy of the watershed or local area within which the source of water for the proposed use originates, in the case where the place of use is outside of the watershed or local area where the source of water originates, and the new use is a beneficial use, which in the case of a municipal provider shall be satisfied if the water right is necessary to serve reasonably anticipated future needs as provided in this chapter.

2. The applicant bears the burden of proof for all of the factors listed in Section 42-222.

Injury to Other Water Rights

3. Rangen argues that "[o]ther water rights will be injured by the transfer." *Protest* at 2. Rangen's expert asserts that, "[i]f a decrease in Snake River flow results in a violation of the 3900 or 5600 cfs minimum flow at Murphy as outlined in the Swan Falls Trust Water agreement, then other irrigation water right holders in the Magic Springs/Murphy gauge reach could be negatively impacted." Ex. 5015 at 4.

4. While the only evidence regarding injury is speculative suggesting a potential for injury to water users that may be curtailed in the event of a violation of the Swan Falls minimums, as noted above, IGWA's expert concluded "it would be reasonable to include in the approval of the Application a condition that requires mitigation be provided sufficient to offset depletion of water right 36-7072 in the event of a violation of the Swan Falls minimums." Ex. 4003 at 5.

5. The Department's analysis demonstrates that benefits of IGWA and Southwest Irrigation District's past aquifer enhancement activities to the Snake River between Kimberly and King Hill are predicted to exceed 10 cfs between April 2014 and March 2015. *Attachment A* at 4-5.[11]

6. As a condition of approval, IGWA and Southwest Irrigation District will be required to continue into the future aquifer enhancement activities sufficient to offset 10 cfs of depletion of flow in the Snake River between Kimberly and King Hill. Prior to each irrigation season, IGWA must submit documentation of aquifer enhancement activities from the previous year to establish that sufficient mitigation will be provided in the upcoming season.

Enlargement in Use of the Original Right

7. Rangen argues the proposed transfer "constitutes" an enlargement in use of the original right, in violation of the criteria of Idaho Code § 42-222. *Protest* at 2. Rangen's expert asserts the proposed transfer results in an enlargement of water right no. 36-7072 because the application included mitigation in addition to fish propagation as a nature of use. Ex. 5015 at 5. Rangen's expert also notes that water right no. 36-7072 authorizes the non-consumptive use of fish propagation and asserts that, because downstream irrigators will divert any additional flow added to Billingsley Creek from Magic Springs, the transfer "will result in expansion of historical consumptive use from water right no. 36-7072." Ex. 5015 at 5. IGWA's expert asserts the proposed transfer will not result in an enlargement because "[e]nlargement is determined by the use made by the appropriator and not what becomes of discharged water after beneficial use is complete." Ex. 4003 at 5.

8. The Director concludes IGWA has sufficiently demonstrated that approval of the proposed transfer will not result in enlargement of water right no. 36-7072. Water right no. 36-7072 authorizes the diversion of water for fish propagation purposes. Ex. 1001 at 21-22. The application proposes to change the nature of use of water right no. 36-7072 to "Fish Propagation/Mitig." Ex. 4000 at 3. Because the reason for the proposed transfer is to mitigate material injury to Rangen, the nature of use will be described in the transfer documents as "Mitigation." This proposed change in nature of use does not alter that water right no. 36-7072 will be used for non-consumptive fish propagation purposes, but only reflects that water delivered to Rangen pursuant to the transfer will help satisfy mitigation obligations imposed by the Curtailment Order. The proposal to change the nature of use of water right no. 36-7072 from "Fish Propagation" to "Mitigation" does not constitute an "enlargement in use of the original right" as prohibited by Idaho Code § 42-222. Rangen's argument regarding expansion of historical consumptive use is mooted by the condition of approval requiring IGWA and Southwest Irrigation

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[11] Rangen argues that, as part of this transfer proceeding, IGWA must mitigate for all the impacts of ground water pumping junior to July 13, 1962, on flow in the Snake River. *See Expert Response* at 6-8. The impact at issue in this transfer proceeding is the impact on flow in the Snake River resulting from the transfer of 10 cfs of water from Magic Springs to Rangen, not the impacts of all ground water pumping junior to July 13, 1962, on flow in the Snake River. Rangen also appears to assert the proposed transfer will have some negative impact on non-consumptive water rights at Box Canyon and Devil's Corral. *See id.* at 9. But the proposed transfer will have no depletive impact on flow available for those water rights. Instead, the Box Canyon reach and Devil's Corral spring cell benefit significantly from the aquifer enhancement activities of IGWA and Southwest Irrigation District.

District to provide ongoing mitigation through aquifer enhancement activities sufficient to offset 10 cfs of depletion of flow in the Snake River between Kimberly and King Hill.[12]

Conservation of Water Resources

9. Rangen asserts "[t]he transfer is not consistent with the conservation of water resources within the state, in violation of the criteria of I.C. § 42-222." *Protest* at 2. Rangen provided no evidence to support this blanket assertion.

10. IGWA's expert report and testimony assert the proposed transfer is consistent with the conservation of water resources within Idaho because water right no. 36-7072 is currently used for the beneficial use of fish propagation in the state and will continue to be used for fish propagation within Idaho and not wasted if the transfer is approved. Ex. 4002 at 6; Tr. p. 79-80. The Director agrees. The proposed transfer is consistent with the conservation of water resources within the state of Idaho.

Local Public Interest

11. Local public interest is defined as "the interests that the people in the area directly affected by a proposed water use have in the effects of such use on the public water resource." Idaho Code § 42-202B(3).

12. Rangen asserts "[t]he transfer is not in the local public interest as defined in section 42-202B, Idaho Code, in violation of the criteria of I.C. § 42-222." *Protest* at 2. Rangen also asserts "[t]he transfer will be detrimental to fish and wildlife, fish rearing and spawning habitat, fish passage, waterfowl habitat, and aesthetic beauty and therefore is not in the best interest of the general public of the state of Idaho." *Protest* at 2. Rangen offered no evidence to support these assertions.

13. IGWA's expert argued the proposed transfer is in the local public interest because "Rangen will benefit from a significant increase in water available for fish production . . . and . . . [a]dditional flow in Billingsley Creek is expected to improve conditions for fish and wildlife." Ex. 4002 at 6. IGWA's expert also argued the proposed transfer is in the local public interest because "[improved] economic conditions at Rangen and increased flows in Billingsley Creek will benefit the people in the Hagerman area." *Id.* IGWA's expert testified that "the mitigation aspect of this to

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[12] Rangen's expert also argues "[t]he proposed use of water right 37-7072 in the manner proposed in Transfer 79560 will result in additional consumptive use under this water right and is therefore in violation of the [Eastern Snake River Plain] moratorium." Ex. 5019 at 6. 29. However, the referenced moratorium clearly states that it does not apply to the transfer of existing water rights. Ex. 5007 at 5. Even if the moratorium did apply to the Application, the moratorium provides that the Director may approve relevant applications proposing consumptive use of water if "[t]he Director determines that the development and use of the water pursuant to an application will have no effect on prior surface and ground water rights because of . . . mitigation provided by the applicant to offset injury to other rights." *Id.* at 4-5. Because as a condition of approval IGWA and Southwest Irrigation District must provide ongoing mitigation sufficient to offset 10 cfs of depletion of Snake River flow between Kimberly and King Hill, the referenced moratorium would not be violated.

allow the groundwater pumpers to continue their beneficial uses of water is very much in the local public interest to keep the economy of the area more intact." Tr. p. 80.

14. The proposed transfer will help provide mitigation water to Rangen as required by the Curtailment Order and will contribute additional flow to Billingsley Creek. IGWA and Southwest Irrigation District will be required to provide mitigation sufficient to offset depletion of Snake River flows due to the Application. There is no evidence in the record to support Rangen's contention that the proposed transfer will be detrimental to fish and wildlife, fish rearing and spawning habitat, fish passage, waterfowl habitat, and aesthetic beauty. There is no evidence establishing that people in the area directly affected by the proposed transfer will suffer any negative impacts. The proposed transfer is in the local public interest.

Local Economy

15. Rangen does not argue that the proposed transfer "will adversely affect the local economy" in violation of Idaho Code § 42-222 or assert that fish propagation and mitigation are not beneficial uses.

16. IGWA's expert argues the proposed transfer will not adversely affect the local economy because instead "[t]he transfer will have significant benefits to the local economy. Additional water provided to Rangen allows the facility to improve its economic output. In addition, the proposed transfer provides mitigation needed to prevent the curtailment of ground water rights." Ex. 4002 at 7. The Director agrees. The proposed transfer will not adversely affect the local economy and fish propagation and mitigation are established beneficial uses of water in Idaho in accordance with the criteria set forth in Idaho Code § 42-222.

Summary

17. IGWA satisfied its burden of proof for the review of criteria set forth in Idaho Code § 42-222. The proposed transfer will not result in injury to other water rights or an enlargement in use of the original right, is consistent with the conservation of water resources within the state of Idaho, is in the local public interest as defined in Idaho Code § 42-202B, and will not adversely affect the local economy.

ORDER

IT IS HEREBY ORDERED that Application for Transfer No. 79560 in the name of North Snake Ground Water District, Magic Valley Ground Water District, and Southwest Irrigation District is APPROVED.

IT IS FURTHER ORDRED that, as a condition of approval, IGWA and Southwest Irrigation District will continue into the future, aquifer enhancement activities sufficient to offset 10 cfs of depletion of flow in the Snake River between Kimberly and King Hill. Prior to the start of each irrigation season, IGWA must provide documentation of aquifer enhancement activities from

the previous year to establish that sufficient mitigation will be provided in the upcoming season. If sufficient mitigation is not provided, the transfer will be void.

Dated this 19th day of February 2015.

Gary Spackman
Director

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that on this 19th day of February 2015, true and correct copies of the document described below was served on the parties by placing a copy of the same with the United States Postal Service, postage prepaid and properly addressed to the following:

Document Served: Final Order Approving Application for Transfer and Explanatory Information to Accompany a Final Order

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ATTACHMENT A

MEMO

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Date: January 27, 2015

To: Gary Spackman, P.E., Director

From: Jennifer Sukow, P.E., P.G., Hydrology Section

Subject: Technical review of expert witness reports and testimony in the matter of application for transfer no. 79560 (proposed Magic Springs to Rangen pipeline)

This memorandum was prepared in response to your request for a technical review of expert witness reports and testimony from Sophia Sigstedt and Charles E. Brockway in the matter of application for transfer no. 79560 in the name of North Snake Groundwater District, Magic Valley Groundwater District, and Southwest Irrigation District. Ms. Sigstedt testified on behalf of the applicants. Dr. Brockway testified on behalf of protestant, Rangen, Inc. My review focused specifically on potential impacts to flow in the Snake River resulting from changing the place of use for fish propagation from the Magic Springs Hatchery to the Rangen Hatchery, and proposed mitigation of such impacts. The Magic Springs Hatchery discharges directly into the Snake River, while the Rangen Hatchery discharges into Billingsley Creek, a tributary to the Snake River. Expert witness reports and testimony discuss potential impacts resulting from evaporation of water conveyed through Billingsley Creek, and from consumptive use by irrigators who divert from Billingsley Creek.

Ms. Sigstedt estimated if 10 cfs of water from Magic Springs is conveyed to the Snake River via Billingsley Creek, approximately 0.039 cfs would be lost to evaporation prior to reaching the Snake River. Ms. Sigstedt also compiled results from ESPAM2.1 model runs performed by the Idaho Department of Water Resources (IDWR) in support of the order approving the groundwater user's first mitigation plan. The model runs simulated aquifer enhancement activities (conversions, CREP, voluntary curtailment, and recharge) performed by the Idaho Groundwater Water Appropriators, Inc. (IGWA) and Southwest Irrigation District (SWID) between 2005 and 2013, with the assumption that 2013 conversions, CREP, and voluntary curtailment were continued in future years. Ms.

Sigstedt presented the total model-predicted benefit of the mitigation accruing to springs tributary to the Snake River between Kimberly and King Hill. Ms. Sigstedt reported an average benefit of 48.6 cfs between April 2014 and March 2015, and an average benefit of 58.1 cfs between April 2018 and March 2019, and noted that these values greatly exceed her estimate of evaporation in Billingsley Creek.

Dr. Brockway criticizes the assumptions used by Ms. Sigstedt in calculating evaporation from Billingsley Creek, but acknowledges the magnitude of additional evaporation in Billingsley Creek will be small however it is calculated. Dr. Brockway argues that if an additional 10 cfs is discharged from the Rangen Hatchery into Billingsley Creek, the water will be diverted by downstream users in Water District 36A for both consumptive and non-consumptive uses, further reducing the portion of the 10 cfs which will reach the Snake River.

It does not appear that either expert witness attempted to quantify the percentage of the 10 cfs that would be lost to consumptive use by downstream water users. Because of the complexity of water distribution in Water District 36A, it is difficult to determine what percentage of the 10 cfs will reach the Snake River during the irrigation season if diversion and consumptive use by downstream water users are not prevented. Some water will discharge to the Snake River as either surface or subsurface flow, and the impact to the Snake River will be less than 10 cfs. A very conservative approach would be to assume a maximum impact of 10 cfs. A less conservative approach would be to assume a reasonable value for efficiency of the delivery and irrigation systems to estimate an impact.

I compiled the results of the ESPAM2.1 model runs of the IGWA and SWID aquifer enhancement activities in Table 1. My results are similar, but slightly different from Ms. Sigstedt's Table 3 from her December 12, 2014 report. The differences appear to be in her compilation of the results for general head boundaries and Class C springs. Ms. Sigstedt's Table 3 reports a constant value of 3.49 cfs for the general head boundaries for all five years. This value should vary with time. My analysis indicates this value varies from 2.91 cfs in Year 1 to 3.43 cfs in Year 5. It appears Ms. Sigstedt calculated the model-predicted average value for the time period between April 2019 and March 2020 and applied this value to the previous five years in her Table 3. I was not able to determine how Ms. Sigstedt arrived at the values reported in Table 3 for the benefit to Class C springs. Given that the values are higher in Year 3 than in Years 4 and 5, it appears she may have used model results from the 2005-2013 timeframe rather than results from the 2014-2019 timeframe, possibly in combination with summing an incorrect group of spring cells.

Dr. Brockway criticized Ms. Sigstedt for including the impacts of SWID aquifer enhancement activities in her analysis. Because SWID is one of the transfer applicants, the inclusion of their mitigation activities seems appropriate. My analysis includes the SWID mitigation activities and indicates the average model-predicted benefit to springs tributary to the Snake River between Kimberly and King Hill is 48.5 cfs between April 2014 and March 2015, and 67.5 cfs at steady state (Table 1). These values are projections based on continuation of 2013 aquifer enhancement activities by IGWA and SWID, and are expected to change after each annual post-audit of IGWA and SWID mitigation activities.

Baseflow represented by general head boundaries is subsurface discharge to the Snake River and can be assumed to be unavailable to surface water users. Baseflow comprises only 2.9 cfs of the model-predicted increase in discharge between April 2014 and March 2015, and only 3.9 cfs at steady state (Table 1). Increases in spring discharge have the potential to be intercepted by surface water users before discharging to the Snake River. If the increase in spring discharge is diverted for a consumptive use, such as irrigation, only a portion of the increase in discharge will reach the Snake River. Based on IDWR water right shapefiles, many of the 50 spring reaches represented in ESPAM2.1 include springs diverted for irrigation use (Figure 1), but there are several spring cells that do not contain springs diverted for irrigation use.

A few of the spring cells without irrigation use are predicted by ESPAM2.1 to benefit significantly from the IGWA and SWID aquifer enhancement activities. The Box Canyon reach consists of two model cells without spring diversions for irrigation use. The Devil's Washbowl and Devil's Corral spring cells also do not contain springs diverted for irrigation use. The sum of model-predicted benefits to the Box Canyon reach, the Devil's Washbowl and Devil's Corral spring cells, and the baseflow represented by general head boundaries is 13.5 between April 2014 and March 2015, and 18.3 cfs at steady state (Table 1), and exceeds the maximum potential impact of 10 cfs resulting from the proposed transfer. Additional water is also expected to accrue to the Snake River from increases in discharge at spring cells with irrigation use, but cannot be quantified without a detailed analysis of irrigation demand and water availability at each spring source. If continued at locations and volumes similar to 2013 activities, the benefits of the IGWA and SWID aquifer enhancement activities to the Snake River between Kimberly and King Hill are predicted to exceed the potential impact of the proposed transfer on flow in the Snake River.

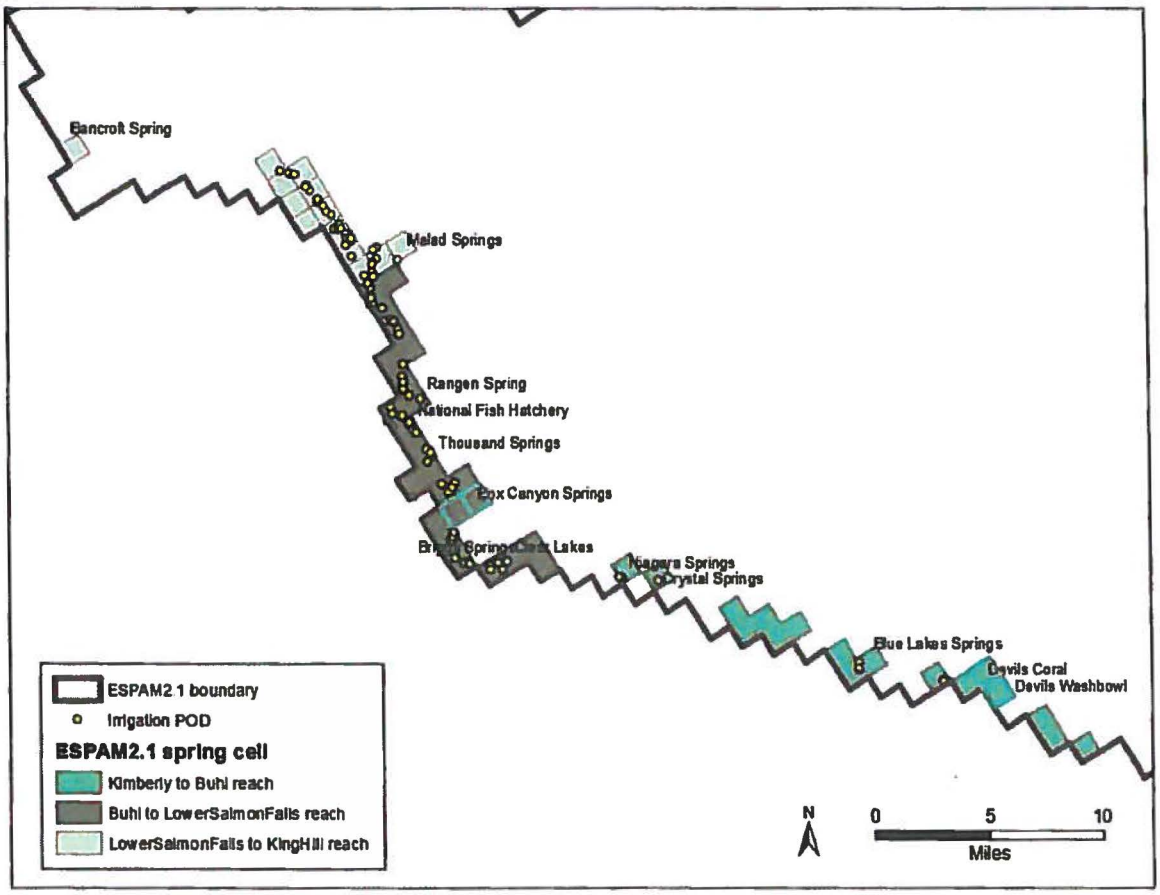

Figure 1. ESPAM2.1 spring cells and irrigation points of diversion.

Because documentation of 2014 IGWA and SWID aquifer enhancement activities was not available as of the date of this memorandum, an ESPAM2.1 simulation of 2005 through 2013 aquifer enhancement activities was performed to determine the minimum benefit provided by documented past activities. The model simulation assumes no aquifer enhancement activities occurred in 2014 and future years[1]. The average model-predicted benefit to springs tributary to the Snake River between Kimberly and King Hill is 40.6 cfs between April 2014 and March 2015 (Table 2). The average model-predicted benefit to the Box Canyon reach, the Devil's Washbowl and Devil's Corral spring cells, and the baseflow represented by general head boundaries is 11.1 cfs between April 2014 and March 2015 (Table 2). Even without including estimated benefits from 2014 activities that have not yet been fully documented, the benefits of past IGWA and

[1] Model files for the simulation of 2005-2013 aquifer enhancement activities with no future activities are contained on the CD accompanying this memorandum.

SWID aquifer enhancement activities to the Snake River between Kimberly and King Hill are predicted to exceed the potential impact of the proposed transfer on flow in the Snake River in the short term. Because the benefits of past aquifer enhancement activities decrease with time, long term mitigation of the potential impact of the proposed transfer will be dependent on future aquifer enhancement activities.

Table 1. Predicted impact of 2005-2013 aquifer enhancement activities, with 2013 activities assumed to continue into future years

ESPAM2.1 reach	Year 1 (4/2014-3/2015)	Year 2 (4/2015-3/2016)	Year 3 (4/2016-3/2017)	Year 4 (4/2017-3/2018)	Year 5 (4/2018-3/2019)	Steady state
ASH_REX	0.1	0.1	0.2	0.2	0.3	1.3
HEISE_SHEL	1.0	1.2	1.5	1.7	1.9	3.9
SHELNRBLKF	4.8	5.6	6.4	7.1	7.6	11.7
NRBLKFMIN	16.6	19.6	22.1	24.3	26.1	39.3
D070030	0.0	0.0	0.0	0.0	0.0	0.0
D069029	0.0	0.0	0.0	0.0	0.0	0.0
D068029	0.0	0.0	0.0	0.0	0.0	0.0
DEVILW	1.3	1.4	1.4	1.5	1.5	1.7
DEVILC	1.7	1.8	1.8	1.9	1.9	2.1
D065027	0.1	0.1	0.1	0.1	0.1	0.1
D064026	0.1	0.1	0.1	0.1	0.1	0.1
BLUELK	3.7	4.0	4.1	4.3	4.4	4.9
D062023	0.0	0.0	0.0	0.0	0.0	0.0
D061023	0.0	0.0	0.0	0.0	0.0	0.0
D059022	0.0	0.0	0.0	0.0	0.0	0.0
D059021	0.0	0.0	0.0	0.0	0.0	0.0
ELISON	0.0	0.0	0.0	0.0	0.0	0.0
D058020	0.0	0.0	0.0	0.0	0.0	0.0
D057020	0.0	0.0	0.0	0.0	0.0	0.0
CRYSTAL	5.2	5.7	6.0	6.2	6.4	7.4
NIAGARA	3.6	3.8	4.0	4.2	4.3	5.0
D051014	0.0	0.0	0.0	0.0	0.0	0.0
D050014	0.0	0.0	0.0	0.0	0.0	0.0
CLEARLK	4.6	5.0	5.2	5.4	5.6	6.5
BRIGGS	0.1	0.1	0.1	0.1	0.2	0.2
BANBURY	0.4	0.4	0.4	0.4	0.4	0.5
D047011	0.0	0.0	0.0	0.0	0.0	0.0
BOX	7.6	8.2	8.6	9.0	9.3	10.7
SAND	2.0	2.2	2.3	2.4	2.5	2.9
D045011	0.0	0.0	0.0	0.0	0.0	0.0
D045012	0.0	0.0	0.0	0.0	0.0	0.0
THOUSAND	5.4	5.8	6.1	6.3	6.5	7.5
NTLFSHH	1.2	1.3	1.4	1.4	1.5	1.7
TUCKER	0.1	0.1	0.1	0.1	0.1	0.2
RANGEN	1.9	2.1	2.2	2.3	2.3	2.7
THREESP	1.4	1.5	1.6	1.6	1.7	2.0
D040013	0.0	0.0	0.0	0.0	0.0	0.0
D040014	0.1	0.1	0.1	0.1	0.1	0.1
BIGSP	0.7	0.8	0.9	0.9	0.9	1.1
D038014	0.1	0.1	0.1	0.1	0.1	0.1
D037014	0.0	0.0	0.0	0.0	0.0	0.0
BIRCH	0.0	0.0	0.0	0.0	0.0	0.0
D036014	0.0	0.0	0.0	0.0	0.0	0.0
MALAD	3.9	4.2	4.5	4.7	4.8	5.6
D035014	0.0	0.0	0.0	0.0	0.0	0.0
D034014	0.1	0.1	0.1	0.1	0.2	0.2
D033013	0.0	0.0	0.0	0.0	0.0	0.0
D033014	0.0	0.0	0.1	0.1	0.1	0.1
D032013	0.0	0.0	0.0	0.0	0.0	0.0
D032014	0.0	0.0	0.0	0.0	0.0	0.0
D031013	0.0	0.0	0.0	0.0	0.0	0.0
D031014	0.0	0.0	0.0	0.0	0.0	0.0
D030013	0.0	0.0	0.0	0.0	0.0	0.0
BANCROFT	0.0	0.0	0.0	0.0	0.0	0.0
Kimberly to Buhl springs	15.8	16.9	17.7	18.4	18.9	21.5
Buhl to Lower Salmon Falls springs	25.6	27.6	29.1	30.4	31.3	36.2
Lower Salmon Falls to King Hill springs	4.2	4.5	4.8	5.0	5.1	6.0
Kimberly to Buhl baseflow	1.9	2.0	2.1	2.2	2.2	2.5
Buhl to Lower Salmon Falls baseflow	0.7	0.7	0.8	0.8	0.8	0.9
Lower Salmon Falls to King Hill baseflow	0.3	0.3	0.3	0.4	0.4	0.4
Total baseflow	**2.9**	**3.1**	**3.2**	**3.3**	**3.4**	**3.9**
Total Kimberly to King Hill	**48.5**	**52.1**	**54.9**	**57.1**	**58.8**	**67.5**
Sum of Box Canyon, Devil's Washbowl, Devil's Corral, and baseflow	**13.5**	**14.4**	**15.1**	**15.7**	**16.1**	**18.3**

Table 2. Predicted impact of 2005-2013 aquifer enhancement activities, with no future activities

ESPAM2.1 reach	Year 1 (4/2014-3/2015)	Year 2 (4/2015-3/2016)	Year 3 (4/2016-3/2017)	Year 4 (4/2017-3/2018)	Year 5 (4/2018-3/2019)
ASH_REX	0.1	0.1	0.2	0.2	0.2
HEISE_SHEL	1.0	1.2	1.3	1.3	1.2
SHELNRBLKF	4.7	5.1	4.9	4.5	4.0
NRBLKFMIN	16.3	17.3	16.6	15.1	13.3
D070030	0.0	0.0	0.0	0.0	0.0
D069029	0.0	0.0	0.0	0.0	0.0
D068029	0.0	0.0	0.0	0.0	0.0
DEVILW	1.0	0.7	0.5	0.4	0.3
DEVILC	1.4	1.0	0.7	0.5	0.4
D065027	0.1	0.1	0.1	0.0	0.0
D064026	0.1	0.1	0.0	0.0	0.0
BLUELK	3.2	2.3	1.8	1.3	1.0
D062023	0.0	0.0	0.0	0.0	0.0
D061023	0.0	0.0	0.0	0.0	0.0
D059022	0.0	0.0	0.0	0.0	0.0
D059021	0.0	0.0	0.0	0.0	0.0
ELISON	0.0	0.0	0.0	0.0	0.0
D058020	0.0	0.0	0.0	0.0	0.0
D057020	0.0	0.0	0.0	0.0	0.0
CRYSTAL	4.5	3.5	2.8	2.2	1.7
NIAGARA	3.0	2.4	1.9	1.5	1.2
D051014	0.0	0.0	0.0	0.0	0.0
D050014	0.0	0.0	0.0	0.0	0.0
CLEARLK	3.8	3.1	2.4	1.9	1.5
BRIGGS	0.1	0.1	0.1	0.1	0.0
BANBURY	0.3	0.2	0.2	0.1	0.1
D047011	0.0	0.0	0.0	0.0	0.0
BOX	6.3	5.0	4.0	3.1	2.5
SAND	1.7	1.3	1.1	0.8	0.7
D045011	0.0	0.0	0.0	0.0	0.0
D045012	0.0	0.0	0.0	0.0	0.0
THOUSAND	4.4	3.5	2.8	2.2	1.7
NTLFSHH	1.0	0.8	0.6	0.5	0.4
TUCKER	0.1	0.1	0.1	0.0	0.0
RANGEN	1.6	1.2	1.0	0.8	0.6
THREESP	1.1	0.9	0.7	0.6	0.4
D040013	0.0	0.0	0.0	0.0	0.0
D040014	0.1	0.1	0.0	0.0	0.0
BIGSP	0.6	0.5	0.4	0.3	0.2
D038014	0.1	0.1	0.1	0.0	0.0
D037014	0.0	0.0	0.0	0.0	0.0
BIRCH	0.0	0.0	0.0	0.0	0.0
D036014	0.0	0.0	0.0	0.0	0.0
MALAD	3.3	2.6	2.1	1.7	1.3
D035014	0.0	0.0	0.0	0.0	0.0
D034014	0.1	0.1	0.1	0.1	0.0
D033013	0.0	0.0	0.0	0.0	0.0
D033014	0.0	0.0	0.0	0.0	0.0
D032013	0.0	0.0	0.0	0.0	0.0
D032014	0.0	0.0	0.0	0.0	0.0
D031013	0.0	0.0	0.0	0.0	0.0
D031014	0.0	0.0	0.0	0.0	0.0
D030013	0.0	0.0	0.0	0.0	0.0
BANCROFT	0.0	0.0	0.0	0.0	0.0
Kimberly to Buhl springs	13.3	10.3	7.9	6.1	4.7
Buhl to Lower Salmon Falls springs	21.4	17.1	13.6	10.7	8.4
Lower Salmon Falls to King Hill springs	3.5	2.9	2.3	1.8	1.5
Kimberly to Buhl baseflow	1.6	1.2	0.9	0.6	0.5
Buhl to Lower Salmon Falls baseflow	0.6	0.4	0.4	0.3	0.2
Lower Salmon Falls to King Hill baseflow	0.3	0.2	0.2	0.1	0.1
Total baseflow	**2.4**	**1.8**	**1.4**	**1.1**	**0.8**
Total Kimberly to King Hill	**40.6**	**32.1**	**25.2**	**19.6**	**15.4**
Sum of Box Canyon, Devil's Washbowl, Devil's Corral, and baseflow	**11.1**	**8.6**	**6.6**	**5.1**	**4.0**

EXPLANATORY INFORMATION TO ACCOMPANY A FINAL ORDER

(Required by Rule of Procedure 740.02)

The accompanying order is a "**Final Order**" issued by the department pursuant to section 67-5246 or 67-5247, Idaho Code.

Section 67-5246 provides as follows:

(1) If the presiding officer is the agency head, the presiding officer shall issue a final order.

(2) If the presiding officer issued a recommended order, the agency head shall issue a final order following review of that recommended order.

(3) If the presiding officer issued a preliminary order, that order becomes a final order unless it is reviewed as required in section 67-5245, Idaho Code. If the preliminary order is reviewed, the agency head shall issue a final order.

(4) Unless otherwise provided by statute or rule, any party may file a petition for reconsideration of any order issued by the agency head within fourteen (14) days of the service date of that order. The agency head shall issue a written order disposing of the petition. The petition is deemed denied if the agency head does not dispose of it within twenty-one (21) days after the filing of the petition.

(5) Unless a different date is stated in a final order, the order is effective fourteen (14) days after its service date if a party has not filed a petition for reconsideration. If a party has filed a petition for reconsideration with the agency head, the final order becomes effective when:

(a) The petition for reconsideration is disposed of; or
(b) The petition is deemed denied because the agency head did not dispose of the petition within twenty-one (21) days.

(6) A party may not be required to comply with a final order unless the party has been served with or has actual knowledge of the order. If the order is mailed to the last known address of a party, the service is deemed to be sufficient.

(7) A non-party shall not be required to comply with a final order unless the agency has made the order available for public inspection or the nonparty has actual knowledge of the order.

(8) The provisions of this section do not preclude an agency from taking immediate

action to protect the public interest in accordance with the provisions of section 67-5247, Idaho Code.

PETITION FOR RECONSIDERATION

Any party may file a petition for reconsideration of a final order within fourteen (14) days of the service date of this order as shown on the certificate of service. **Note: the petition must be received by the Department within this fourteen (14) day period.** The department will act on a petition for reconsideration within twenty-one (21) days of its receipt, or the petition will be considered denied by operation of law. See section 67-5246(4) Idaho Code.

APPEAL OF FINAL ORDER TO DISTRICT COURT

Pursuant to sections 67-5270 and 67-5272, Idaho Code, any party aggrieved by a final order or orders previously issued in a matter before the department may appeal the final order and all previously issued orders in the matter to district court by filing a petition in the district court of the county in which:

i. A hearing was held,
ii. The final agency action was taken,
iii. The party seeking review of the order resides, or
iv. The real property or personal property that was the subject of the agency action is located.

The appeal must be filed within twenty-eight (28) days: a) of the service date of the final order, b) the service date of an order denying petition for reconsideration, or c) the failure within twenty-one (21) days to grant or deny a petition for reconsideration, whichever is later. See section 67-5273, Idaho Code. The filing of an appeal to district court does not in itself stay the effectiveness or enforcement of the order under appeal.