

**BEFORE THE DEPARTMENT OF WATER RESOURCES
OF THE STATE OF IDAHO**

IN THE MATTER OF APPLICATIONS FOR)	ORDER GRANTING PETITION FOR
PERMIT NOS. 63-34079 AND 63-34080)	RECONSIDERATION; AMENDED
IN THE NAME OF CHRIS EMMERT)	PRELIMINARY ORDER REJECTING
_____)	APPLICATIONS FOR PERMIT

On June 19, 2017, the Hearing Officer issued a *Preliminary Order Approving Applications for Permit* ("Preliminary Order") pursuant to Rule 730 of the Department's Rules of Procedure (IDAPA 37.01.01). The Department mailed the Preliminary Order to the parties on June 19, 2017. On June 30, 2017, the Department received *Boise Project Board of Control's Petition for Reconsideration of Preliminary Order Approving Applications for Permit* ("Petition"). Pursuant to Rules 300 and 730.02.a of the Department's Rules of Procedure, the petitions was filed timely. On July 14, 2017, the Department received *Applicant's Opposition to Reconsideration*. The Hearing Officer grants the Petition and orders as follows:

ISSUES FOR RECONSIDERATION

In the Petition, the Boise Project Board of Control ("Boise Project") asks the Hearing Officer to "reconsider his rejection of the expert analysis supplied by R. D. Schmidt concerning the impacts on the canal depletions where the canals are in direct contact with the groundwater table...." *Petition* at 1. The Boise Project also asks the Hearing Officer to reconsider his "heavy reliance on the testimony of Terry Scanlan concerning Mr. Scanlan's visual inspection of the canals sometime in April, 2017." *Petition* at 1. Finally, the Boise Project states that if it had been aware that Scanlan "intended to offer an opinion concerning the interconnection between the canals and the ground water", it "would have been better prepared" to provide information about percent seepage losses from its canals. *Petition* at 6.

Schmidt's Expert Analysis

Robert D. Schmidt ("Schmidt") testified as an expert witness against Applications for Permit Nos. 63-34079 and 63-34080 ("Applications"). Schmidt's testimony, including his expert report (Exhibit 110), focused primarily on his ground water modeling to show the hydraulic connectivity between the Boise Project's water storage and delivery system and the regional aquifer. For accuracy, such modeling requires characterization of the vertical and horizontal movement of water through the geologic strata. The Boise Project seeks reconsideration of the Hearing Officer's statement in Finding of Fact no. 22 that Schmidt's "[t]wo dimensional AEM modeling is not suitable for such three-dimensional complexities." To support its request, the Boise Project summarizes the relative merits of Schmidt's ground water modeling compared to the Treasure Valley Hydrologic Project ("TVHP") ground water model employed by Christian Petrich ("Petrich"), who testified as an expert witness in favor of the Applications. The Petition states, "[T]he TVHP model is incapable of making any prediction whatsoever as to whether the new pumping would or would not affect an increase in canal seepage in the model area." *Petition* at 2.

The Boise Project's Petition assumes Finding of Fact no. 22 is based on a similar point-for-point analysis of the ground water modeling. However, in reaching the findings stated in Finding of Fact no. 22, the Hearing Officer did not rely on a direct comparison of the Schmidt and Petrich modeling. Instead, Finding of Fact no. 22 relies on Petrich's oral testimony explaining why, in his expert opinion, he is skeptical of Schmidt's conclusion that increased pumping from the regional aquifer south of Lake Lowell will induce additional seepage from the canals used by the Boise Project to deliver water. Petrich is skeptical that Schmidt's ground water modeling accurately accounts for the influence of the low-permeability sedimentary layers prevalent in the geology south of Lake Lowell. Petrich thinks the low-permeability sedimentary layers make it unlikely that the ground water pumping proposed in the Applications will affect the Boise Project's canals. The Hearing Officer found Petrich's testimony to be well-reasoned, compelling, and supportive of the conclusion that Emmert's proposed ground water pumping is unlikely to affect the water in the Boise Project's canals. That being said, the last sentence of Finding of Fact no. 22 about the suitability of two-dimensional AEM modeling for three-dimensional complexities is overly broad for the narrow subject of the finding and is not necessary for the finding. Therefore, the Hearing Officer will remove the sentence, "Two-dimensional AEM modeling is not suitable for such three-dimensional complexities." The Hearing Officer will also modify Conclusion of Law no. 2 to refer to Petrich's testimony.

Scanlan's Testimony

Terry Scanlan ("Scanlan") testified as an expert witness in support of the Applications. Scanlan's testimony focused mainly on the hydraulic connectivity between the Boise Project's delivery canals and the regional aquifer. The Boise Project objects to the Hearing Officer's reliance on Scanlan's testimony about "his site visit to observe the canals in the vicinity of the locations identified by Mr. Schmidt as being hydraulically connected to the ground water, and his statements concerning viewing Google Earth images." *Petition* at 5. The Boise Project alleges this testimony "had never before been disclosed as a subject on which [Scanlan] intended to testify." *Id.* The Boise Project argues Emmert violated Idaho Rule of Civil Procedure 26 ("IRCP 26") which imposes a continuing duty to supplement discovery responses. *Id.*

IRCP 26(e) states:

(2) Expert Witnesses. A party must supplement in a timely manner the identity of each person expected to be called as an expert witness at trial, the subject matter on which the person is expected to testify, and the substance of the person's testimony.

Boise Project asserts Emmert's disclosure in the *Applicant's First Supplemental Response to Boise Project Board of Control's First Discovery Requests* ("Response"), included as Attachment A to the Petition, was inadequate notice of the subject and substance of Scanlan's testimony. The Response states:

Terry Scanlan and Christian Petrich have developed additional opinions following their Review of Robert D. Schmidt's report entitled *Conjunctive Hydrologic*

Modeling Analysis of Proposed New Groundwater Pumping in the Boise Basin
South of Lake Lowell (Appl. 63-84079 and 63-84084) [sic]:

1. Groundwater pumping likely has not resulted in an increase of 40,000 AF/yr losses from the Mora Canal. The reasons for this are: a) the inferred correlation between groundwater pumping and canal losses does not prove causation; b) induced losses can only occur in reaches of the canal that are in direct hydraulic connection with [the] regional aquifer; c) most of the Mora Canal is not in direct hydraulic connection with the regional aquifer; d) the claimed losses, if induced by groundwater pumping, likely would have coincided with substantial groundwater-level declines in the immediate vicinity of the canal – declines which are not apparent in the historical record.

From the statement in the Response, the Boise Project knew or should have known that Scanlan would testify about the connectivity between the canals and the regional aquifer. The Response is clear that the subject matter of Scanlan's testimony would be the correlation between groundwater pumping and canal losses and that the substance of his testimony would be that there is no correlation between groundwater pumping and canal losses. IRCP 26(e) does not support the Boise Project's argument that Emmert was required to supplement the Response with additional information prior to presenting the testimony at issue.

Moreover, Scanlan's conclusion regarding connectivity was not based exclusively on his site visit and his review of Google Earth images. Scanlan's conclusion was also based on his observations over his 30-year professional experience of investigating and measuring vertical hydraulic gradients on well-drilling projects south of Lake Lowell and on a review of publicly available well driller's reports showing static water levels south of Lake Lowell. The Hearing Officer's conclusion regarding connectivity is supported by this testimony alone, independent of the site visit and Google Earth images testimony. So even if the Hearing Officer were to exclude the site visit and Google Earth images testimony as the Boise Project suggests, the conclusion would be the same. The Hearing officer will modify Finding of Fact no. 21 to bolster this point.

Canal Seepage Losses

Finally, the Boise Project challenges the Hearing Officer's statement in Conclusion of Law no. 6 that the Hearing Officer will not "add an arbitrary volume to the mitigation requirement to account for canal losses, ..." *Petition* at 6. Conclusion of Law no. 6 addresses the potential for Emmert to mitigate for the likely impacts of his proposed ground water pumping on the Boise Project's storage of water in Lake Lowell. The amount of mitigation is dependent on the conclusion that seepage from the canals occurs but is not induced by ground water pumping. The Hearing Officer has re-evaluated Conclusion of Law no. 6. The Hearing officer still finds that seepage losses must be overcome to show the proposed ground water diversions will not reduce the amount of water beneficially used by the Boise Project under its existing water rights. However, the Hearing Officer erred in his approach. Emmert bears the ultimate burden of persuasion regarding the potential for his proposed diversions to cause injury to other water right holders. By not providing sufficient information to establish a satisfactory mitigation requirement pursuant to Rule 45.01.a.iv of the Water Appropriation Rules (IDAPA 37.03.08),

Emmert has not met his burden of persuasion regarding the requirements of Rule 45.01.a.i of the Water Appropriation Rules. The Hearing Officer will revise Conclusion of Law no. 6. Because Emmert has not met the burden of persuasion for Rule 45.01.a.i, the Hearing Officer will also modify the Order to reject the Applications.

AMENDED PRELIMINARY ORDER REJECTING APPLICATIONS FOR PERMIT

The following is the Department's revised preliminary order in the matter of Applications for Permit Nos. 63-34079 and 63-34080 in the name of Chris Emmert.

STATEMENT OF THE CASE

On May 8, 2015, Chris Emmert ("Emmert") filed Applications for Permit Nos. 63-34079 and 63-34080 ("Applications") with the Idaho Department of Water Resources ("Department"). The Applications seek supplemental supplies of ground water to irrigate farmland in Canyon County approximately five miles southeast of Lake Lowell.

The Department published notice of the Applications as required by Idaho Code § 42-203A.

The Boise Project Board of Control ("Boise Project") protested both Applications on October 22, 2015. In both protests, the Boise Project stated:

Protestant is concerned about the cumulative effects that groundwater withdrawals in the Lake Lowell vicinity may have[,] adversely affecting its senior water rights in Lake Lowell, and therefore submits this Protest. Further, the location and proposed depth of the applicant's well will most likely directly withdraw water from Lake Lowell.

PROCEDURAL HISTORY

On April 6, 2017, the Department conducted a hearing on the Applications. Attorney John Marshall of John Marshall Law PLLC represented the Applicant. Attorney Shelley Davis of Barker, Rosholt & Simpson LLP represented the Boise Project. Emmert, Christian Petrich ("Petrich"), and Terry Scanlan ("Scanlan") testified in support of the Applications. Robert D. Schmidt ("Schmidt") and Tim Page ("Page") testified against the Applications.

On April 24, 2017, the Department received *Applicant's Closing Arguments* and *Boise Project Board of Control's Post-Hearing Closing Argument*.

Based on careful consideration of the administrative record, including the application file and evidence and testimony presented at the hearing, the Hearing Officer finds, concludes, and orders as follows:

FINDINGS OF FACT

Emmert's Farming Practices

1. Emmert farms about 800 acres of land in southern Canyon County in Idaho. Of the 800 acres of land, Emmert owns about 400 acres. Emmert grows specialty seed crops such as onion seed and carrot seed. Such seed crops are dependent on a sufficient supply of water throughout the irrigation season. Because seed crops are planted at shallow depths to ensure proper germination, Emmert may need irrigation water early in the irrigation season to ensure sufficient soil moisture near the ground surface. During the growing season, Emmert needs sufficient irrigation water to overcome the precipitation deficit for his crops. Finally, growing seed crops requires irrigation water late in the irrigation season so that each plant will produce a quality seed that germinates when planted. Without sufficient irrigation water early and late in the irrigation season, Emmert's seed crops could fail. Testimony of Emmert.
2. Emmert's seed crops require approximately 4.0 acre-feet ("AF") of water per irrigated acre each year. Exhibit 1; Testimony of Scanlan.
3. Emmert currently relies mostly on surface water provided by the Boise-Kuna Irrigation District via the Boise Project for his irrigation supply. However, Emmert does not receive the same quantity of surface water each year. Emmert's annual allotment is usually in the range of 2.5 AF per acre to 3.5 AF per acre. Testimony of Emmert; Testimony of Page. From 2010 through 2016, the Boise Project supplied Emmert a high of 4.00 AF per acre in 2012 and a low of 2.59 AF per acre in 2013. Exhibit 109. When Emmert exceeds the Boise Project's maximum allowance of 3.75 AF per acre in a given year, he pays substantially more for the amount of water in excess of 3.75 AF per acre. Testimony of Emmert; Testimony of Page.
4. To compensate for the difference between the water needs of his crops and his annual allotment, Emmert employs various strategies. On those lands where Emmert has supplemental ground water rights, he mixes ground water with surface water early in the irrigation season until his annual surface water allotment is firmed up, then he irrigates exclusively with surface water for as long as he can. In some years, Emmert idles some farmland so he can concentrate the available water on the rest of his land. In other years, Emmert pays extra to rent water through the Water District 63 Rental Pool. Finally, Emmert sometimes pays extra to exceed the Boise Project's maximum allowance of 3.75 AF per acre. When Emmert employs these methods to compensate for the water needs of his crops, they have a negative financial impact on his business operations. Testimony of Emmert.
5. Emmert signs contracts in February or March each year to deliver seed crops at the end of the year. Emmert must often sign contracts before knowing how much surface water will be available to him for irrigation that year. Testimony of Emmert.

The Applications

6. Application No. 63-34079 proposes the diversion of 1.9 cfs of ground water from a well in the SW $\frac{1}{4}$ NE $\frac{1}{4}$, Section 35, Township 2 North, Range 1 East, B.M., for supplemental irrigation of 95 acres of land in the NE $\frac{1}{4}$, Section 35, Township 2 North, Range 1 East, B.M. The proposed well would be approximately 225 feet deep.
7. Application No. 63-34080 proposes the diversion of 1.46 cfs of ground water from a well in the SW $\frac{1}{4}$ NW $\frac{1}{4}$, Section 1, Township 1 North, Range 2 West, B.M., for supplemental irrigation of 73 acres of land in the NW $\frac{1}{4}$, Section 1, Township 1 North, Range 2 West, B.M. The proposed well would be approximately 225 feet deep.
8. Emmert would need to divert 668 AF of ground water to provide 4.0 AF per acre to his entire proposed place of use for the two Applications. However, Emmert stated in each Application that its purpose is “to supplement” the available surface water supply. In most years, Emmert would divert between 24 AF and 133 AF for Application 63-34079 and between 18 AF and 102 AF for Application 63-34080 to ensure he has a water supply at the times and in the quantities necessary to complete his seed crops. The total likely diversion for the two Applications combined is between 42 AF and 235 AF annually. Exhibit 1; Testimony of Scanlan; Testimony of Petrich.

The Boise Project

9. The Boise Project is the operations and maintenance entity supplying irrigation water from the Boise River and reservoirs on the Boise River to land in five irrigation districts: Big Bend, Boise-Kuna, Wilder, Nampa-Meridian, and New York. To serve approximately 47,000 to 50,000 acres within four of those irrigation districts, the Boise Project conveys water from the Boise River to Lake Lowell, an off-stream reservoir in Canyon County, and redistributes the water from Lake Lowell to irrigated farmland through an extensive canal network. Testimony of Page; Testimony of Schmidt; Exhibit 110.
10. Since the 1960s the average quantity of water in Lake Lowell has declined. Exhibit 105. The decline may be attributable to several factors, including declining Boise River flows resulting from a declining average annual snowpack, increased seepage from Lake Lowell itself, and the impacts of ground water pumping. Testimony of Page.
11. The Boise Project loses water in its delivery system due to seepage from unlined canals. Testimony of Schmidt; Testimony of Page.

The Aquifer

12. The geology of southern Canyon County, south and southeast of Lake Lowell, consists of interbedded sedimentary and basalt layers. Exhibit 1; Exhibit 4. The primary sources of ground water are within the sedimentary layers, with clay layers separating water bearing zones and impeding the vertical movement of ground water. Exhibit 1; Exhibit 4; Testimony of Petrich.

13. Some ground water drawdowns were observed in the area south of Lake Lowell prior to 2004. Exhibit 106, page 32; Testimony of Petrich. Since 2004, those drawdowns have proven to be more localized and less regional than previously thought, and ground water levels have stabilized in the local areas previously showing drawdowns. Testimony of Petrich.
14. In the vicinity of Emmert's proposed points of diversion, ground water is recharged from flood irrigation practices and seepage from irrigation canals and laterals. Exhibit 1.
15. Emmert owns two wells in the SE $\frac{1}{4}$ SE $\frac{1}{4}$, Section 35, Township 2 North, Range 2 West, B.M., which is roughly midway between the points of diversion proposed in the Applications. Exhibit 1. Both wells have maintained static water levels at 90 feet below ground surface for many years. Testimony of Emmert. Other wells near the proposed points of diversion for the Applications generally show stable or rising ground water levels. Exhibit 1.
16. Petrich's analysis shows a significant number of productive wells within 0.5 miles of each of Emmert's proposed points of diversion. Exhibit 1.

Impacts of the Applications on Lake Lowell

17. Lake Lowell is in direct contact with the underlying aquifer. Exhibit 1; Exhibit 110.
18. Petrich modeled the impacts of Emmert's proposed ground water pumping on Lake Lowell using the Treasure Valley ground water flow model ("TVHP model"), which employs "three-dimensional, finite difference, USGS MODFLOW code . . . to simulate ground water flow on a regional (basin) scale." Exhibit 106 at 9. The TVHP model was calibrated to steady-state hydraulic conditions. Exhibit 1; Exhibit 106; Testimony of Petrich. The purpose of the TVHP model is "to simulate possible changes in recharge and the potential effects of regional increases in groundwater withdrawals." Exhibit 1 at 19. The TVHP model's predictions are likely to be more accurate on a regional scale than a local scale. Exhibit 106 at 16; Testimony of Petrich.
19. Using the TVHP model, Petrich simulated the impact of Emmert's proposed ground water withdrawals on Lake Lowell under steady-state conditions. Exhibit 1. Petrich's report states that regardless of the quantity of water Emmert pumps, the annual discharge of ground water into Lake Lowell will decrease by 1.3% of the volume pumped. Also regardless of the volume pumped, discharges from Lake Lowell into the ground water will increase by 1.3% of the volume pumped. Exhibit 1; Testimony of Scanlan. Applying these percentages, if Emmert were to pump the maximum predicted volume for the Applications of 235 AF annually, the volume of water in Lake Lowell would decrease by 6.1 AF. Exhibit 1.
20. Schmidt also modeled the impacts of Emmert's proposed ground water pumping on Lake Lowell under steady-state conditions. Schmidt employed the Dry Lake Area analytic element method ("AEM") model, a two-dimensional modeling technique. Exhibit 112;

Exhibit 110. Schmidt's report states that regardless of the quantity of water Emmert pumps, the annual discharge of ground water into Lake Lowell will decrease by 1.34% of the volume pumped. Also regardless of the volume pumped, discharges from Lake Lowell into the ground water will increase by 0.0074% of the volume pumped. Exhibit 110. Applying these percentages, if Emmert were to pump the maximum predicted volume for the Applications of 235 AF annually, the volume of water in Lake Lowell would decrease by 4.9 AF.

Impacts of the Applications on Canal Seepage

21. If portions of the Boise Project canals running into and from Lake Lowell were in direct contact with the underlying aquifer, as asserted by Schmidt's ground water modeling, Emmert's proposed ground water pumping would likely increase seepage from the canals. Testimony of Schmidt. In the early 1960s, ground water levels in the vicinity of some of the canals ranged from zero to 50 feet below ground surface, suggesting a direct connection between the canals and ground water at some locations. Testimony of Schmidt. Schmidt's two-dimensional modeling shows that portions of the Boise Project's canals are in direct contact with the regional aquifer. Exhibit 110; Testimony of Schmidt. Schmidt's analysis of canal seepage losses from 1967 to 1997 seems to show increased canal seepage corresponding to increases in authorized ground water pumping south of Lake Lowell after 1977. Exhibit 110 at 15; Testimony of Schmidt. However, 1997 was twenty years ago. Scanlan has professional experience evaluating hydraulic gradients for well design and construction projects south of Lake Lowell over an ongoing 30-year career as a professional geologist. Testimony of Scanlan. In Scanlan's experience, he has not found static water levels close enough to the ground surface to suggest a hydraulic connection between the regional aquifer south of Lake Lowell and the canals. Testimony of Scanlan. Moreover, when Scanlan conducted recent on-site evaluations during the non-irrigation season, he found the canal reaches identified by Schmidt as connected to the aquifer to be dry. Scanlan also found the canal reaches to be dry during the non-irrigation season in a review of aerial imagery. If the canals were in direct connection with the aquifer, ground water seeping into them would cause them to flow even during the non-irrigation season when water is not being diverted into them. Therefore, because the canals are dry, they are not in direct contact with the aquifer. Testimony of Scanlan. The weight of Scanlan's career-long and recent observations compared to Schmidt's modeling make it more likely than not that the regional aquifer south of Lake Lowell is not in hydraulic connection with the canals for any meaningful length of distance or time.
22. The likelihood that the canals are not in direct contact with the aquifer is further supported by the geology of the area. The clay layers interbedded with the water-bearing layers of basalt and sand will impede the vertical development of cones of depression caused by pumping ground water. Thus, pumping ground water from depth is not likely to impact the water flowing in canals directly. Testimony of Petrich.

Impacts of the Applications on Existing Ground Water Rights

23. Petrich found ten water right points of diversion within 0.5 miles of the proposed point of diversion for Application 63-34079. Petrich conducted a Theis analysis using reasonable

assumptions for Emmert's pumping rate, aquifer transmissivity, and aquifer storativity. The Theis analysis predicts a maximum drawdown of 2.4 feet at a distance of 0.25 miles and 2.0 feet at a distance of 0.5 miles. Exhibit 1.

24. Petrich found eight water right points of diversion within 0.5 miles of the proposed point of diversion for Application 63-34080. Petrich conducted a Theis analysis using reasonable assumptions for Emmert's pumping rate, aquifer transmissivity, and aquifer storativity. The Theis analysis predicts a maximum drawdown of 1.8 feet at a distance of 0.25 miles and 1.5 feet at a distance of 0.5 miles. Exhibit 1.

APPLICABLE RULES AND STATUTES

1. Idaho Code § 42-203A(5) directs the Department to evaluate certain criteria in connection with each application for permit to appropriate water:

In all applications whether protested or not protested, where the proposed use is such (a) that it will reduce the quantity of water under existing water rights, or (b) that the water supply itself is insufficient for the purpose for which it is sought to be appropriated, or (c) where it appears to the satisfaction of the director that such application is not made in good faith, is made for delay or speculative purposes, or (d) that the applicant has not sufficient financial resources with which to complete the work involved therein, or (e) that it will conflict with the local public interest as defined in section 42-202B, Idaho Code, or (f) that it is contrary to conservation of water resources within the state of Idaho, or (g) that it will 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; the director of the department of water resources may reject such application and refuse issuance of a permit therefor, or may partially approve and grant a permit for a smaller quantity of water than applied for, or may grant a permit upon conditions.

2. Rule 45 of the Department's Water Appropriation Rules (IDAPA 37.03.08) further interprets the review criteria established in Idaho Code § 42-203A(5).
3. Idaho Code § 42-202B(3) defines local public interest 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."
4. Pursuant to Rule 40.04.c of the Department's Water Appropriation Rules, the applicant bears the ultimate burden of persuasion regarding all the factors set forth in Idaho Code § 42-203A(5).

CONCLUSIONS OF LAW

Potential to Reduce the Quantity of Water Available to Existing Water Right Holders -- Idaho Code § 42-203A(5)(a)

1. Rule 45.01.a of the Water Appropriation Rules (IDAPA 37.03.08.045.01.a) establishes four criteria for evaluating whether a proposed use will reduce the quantity of water under existing water rights:
 - i. The amount of water available under an existing water right will be reduced below the amount recorded by permit, license, decree or valid claim or the historical amount beneficially used by the water right holder under such recorded rights, whichever is less.
 - ii. The holder of an existing water right will be forced to an unreasonable effort or expense to divert his existing water right. Protection of existing groundwater rights are subject to reasonable pumping level provisions of Section 42-226, Idaho Code.
 - iii. The quality of the water available to the holder of an existing water right is made unusable for the purposes of the existing user's right, and the water cannot be restored to usable quality without unreasonable effort or expense.
 - iv. An application that would otherwise be denied because of injury to another water right may be approved upon conditions which will mitigate losses of water to the holder of an existing water right, as determined by the Director.
2. Regarding the criteria in Rule 45.01.a.i, testimony by Scanlan and Petrich discredit the Boise Project's allegation that Emmert's proposed ground water pumping would deplete the Boise Project's water supply by causing increased seepage from the canals the Boise Project uses to distribute water and by reducing the amount of water stored in Lake Lowell.
3. Still addressing the criteria in Rule 45.01.a.i, the reduction of water stored in Lake Lowell can be further divided into two categories, ground water flowing into Lake Lowell and surface water seeping from Lake Lowell. As for ground water flowing into Lake Lowell, the Boise Project's water rights authorize the storage of surface water, not ground water, in Lake Lowell. To fail the criteria established in Rule 45.01.a.i, a proposed appropriation must reduce the amount of water available "under such recorded rights." Because, the Boise Project does not have a water right for the storage of ground water in Lake Lowell, it is not entitled to the benefit of ground water flowing into Lake Lowell. Therefore, the reduction of groundwater inflow into Lake Lowell that would result from Emmert's proposed appropriations, as predicted by both Petrich and Schmidt, would not reduce the amount of surface water available to the Boise Project under its existing water rights. As for the increased seepage of surface water stored in Lake Lowell, the modeling efforts of both Petrich and Schmidt show that Emmert's proposed ground water diversions would cause the seepage volumes to increase. Because the Boise Project does not have a sufficient supply of surface water to meet all the needs of the irrigators it supplies every year, as explained in Emmert's own testimony, Emmert's proposed ground water diversions will reduce the amount of water to the Boise Project under its existing water rights below the amount historically beneficially used by the Boise Project. Emmert argues the increased seepage from Lake Lowell that would be caused by the proposed ground water diversions is "an

immeasurable impact on the lake, an impact that cannot be said to reduce the quantity of water available to existing rights.” *Applicant’s Closing Arguments* at 7. While the amount of increased seepage from Lake Lowell may be small, it is nevertheless real, quantifiable, and injurious to the Boise Project.¹

4. Regarding the criterion in Rule 45.01.a.ii, Emmert demonstrated his proposed ground water diversions will reduce the water level in the nearby wells serving as points of diversion for existing water rights by only a few feet, which is not enough to induce an unreasonable effort or expense to divert water or to exceed a reasonable pumping level for existing ground water users.
5. Regarding the criterion in Rule 45.01.a.iii, there is no evidence in the record to suggest the irrigation water uses proposed in the Applications will affect the quality of water necessary to satisfy existing water rights.
6. Regarding the criterion in Rule 45.01.a.iv, Emmert suggests in a footnote on page 7 of *Applicant’s Closing Arguments* that he could mitigate impacts of his ground water pumping on Lake Lowell by “foregoing delivery of equivalent volume of surface water.”² The Boise Project rejects the Emmert mitigation proposal on two bases. First, because surface water seeps and evaporates from Lake Lowell, foregoing delivery of an acre foot of surface water does not mean the entire acre foot of water will remain in Lake Lowell and be available to others for use. Second, mitigating by reducing the surface water deliveries to Emmert will entice him to divert more ground water to make up the difference, which will increase the mitigation required, ad infinitum. *Boise Project Board of Control’s Post-Hearing Closing Argument* at 7. As an alternative, the Boise Project suggests Emmert should mitigate by renting water from the Water Supply Bank operated by the Idaho Water Resource Board prior to the irrigation season each year and causing the rented water to be made available to the Boise Project for its use. *Boise Project Board of Control’s Post-Hearing Closing Argument* at 10. The Hearing Officer agrees with the Boise Project that mitigating by reducing the volume of surface water delivered to Emmert is not viable because it only increases Emmert’s need to pump ground water. Acquiring a supply of water sufficient to offset Emmert’s maximum likely impact on Lake Lowell of 1.3% of 235 AF (3.1 AF), as predicted by Petrich, and causing it to be made available for use by the Boise Project each year is a better mitigation option. In light of Emmert’s testimony that he already sometimes rents a water supply to augment the water he receives from the Boise Project, Emmert should be capable of renting or otherwise acquiring a supply of water for mitigation purposes. However, the information on pages 14-15 of Exhibit 112 shows the Boise Project’s conveyance canals lose large volumes of water. Because water seeps from the

¹ The Department has been consistent in its view that small impacts are injurious. See Final Order and Order Denying Exceptions, In the Matter of Application for Transfer No. 73969 in the Name of Robert Rohe, at 6 (“While the depletion of flow is small, it is still real and determinable. Moreover, simply because the injury to a water source is small, doesn’t mean the injury should not be mitigated for.”). See also, Final Order, In the Matter of Application for Transfer No. 5174 in the Name of Dennis M. Baker and No. 5175 in the Name of Huf-n-Puf Trust, at 1 (“Even if the maximum instantaneous depletion would not exceed 0.02 cfs and could not be measured using conventional methods, the hearing officer correctly concluded that such depletion would be ‘real’”).

² See also Exhibit 1, page 24, (“Depletions to Lake Lowell can be fully mitigated by delivering 2.6% of net pumping volume to Lake Lowell. The water can be provided by non-diversion of a portion of the annual surface water delivery allocated to the proposed places of use”).

New York canal on its way from the Boise River to Lake Lowell, it would require more than 3.1 acre feet of rented water to convey the 3.1 acre feet of water to Lake Lowell. Page testified the Boise Project carefully measures its water diversions and deliveries such that it could determine the canal losses between the Boise River and Lake Lowell. However, Page did not provide figures for the record that could be used to determine the percentage loss, nor did Emmert. Without information to quantify seepage losses as a percent of diversion volume, the Hearing Officer cannot determine how much mitigation water Emmert would have to provide to overcome the reduction to the amount of water beneficially used by the Boise Project pursuant to its existing water rights. Because it is Emmert's burden to show the proposed water uses will not cause injury, and Emmert has not provided the information needed to reasonably determine the volume of mitigation water that would prevent injury, it is not possible to remedy Emmert's failure regarding the requirement of Rule 45.01.a.i by imposing mitigation requirements. Therefore, the Department should reject the Applications. Because it could be possible for Emmert to devise a satisfactory mitigation plan in the future, the rejections should be without prejudice.

Sufficiency of the Water Supply -- Idaho Code § 42-203A(5)(b)

7. Rule 45.01.b of the Water Appropriation Rules establishes:

[T]he water supply will be determined to be insufficient for the proposed use if water is not available for an adequate time interval in quantities sufficient to make the project economically feasible (direct benefits to applicant must exceed direct costs to applicant), unless there are noneconomic factors that justify application approval.

8. Ground water exists in the sedimentary layers in the vicinity of the points of diversion proposed in the applications. Moreover, the ground water levels in the vicinity of the proposed points of diversion are generally stable or increasing. The ground water is available in sufficient quantity to provide a supplemental irrigation benefit to Emmert in excess of his costs over time.

9. Emmert has met his burden of persuasion regarding the sufficiency of the water supply for the proposed use.

Application is Made in Good Faith and not for Delay or Speculative Purposes -- Idaho Code § 42-203A(5)(c)

10. Rule 45.01.c.i of the Water Appropriation Rules (IDAPA 37.07.03.045.01.c.i) establishes the criterion for determining whether the application was made in good faith:

The applicant shall have legal access to the property necessary to construct and operate the proposed project, has the authority to exercise eminent domain authority to obtain such access, or in the instance of a project diverting water from or conveying water across land in state or federal ownership, has filed all applications for a right-of-way. Approval of applications involving Desert Land

Entry or Carey Act filings will not be issued until the United States Department of Interior, Bureau of Land Management has issued a notice classifying the lands suitable for entry; and

11. The Boise Project is not disputing the good faith nature of Emmert's Applications.
12. Because Emmert owns the land at the proposed point of diversion and place of use, he has the required access necessary to construct and operate the proposed project.
13. Emmert has met his burden of persuasion for an application made in good faith.

Sufficiency of the Applicant's Financial Resources -- Idaho Code § 42-203A(5)(d)

14. Rule 45.01.d.i of the Water Appropriation Rules establishes the relevant criterion for determining whether the applicant has sufficient financial resources to complete the project:

An applicant will be found to have sufficient financial resources upon a showing that it is reasonably probable that funding is or will be available for project construction or upon a financial commitment letter acceptable to the Director.

15. The Boise Project is not disputing the sufficiency of Emmert's financial resources.
16. Emmert owns about 400 acres of farmland and has operated a successful agricultural business enterprise on his land and leased land for many decades.
17. Emmert has met his burden of persuasion regarding his financial ability to complete the project.

Local Public Interest -- Idaho Code § 42-203A(5)(e)

18. Idaho Code § 42-202B(3) defines "local public interest" as "the interests that the people in the area directly affected by a proposed water use have in the effects of such water use on the public water resource." The current definition of local public interest was adopted in 2003 and supersedes the evaluation criteria set forth in Rule 45.01.e of the Water Appropriation Rules (IDAPA 37.03.08.045.01.e), which dates from 1993.
19. It is not in the public interest to authorize a new water use that would reduce the quantity of water historically used for beneficial purposes by holders of senior water rights.
20. Emmert has not met his burden of persuasion for the local public interest.

Conservation of Water Resources in Idaho -- Idaho Code § 42-203A(5)(f)

21. In 1990 the Idaho legislature implemented the conservation of water resources requirement for water appropriations. The Department's Application Processing Memorandum No. 48, which addressed the requirement, states:

The term "conservation" is not defined in the legislative intent or in the amendment. . . . Due to lack of stated legislative intent, the department will apply the criterion in terms of efficiency as is generally suggested by the term.

The requirement has been interpreted by the Department to require standards of water use efficiency so that the proposed beneficial use is accomplished while preserving as much water as possible for other benefits.

22. In southern Canyon County, the Department typically authorizes up to 4.5 AF per acre for irrigation, based on the needs of the most water consumptive crop for the area and a reasonable irrigation efficiency. Emmert grows high-value seed crops with less than 4.5 AF per acre.
23. Emmert proposes to conserve ground water resources by using only the amount needed to supplement his regular surface water supply.
24. Emmert has met his burden of persuasion regarding the conservation of water resources standard.

Effects on the Local Economy -- Idaho Code § 42-203A(5)(g)

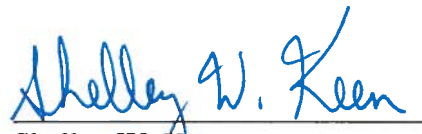
25. This criterion applies only to "out-of-basin" appropriations. It does not apply in this case.

ORDER

IT IS HEREBY ORDERED that Application for Permit No. 63-34079 is hereby **REJECTED** without prejudice, and issuance of a permit is **REFUSED**.

IT IS FURTHER HEREBY ORDERED Application for Permit No. 63-34080 is hereby **REJECTED** without prejudice, and issuance of a permit is **REFUSED**.

Dated this 21st day of July, 2017.


Shelley W. Keen
Hearing Officer

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that on this 21st day of July, 2017, true and correct copies of the *Order Granting Petition for Reconsideration; Amended Preliminary Order Rejecting Applications for Permit* were served by placing a copy of the same with the United States Postal Service, postage prepaid and properly addressed to the following:

SERVICE COPIES TO:

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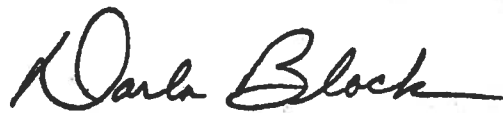
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A handwritten signature in black ink, reading "Darla Block". The signature is fluid and cursive, with a horizontal line extending from the end of the name.

Darla Block
Technical Records Specialist