ORIGINAL

Jeffrey C. Fereday [ISB No. 2719]
Michael P. Lawrence [ISB No. 7288]
GIVENS PURSLEY LLP
601 West Bannock Street
P.O. Box 2720
Boise, Idaho 83701-2720
Office: (208) 388-1200
Fax: (208) 388-1300
www.givenspursley.com
Attorneys for M3 Eagle LLC

RECEIVED
SEP 11 2009
DEPARTMENT OF
WATER RESOURCES

BEFORE THE DEPARTMENT OF WATER RESOURCES

OF THE STATE OF IDAHO

IN THE MATTER OF APPLICATION FOR PERMIT NO. 63-32573 IN THE NAME OF M3 EAGLE LLC	**M3 EAGLE'S POST-HEARING BRIEF ON THE MERITS**

TABLE OF CONTENTS

TABLE OF AUTHORITIES

Cases

Statutes

Other Authorities

Treatises

Constitutional Provisions

INTRODUCTION

This matter concerns the February 1, 2008 Second Amended Application ("Application") filed by M3 Eagle LLC ("M3 Eagle"). It requests a permit to divert up to 6,535 acre-feet of ground water annually to serve a large planned community proposed on its land in the low foothills of North Ada County ("North Ada"), about three miles north of Eagle, Idaho (the "Project"). Over the past three years, M3 Eagle's water and engineering consultants produced volumes of facts, studies, tests, and reports about the proposed plan, the municipal water system, and, especially, the hydrogeology of the principal intended water source, the Pierce Gulch Sand Aquifer ("PGSA" or "Aquifer"). These studies, measurements, reports, and test data, were provided to the Idaho Department of Water Resources ("Department" or "IDWR") as they were produced and are in the record of this case.

The consultants, each of whom testified at the hearing, include hydrogeologist Ed Squires, President of Hydro Logic, Inc. ("Hydro Logic" or "HLI"); Dr. Spencer Wood, Boise State University Professor Emeritus of Geology and Geosciences; Mark Utting, a hydrogeologist with HLI; Richard Glanzman, President of Glanzman Geochemical LLC; Dr. James Osiensky, hydrogeology professor at the University of Idaho; Dr. Steven Holt, a principal engineer and Project Manager with T-O Engineering, Inc.; Scott Wonders, an engineer and Vice President of Stanley Consultants, Inc.; Carter Froelich, certified public accountant and Managing Principal of the Development, Planning and Financing Group, Inc.; Dr. John Church, economist and President of Idaho Economics. Bill Brownlee, M3 Eagle's Managing Partner, also testified.

M3 Eagle also obtained testimony from two other experts who are not its consultants: Roger Dittus, hydrogeologist with United Water Idaho ("United Water"); and Rob Whitney, Senior Water Resource Agent with IDWR's Western Region.

The record also includes the approximately 4,000-page court reporter's transcript of testimony,[1] and some 100 exhibits from the 16-day hearing held between April and July, 2009.

This brief reviews the applicable law and the facts adduced at the hearing relating to all relevant issues other than the question of M3 Eagle's qualification as a municipal provider; that question is addressed in a separate brief filed simultaneously herewith.

The following discussion demonstrates that M3 Eagle's Application should be granted because it fully satisfies each statutory criterion.

DISCUSSION

I. M3 EAGLE'S BURDEN IS TO PROVE ITS CASE BY A PREPONDERANCE OF THE EVIDENCE.

The Department's rules set forth the parties' burdens in a contested case, confirming that the applicant has the initial burden of coming forward with evidence, and has the ultimate burden of persuasion, concerning the five criteria in Idaho Code § 42-203A(5), the statute governing water right applications. IDAPA 37.03.08.04. Protestants are obligated to come forward with evidence relevant to the "local public interest" criterion in section 42-203A(5)(e) of which they can be expected to be more cognizant than the applicant. *Id.*

The standard of proof is a preponderance of the evidence. A preponderance is "evidence that, when weighed with that opposed to it, has more convincing force and from which results a greater probability of truth." *Harris v. Electrical Wholesale*, 141 Idaho 1, 3, 105 P.3d 267, 269 (2004), *citing Cook v. W. Field Seeds, Inc.*, 91 Idaho 675, 681, 429 P.2d 407, 413 (1967). Under this standard, the Department's findings must comport with what the evidence shows probably is true, not what possibly might be true. Even "an assertion that something is 'highly possible'

[1] The Department tape recorded the proceedings, but M3 Eagle hired M&M Court Reporting Services, Inc. ("M&M"), to attend the hearing and transcribe the live testimony. The M&M transcript, which is available to all parties from M&M, has been filed with the Hearing Officer along with a motion to designate it as the official hearing transcript in this matter. This brief cites to the M&M transcript as "Tr."

does not rise to the level necessary to establish [a fact] by a preponderance of the evidence." *Doe v. Sec'y of Health and Human Services*, 19 Cl.Ct 439, 450 (1990). "The law does not concern itself with possibilities. It rather contents itself with a preponderance of probabilities." *Hillman v. Utah Power & Light Co.*, 56 Idaho 67, 71, 51 P.2d 703, 708 (1935).

In other words, the trier of fact's decision "cannot rest on conjecture." *Dent v. Hardware Mutual Casualty Co.*, 86 Idaho 427, 434, 388 P.2d 89, 93 (1964), *quoting Splinter v. City of Nampa*, 74 Idaho 1, 10, 256 P.2d 215, 220 (1953). Where the party with the burden provides substantial credible evidence, it can be overcome only with more persuasive contrary evidence, not with speculation. *See Maryland v. Manor Real Estate & Trust Co.*, 176 F.2d 414, 418 (4th Cir. 1949) ("a preponderance of evidence may not be avoided by indulging in mere conjecture").

This case involves the testimony of several experts. As a matter of law, opinions by experts must rest on actual facts, and must describe more than "possibilities."

> Expert opinion must be based upon a proper factual foundation. Expert opinion which is speculative, conclusory, or unsubstantiated by facts in the record is of no assistance to the jury in rendering its verdict . . . . Expert opinion that merely suggests possibilities would only invite conjecture . . . .

Bromley v. Garey, 132 Idaho 807, 811, 979 P.2d 1165, 1169 (1999) (quotation marks and citations omitted; emphasis supplied).[2]

II. BY A PREPONDERANCE OF THE EVIDENCE, M3 EAGLE CLEARLY HAS MET ITS BURDEN ON EVERY STATUTORY ELEMENT.

IDWR has discretion to approve an application in whole, in part, or with conditions, but that discretion is limited to what a preponderance of facts show as to the elements in section 42-203A(5). M3 Eagle provided substantial scientific data and opinions by experts, all of it based on facts, showing it satisfies each of the statutory criteria. Testimony from Protestants' sole

[2] *Bromley* concerned the admissibility of expert testimony, and thus is relevant in evaluating its weight. Testimony from Protestants' expert and Staff in the present case should be afforded little weight because it largely was speculative and unsubstantiated by facts. It also typically fell short of expressing an actual opinion.

expert (Dr. Dale Ralston) and IDWR Staff (Sean Vincent, Dennis Owsley and Michael McVay) focused on "uncertainties" and "possibilities" but was shy on actual opinions, much less expert opinions based on fact. As shown below, M3 Eagle has satisfied each element by a clear preponderance of the evidence.

A. The water supply is sufficient to support the proposed appropriation.

Idaho Code Section 42-203A(5)(b) authorizes the Department to deny or condition a permit if "the water supply itself is insufficient for the purpose for which it is sought to be appropriated." Here, the uncontroverted evidence shows that the Pierce Gulch Sand Aquifer is more than sufficient to support M3 Eagle's proposed ground water diversions of 6,535 acre-feet per year, the maximum annual amount needed by the planned community at full build-out.

Several experts testified that the PGSA is productive, robustly recharged and regionally extensive; no expert offered facts or an opinion to the contrary. More than a decade of monitoring from reliable test wells demonstrates stable, if not increasing, water levels. *See, e.g.*, Tr. pp. 534-36 (Dittus); 3338, 3251 (Squires). The testimony of Staff and Dr. Ralston consisted largely of conjecture about possible aquifer boundaries or about exact flow or recharge characteristics. But these do not alter the fact that this record establishes that the PGSA water supply is sufficient for Project purposes.

(1) The "sufficiency of supply" criterion is to be applied in the context of the constitutional policy favoring full economic development of Idaho's water resources.

Idaho's constitution and statutes advance the "policy of promoting optimum development of water resources," *Baker v. Ore-Ida Foods, Inc.*, 95 Idaho 575, 584, 513 P.2d 627, 636 (1973) (citing Idaho Const. art. XV, § 7). The Legislature has been particularly forceful on this point when it comes to new ground water appropriations:

> The traditional policy of the state of Idaho . . . is affirmed with respect to the ground water resources of this state . . . and 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. Prior appropriators of underground water shall be protected in the maintenance of reasonable ground water pumping levels as may be established by the director of water resources as provided herein.

Idaho Code § 42-226.

The Legislature plainly recognizes that any new appropriation will lower aquifer levels or pressures by some amount. The point of this statute is that such effects cannot support denial of an application unless it is proven that exercising the new right would cause actionable injury, such as violating a pumping level condition. To similar effect is the Idaho Supreme Court's decision in *American Falls Res. Dist. No. 2 v. Idaho Dept. of Water Resources*, 143 Idaho 862, 866, 154 P.3d 433, 447 (2007), which upheld IDWR rules requiring consideration, in a delivery call, of "full economic development" of ground water.

The full economic development policy is underpinned by the 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. XV, § 3.[3] An applicant is entitled to a ruling that the supply is sufficient if a preponderance of the evidence shows that unappropriated waters are available. This is true even if there is evidence that the new right would heighten the likelihood of future administration.

> Pursuant to Article XV, Sec. 3 of the Constitution of the State of Idaho, to the extent that there is water available for appropriation, the application for permit should be approved even if such approval will result in the need for additional care in the delivery of water in order to protect senior water rights.

[3] This provision applies to ground water sources. *Silkey v. Tiegs*, 5 P.2d 1049, 1053 (1931).

Memorandum Decision and Order at 7-8, *In the Matter of Application for Permit No. 65-12842 and Application for Transfer of Water Right No. 65-03104* (April 28, 1989) ("*Dovel Decision*"), *aff'd in relevant part in Dovel v. Dobson*, 122 Idaho 59, 831 P.2d 527 (1992).[4]

(2) The evidence demonstrates that there is a sufficient ground water supply for the Project.

Each expert who provided an opinion on the sufficiency issue testified that the PGSA contains adequate water to support the Project's needs. There is no contrary testimony.

Mr. Dittus testified that years of measurement in United Water's municipal wells in the Eagle area, all completed into the PGSA, show a stable aquifer despite increasing withdrawals. Tr. pp. 534-37.[5] For example, United Water's Floating Feather well, which is located near the Protestants' wells, has produced from 2,000 to 3,000 gallons per minute ("gpm") full-time since 1998, while experiencing essentially stable water levels. Tr. pp. 518-21 and Exhibit ("Ex.") 45, Fig. 15.[6] Water levels in the adjacent Miller and Vail domestic wells, which were monitored for several years specifically to determine whether Floating Feather's pumping lowered their water levels, show no discernible response. Tr. p. 527-28; Ex. 12 p. 128, Fig. 46. Mr. Vincent said he does not "have any firsthand evidence" that would contradict Mr. Dittus' testimony about the stability of water levels in Floating Feather and other area municipal wells. Tr. p. 700.

Mr. Dittus also described the PGSA monitoring wells United Water constructed in the 1990s and continues to monitor. These show a trend of stable or increasing water levels in the

---

[4] In the *Dovel Decision*, IDWR approved a new appropriation from a stream where "[d]uring most years there are periods when flows . . . exceed the existing rights and are available for diversion and use" and despite the fact that "there are periods during each irrigation season when the flow of the creek can fill only the senior irrigation water right" and not applicant's permit. *Dovel Decision* at 4 (emphasis supplied). A sufficient supply existed because "[t]here are periods of time in most years when water is available for appropriation and diversion." *Id.* at 7.

[5] United Water has 6 municipal wells in the area, together pumping about 4,500 af/yr from the PGSA. Tr. p. 516. These include Island Woods, Swift, Goddard, HP, Redwood Creek, and Floating Feather. Tr. p. 514.

[6] Significant pumping has been going on at this site for many years. Before the Floating Feather well was drilled, the Crandlemire irrigation well on the same site was completed into the PGSA "at approximately the same interval as the Floating Feather well" and was "a significant producer." Tr. p. 523-24 (Dittus).

PGSA. Ex. 45, Figs. 17 (TVHP#1) and 18 (State and Linder).[7] For example, the State and Linder monitoring well's record "shows that the area water levels in the vicinity of this well have been stable since January of 1999." Tr. p. 536 (Dittus); Ex. 45 Fig. 18.

Mr. Dittus is not a disinterested hydrogeologist, but his interest cuts against M3 Eagle: as head of United Water's Geosciences Department. He has been with United Water for 14 years, and one of this jobs is to monitor the "health of the . . . aquifers that [United Water's wells] are producing from." Tr. pp. 499, 501-02. Because he needed to understand the potential effect of M3 Eagle's pumping on United Water's wells, Tr. p. 510, Mr. Dittus "reviewed the reports that Hydro Logic has produced." Tr. p. 550. He stated that he does not "have any criticisms of their conclusions . . . . [T]hey are thorough. They are . . . rigorous, and I feel that they've increased the understanding of our aquifer system significantly." Tr. p. 550.

Mr. Dittus testified that "there is sufficient water" to serve the M3 Eagle development, Tr. p. 551, that "[i]t's my opinion that there is additional water available in that aquifer to be appropriated," Tr. p. 591, and that "[w]e don't see the aquifer in any danger of being overdrafted. We believe there is sufficient water for the [M3 Eagle] application." Tr. p. 511. Consequently, United Water did not oppose it. *Id.*[8]

The PGSA monitoring well network is extensive and appropriately constructed. Data from it supports Mr. Dittus' conclusions. For example, Mr. Squires testified that several North

[7] United Water maintains a permanent, sealed, multi-piezometer PGSA monitoring well at the State and Linder site, and it constructed the State Street Monitoring well—now known as TVHP#1—into the PGSA between west Boise and Eagle. Tr. pp. 514-15 and 780-81. "TVHP" stands for Treasure Valley Hydrologic Project, an effort begun in the 1990s to characterize the ground water aquifers in the Treasure Valley. The final TVHP Report, parts of which HLI referenced in its studies for M3 Eagle, is in the record as the multi-part Exhibit 33. United Water donated its State Street well to IDWR for use in the TVHP and beyond; hence its name.

[8] It also is noteworthy that no commercial or industrial water right holder protested the application, and that there was no opposition from any municipal provider, even though, in addition to United Water, the cities of Star, Meridian, Caldwell, and Eagle all produce from the PGSA, as does Eagle Water Company. The Protestants all are domestic and small irrigation ground water right holders in the north Eagle area, nearly all of whom produce, not from the PGSA, but from shallow overlying aquifers.

Ada permanent monitoring wells in the PGSA, including the TVHP#1, State and Linder, Swift, and Gary Lane wells (each of which he designed and supervised during construction) all:

> have the full depth seals that we talked about, so they're measuring very discrete levels of the aquifer without interference from other levels, [and] those are showing no decline, even in the face of declining precipitation over that same time period . . . [and] even under decades of pumping.

Tr. p. 1063. Mr. Squires also has designed, constructed, and tested municipal wells into the PGSA for Meridian and Caldwell, which "are some of the most productive wells we have." Tr. p. 1073, Tr. 780-81. In these wells, "we've seen no significant declines whatsoever. We haven't really seen any declines, other than what it takes to cause water to flow to the well." *Id.* In Mr. Squires' opinion, the PGSA has "water availability far in excess of the water required by the M3 Project." Tr. p. 1127.

> [T]he groundwater picture that's emerging for this area of Eagle, Star, the M3 area, is a very positive picture. . . .
>
> [I]t shows that there's a large regional aquifer that is robustly recharged, that there's very little evidence of water-level declines in response to increases in pumping. The water chemistry is very good. The water pressures are high. The aquifer is thicker than we previously thought. It's more transmissive than we previously thought. It's not dependent upon a paltry bit of recharge in the foothills above [t]own, but rather connected to a large system.
>
> And so I—I feel very good about the availability of groundwater available for this project and for the community in the foreseeable future, beyond the . . . M3 project and its proposed population.

Tr. pp. 1126-27 (Squires).

Other experts came to the same conclusions. Dr. Wood stated "All the data that I've seen thus far, including all the testimony, would indicate that groundwater supplies are available beneath the M3 site." Tr. p. 2991. Mr. Utting opined that there is "sufficient water in the Pierce Gulch Sand Aquifer to support M3 Eagle's proposed pumping at full build-out." Tr. p. 1594; *see also* Tr. pp. 1567 (Utting) (no data suggests the water supply is insufficient). When asked

whether he has seen any data suggesting there is insufficient ground water for the Project, Dr. Osiensky testified: "I have not seen any." Tr. p. 3492. He testified that "there's very little uncertainty about the amount of water that exists out in the M3 area," Tr. p. 3522, and that "the investigations completed by Hydro Logic were very thorough and they substantially—very, very substantially reduced uncertainty" on this point. Tr. pp. 3518-19.

In sum, the experts who addressed the sufficiency question—each of whom conducted scientific studies or actually is monitoring the aquifer—all testified unequivocally that there is sufficient water in the PGSA to support the application.

(3) Neither Protestants' expert nor the Staff offered an opinion that the ground water supply is insufficient.

Equally as telling as the experts' straightforward testimony that there is sufficient ground water for the Project is the fact that neither Protestants' expert nor the Staff offered an opinion to the contrary. Dr. Ralston, offered testimony and brief documentary submittals focused primarily on his belief that there is not yet enough evidence to demonstrate that the PGSA extends beyond the Boise River basin.[9] Dr. Ralston even confirmed, in an affidavit, that "the Pierce Gulch Sand Aquifer is the target water supply source for M3 Eagle water production wells" and stated his belief that "this hydrogeologic conceptual model is correct," at least in reference to the PGSA's connection to ground and surface waters in the Boise Basin.[10] But he did not address the statutory question of whether "the water supply itself is insufficient."

[9]Even this modest position was hedged and tentative, as discussed below. Dr. Ralston's other main point was whether M3 Eagle's numerical model (the "M3 Model") used boundaries that adequately characterize recharge and discharge. This second point is addressed at Section II.C(1)(a), beginning at page 48.

[10] *Affidavit of Dale R. Ralston in Support of NACGUA's Reply to M3 Eagle's Response to NACGUA's Motion for Stay, and Limited Discovery for Purposes of Settlement* at 2 (November 24, 2008). This affidavit was filed with IDWR in this matter.

In fact, when asked by Protestant Alan Smith whether he agreed with a statement from the initial Staff memo (Ex. 50, p. 20) that "water levels in the PGSA near M3 are declining and suggests that current aquifer discharge rates exceed current recharge rates," Dr. Ralston testified:

> I'm not sure that I do. . . . [M] perusal was that it didn't appear like that there were presently much in the way of water level declines out there.

Tr. p. 2317.[11] Mr. Smith tried again, asking Dr. Ralston about his having quoted (in Ralston's memo to Protestants, Exhibit 49, p. 2) Staff's statement that the "long-term sustainability of the Pierce Gulch Sand Aquifer could be limited," Dr. Ralston replied:

> What I'm doing here [in Ralston's memo, Exhibit 49] is I'm quoting from Owsley and Vincent. . . . I'm just summarizing the key points and that [] was their statement. I'm not sure I agree with that statement.

Tr. p. 2323. Upon yet further questioning, Dr. Ralston ultimately corrected Mr. Smith's version of the Staff statement:

> The sentences that we're talking about says: "In our opinion, the possibility of limited long-term sustainability for the PGSA also cannot be discounted based on current available data."
>
> Yeah, it can't be discounted, but I—I'm not sure I would have worded it exactly that same way. So, in general I agree with it, but that's not the wording I would have put in there, I don't believe.

Tr. p. 2324. Dr. Ralston did not suggest any alternative wording. We are left with his "in general" agreement with a statement that the "possibility" of an unspecified "limit" to long-term sustainability of the PGSA "cannot be discounted." In other words, all Dr. Ralston has said is that he cannot completely eliminate this possibility, whatever it might mean. Dr. Ralston's

[11] At trial, Staff itself backed away from this summary statement in Exhibit 50. Mr. McVay, who conducted the water level analysis (Attachment A to Ex. 50) testified that his water level exercise was not intended "to determine whether water-level trends are rising or falling in the Pierce Gulch Sand Aquifer," Tr. pp. 2456-57, and instead was carried out "in an attempt to try to differentiate between" the PGSA and "the upper undifferentiated aquifers" overlying it. Tr. p. 2457. See also Mr. McVay's statements describing his water level analyses in Ex. 905 at 1 ("[t]his undertaking was not intended to determine the periods of rising and declining water levels in individual wells") and at 30 ("It is important to remember that these analyses were not intended to assign a trend value to the Pierce Gulch aquifer, only to compare the wells that I was given to assess similarities and differences.").

agreeing generally with a "possibility" suggested by Staff hardly is opinion evidence on water sufficiency that can overcome the unequivocal opinions of M3 Eagle's experts and United Water's Mr. Dittus. The Staff never defined what they meant by "limited."[12]

Moreover, and in contrast with his general agreement about a staff-described "possibility," Dr. Ralston's testified that he has no reason to disagree with the conclusion by hydrogeologists Dr. Christian Petrich and Chris Duncan, in their 2007 technical report about the City of Eagle's ground water application, that "[s]ubstantial increases in groundwater withdrawals for municipal purposes in Eagle over the last 10 years have not resulted in substantial local water level declines." Tr. p. 2341-42 (referencing Ex. 133 p. 3).

(4) Whether the PGSA extends to the Payette basin, a point well supported by all available scientific data, is a contention Dr. Ralston believes lacks compelling evidence.

Dr. Ralston focused most of his comments on the other experts' conclusion, based on geology and hydraulic characteristics, that the PGSA extends to the Payette Valley. While the point is tangential to the question of water sufficiency, it is appropriate to consider here because it occupied such a prominent position in the testimony of Protestants' only expert witness.

The concept of North Ada ground water flow to the west-northwest and into the Payette Valley is not surprising in light of the area's geology. This is the structural trend of the Boise Valley, and also of the Payette Valley 15 miles to the north. The Payette is some 300 feet lower

[12] The water appropriation statute does not call for a finding on "long term sustainability," but Protestants and, arguably, the Staff seem to suggest that it does. The statute requires permit approval unless, among other factors, "the water supply itself is insufficient." Idaho Code § 42-203A(5)(b). Idaho's Constitution and statutes establish the priority system and the obligation to administer rights in times of shortage. Administration includes curtailing or allowing mitigation from junior water rights, and may involve evaluation of such things as "future natural recharge." Idaho Code § 42-237a(g). But these standards for carrying out delivery calls are not applicable in considering water right applications. Arguably, an exception to this is when IDWR designates, after finding certain facts, Critical Ground Water Areas or Ground Water Management Areas, but none of these facts is present here. *See* Idaho Code §§ 42-233a and b. In any event, the evidence here bearing on aquifer sustainability is contained in M3 Eagle's studies and expert testimony—all of which show the existence of an aquifer that is fully capable of sustaining the entire M3 Eagle project with minimal effects on other water rights.

than the Boise. Ex. 42A(4) p. 1; *see also* Tr. p. 3502 (Dr. Osiensky noting the elevation difference and "a gradient to the northwest from . . . Eagle to . . . Letha" in the Payette Valley). Still, to some, subsurface flow from one basin to the other seems counterintuitive because the valleys are separated by foothills. However, for at least 20 years geologists have noted the existence of a thick and extensive sand layer—shown in well bore geophysics, in ground water contours, and in foothill outcrop—that dips to the southwest, that is regionally extensive, and that exists beneath (and in some areas even comprises) these same foothills. This layer is the "Pierce Gulch Sand," from which the Aquifer derives its name. *See, e.g.*, Ex. 68.[13] The evidence shows the PGSA is a conduit for ground water under the foothills connecting the Boise, Payette, and, ultimately, Snake River basins.

The Pierce Gulch Sand was laid down as shoreline sands (reworked deltaic deposits and fluvial sediments) associated with prehistoric Lake Idaho, a water body of gargantuan dimensions that extended to the Owyhees on the south, well up the flanks of the Boise Mountains on the north, and into what became the Payette drainage to the northwest. Ex. 19G pp. 104-05, Figs. 1 and 2. As the lake receded, these sands, lying on the sloping lakebed, were exposed to fluvial action by rivers and streams that further spread them into a regionally-extensive sheet (and added yet more sands). This is the origin of the PGSA and a basis for HLI's conceptual model.

The TVHP study was designed to evaluate only the Boise Valley ground water system, so its numerical model established its ground water divide (the model boundary) at the foothills

[13] The Aquifer is a plane that reaches from the Boise Valley across to the Snake (on the west) and the Payette Valley (on the northwest), but it lies on a slant—a "dip" in geological terms—that rises to the northeast. *See, e.g.*, Tr. p. 2392 (Owsley). Its rise to the surface in the northeast eventually brings it above its own saturated zone and causes it to outcrop in the North Ada foothills, where it also is eroded away in several areas (and stands out in thick formations in others). The "green line," so called because HLI marked it in green on conceptual maps (Ex. 42A, Figs. 4 and 6), traces the approximate location where the bottom of the Aquifer is projected up-dip and breaks ground surface in the foothills. The green line, therefore, represents the Aquifer's boundary, its northern edge.

north of Eagle, thus preventing—for modeling purposes—any ground water in the Boise basin from moving to the lower elevation Payette Valley. Ex. 33A. This proved to be incorrect. Tr. pp. 980-81 (Wood) and 1520-21 (Utting). But the point here is that an aquifer assumed to be confined to the Boise River surface drainage would be smaller than one extending further, beneath the foothills and toward the northwest. The water budget for the more extensive aquifer is larger than the TVHP model assumed. In other words, the hydrogeological evidence that the PGSA extends to the Payette Valley and the Snake also is evidence—on top of the proof of large production with little or no drawdowns—that the PGSA is a very large resource.

Dr. Ralston does not question that the PGSA is a dipping aquifer or that it extends at least from the M3 Eagle area back through west Boise. Tr. p. 2260-61.[14] He does not question its productivity or the geological processes by which it was formed. However, he testified that he has not seen what he would consider "compelling" evidence that it extends to the Payette. But Dr. Ralston took no measurements, mapped no geology, interpreted no geophysical logs, ran no aquifer tests.[15] While he did put two ground water level contour lines on an HLI-produced map, he "did not independently evaluate" whether ground water levels are lower in the Payette Valley than those in the vicinity of M3 Eagle. Tr. p. 2267. He is unfamiliar with the pumping history and current water level status of any of the wells in the area, such as Floating Feather well. Tr. p. 2276-77. He has no prior experience studying or working with North Ada hydrogeology. Tr. p. 2260. His memoranda to his Protestant clients (Exhibits 46-49), stress the flow to the Payette

[14] Dr. Ralston also testified that HLI's "data collection efforts that they've done and the well construction efforts have been very good and I applaud them," Tr. p. 2248-49, and that HLI had provided "sufficient information" to show that west Boise wells were in the PGSA, and that this was "good work" by HLI. Tr. p. 2220. He agreed that the aquifer water level contours provided by HLI (in Exhibit 42A(4), Fig. 6) "in the area south, more or less upgradient from the M3 Eagle area, pretty well fit the data and make a reasonable amount of sense." Tr. p. 2231.

[15] In response to the question whether Staff or Dr. Ralston "conducted any actual scientific analysis," Dr. Osiensky testified "Dr. Ralston did—he brought in more of an illustration than analysis. But he put a couple contour lines on a map to illustrate that there is potential for water flow in one direction or another." Tr. p. 3517.

issue but do not mention the geophysical logs from the deep wells to the west and northwest of M3 Eagle about which Dr. Wood testified (Tr. pp. 976-77, Exs. 33O-33R and 45 Figs. 3 & 4) that provide just the type of additional data Dr. Ralston said he would prefer to see.

Still, Dr. Ralston agreed with many things about M3 Eagle's case. He agreed there is "reasonable geologic, hydrologic basis for [the green] line [depicting the PGSA's outcrop on its northeast boundary] within the M3 Eagle property and perhaps a mile or so to the west" of it. Tr. p. 2221. He did not dispute the fact that all available water levels to the west and northwest support the flow toward the Payette and Snake Rivers. Tr. pp. 2267-68. He does not deny that the Aquifer may reach into the Payette Valley, Tr. p. 2234, and knows of "no evidence that it does not flow in that direction." Tr. p. 2263. He confirmed that the Pierce Gulch sands "could be spread" from the Project area across to what is now the Payette drainage. Tr. p. 2287. He agreed that the water level response in the much-discussed Big Gulch Stock well resulting from the SVR7 aquifer test plotted on the same curve as other test wells in the PGSA and "is the drawdown that you would anticipate" from wells in the same aquifer. Tr. p. 2334-35.[16] When asked his opinion about "the completeness and accuracy of the M3 information provided in various HLI reports," Dr. Ralston said "the well construction, the actual numbers and all of that I have reasonable confidence, very good confidence in. The disagreement, if there is one, comes from the interpretation of those," and specifically the interpretation that "the aquifer was laterally extensive from M3 Eagle to Payette." Tr. pp. 2313-14.

Dr. Ralston's complaint was "the farther west you go . . . there are relatively few wells upon which to base" the depiction of the Aquifer to the west-northwest. Tr. p. 2231. From this, he concluded that he "couldn't see compelling evidence that the Pierce Gulch Sand Aquifer

[16] See footnote 31 and accompanying text for more discussion of the Big Gulch Stock Well drawdown during the SVR7 Aquifer Test.

continued on to the northwest on over toward the Payette River." Tr. p. 2234. In other words, instead of testifying to what the evidence shows probably is true on this point, Dr. Ralston testified about what possibly is true, and suggested that the standard he is looking for is "compelling" evidence, not a preponderance as required by our Supreme Court.[17]

Despite these hesitations, and in seeming contradiction of his own testimony, Dr. Ralston did—in the one instance he worked with actual data to analyze aquifer properties—draw his own contour lines of PGSA flow on HLI's ground water contour map. The Ralston contours depict PGSA ground water flowing west-northwest past the M3 Eagle site and toward the Payette Valley and Snake River, but a few degrees more westerly than shown on HLI's contour map. Exhibit 47, Fig. 9.[18] In other words, Dr. Ralston's contours, plotted from a few of HLI's water level measurements, do not differ materially from HLI's, which were plotted from many more.[19]

To sum it up, Dr. Ralston stated he has seen no compelling evidence of the PGSA extending to the Payette, but he failed to give an opinion that it is more probable than not that the PGSA terminates anywhere in the Boise basin, or even at the point "a mile or so to the west" of M3 Eagle, where he acknowledges it to exist. Nor did he attempt to connect his contention to the issue of whether there is sufficient water for the Project.

---

[17] The record contains many examples of this, such as when Mr. Thornton asked Dr. Ralston whether "[i]t it is also possible that there could be . . . some fault or some other impediment to flow towards the Payette River that we don't know about yet?" to which Dr. Ralston answered, "It's possible." Tr. pp. 2327-28.

[18] M3 Eagle's evidence concerning ground water flow direction is that it flows to the west and to the west-northwest in the vicinity of the Project, and discharges into the drainage basins of the Boise, the Snake, and the Payette Rivers. Tr. pp. 1234-35 (Squires). Dr. Ralston's contours are consistent with this scientific conclusion.

[19] Dr. Ralston commented that his contour lines are "quite different" from HLI's contours in this area because, he asserts, his describe ground water flow that "doesn't swing quite as far north." Tr. p. 2268. "Quite different" would appear to be an overstatement, since both sets of contours trend to the west-northwest. While "[not] quite as far north" is supportable, this hardly describes a significant difference. A more accurate description of Ralston's contours compared to HLI's might be "strikingly similar." In any case, Dr. Ralston's contour map hardly raises significant uncertainty on this subject, especially not where the Payette Valley is at a lower elevation than the Boise, ground water flows from higher head to lower head, and measured water levels are lower in the Payette Valley than in the Boise Valley. Tr. p. 866 (Squires).

These comments did not hold up well with the other hydrogeologists. Mr. Owsley stated that Ralston's contours show that "generally, the flow direction's to the west-northwest," and that he does not "have any reason to disagree with that." Tr. p. 2444.[20] Mr. Vincent testified "that it looked, based on available data that was presented to us, that the flow was primarily west on M3 property, and then it turned northwest." Tr. p. 698.

When asked if he agrees with Dr. Ralston's view "that there is inadequate data to support the theory of ground water flow toward the Payette Valley," Dr. Osiensky testified:

> No. No. I believe that there's plenty of information to suggest that the water is flowing in the direction that the conceptual model says it is . . . .
>
> Based on all the data that have been collected to date, the conceptual model makes perfect sense, in my opinion, and it does indicate that groundwater is flowing to the northwest.

Tr. pp. 3498-99. Dr. Osiensky (like M3 Eagle's other hydrogeology witnesses) has studied Ada County hydrogeology and co-authored a scientific report on it. Ex. 67. He and his master's degree student, Stacy Douglas, measured aquifer levels as part of constructing their own North Ada ground water model (the "U of I Model," Ex. 41) and independently concluded that ground water flows from the Boise basin to the Payette basin. Tr. pp. 3500-03.[21]

Mr. Utting described the U of I Model as "an independent confirmation of the groundwater flow from portions of the Boise Basin to portions of the Payette Basin, which of course was shown on previous USGS studies too." Tr. p. 1588.[22] Mr. Dittus likewise concluded,

---

[20] Mr. Owsley answered, "I do not believe so, no" to Protestant Thornton's question whether the flow lines depicted on Mr. Ralston's Figure 9 (Ex. 47) "show a high degree of certainty for the direction of flow." Tr. p. 2447. However, even if the standard of proof in this case were "a high degree of certainty" (and it is not), the fact remains that Dr. Ralston's own aquifer surface contours corroborate HLI's more detailed contours using many more data points (Ex. 18, Fig. 1). Neither Mr. Owsley nor other Staff members attempted to plot the Aquifer's contours.

[21] In fact, once they concluded that ground water flows toward the Payette in North Ada, they reported this to Mr. Squires with the assumption that this would be a surprise to him. Tr. p. 3502 (Osiensky).

[22] The USGS studies to which Mr. Utting was referring are in the record as Exhibits 29 (Newton 1991), 31 (USGS 1980), and 45 App. A, Fig. 1 (USGS 1988). Mr. Utting also mentions Exhibits 29 and 31 in describing the various items of "hard evidence" showing ground water flow toward the Payette Valley. Tr. p. 1633. In suggesting

"based on the information that is available, and based on the aquifer geometry, . . . as you begin to go west of the M3 property, [ground water flow] begins to go toward the north." Tr. p. 559.[23] Dr. Wood stated that the PGSA "does extend into the Payette River Valley. There's no question about it." Tr. p. 981.

Mr. Squires testified that "there's a gradient" from the Boise Valley to the Payette Valley, "100% for sure. There's no doubt about that." Tr. p. 1234. Dr. Ralston agreed that ground water will flow in that direction if the sands continue there and ground water elevations are lower in the Payette basin than in the Boise. Tr. p. 2267-68.[24] The preponderance of the evidence (including Dr. Ralston's contours) is that the PGSA extends to the Payette Valley.

It also is telling that the flow to the Payette is one of the few points Dr. Ralston chose to discuss in his memos. It is true that the flow toward the Payette means that ground water drawdowns from Project pumping would propagate, not just to the south and southeast, but also to the northwest where there are very few wells. Tr. p. 1238 (Squires). Still, as several experts noted, whether PGSA ground water flows to the Payette Valley is not central to the statutory question of sufficiency. *See, e.g.,* Tr. pp. 1227-30 (Squires); 699 (Vincent); and 1664 (Utting). This is because, regardless, the PGSA exhibits sufficient water supply for the Project and clearly

---

there was not enough data to satisfy him on this point, Dr. Ralston did not indicate familiarity with these studies (or with an IDWR report) showing ground water flow in exactly this same west-northwest direction, a clear trend from the Boise to the Payette and Snake Rivers. When asked about Exhibits 29 and 31, Mr. Vincent said he has no evidence to contradict them. Tr. pp. 706-07.

[23] Mr. Squires' testimony and exhibits on this point are exhaustive, and will not be repeated here. It is worth noting that the M3 Model (discussed at Section II.B.2.b, below) concluded that "[p]reliminary results strongly support the conceptual model developed by HLI that ground water flows from the Boise River valley to the Payette River valley throughout the lower Boise River basin and the southern half of the proposed M3 Eagle development property." Ex. 16 at 119.

[24] Dr. Ralston also agreed that placing ground water contour lines perpendicular to the northeast no-flow boundary (the "green line") as HLI had done in its analysis, is "proper." Tr. p. 2272. He testified that, with the exception of the green line and the West Boise-Eagle Fault, the ground water contour map does not reveal "any no-flow boundaries moving up through M3." Tr. p. 2273. He agreed that the PGSA between the Boise River and M3 Eagle has "relatively high" aquifer transmissivity values, Tr. p. 2276, and that HLI "followed the kind of stepwise progress to develop its conceptual model" of the aquifer that he had described as appropriate. Tr. pp. 2251-52.

is strongly recharged. As discussed further below, recharge is robust, region-wide and originating in Boise River water.

In any event, reading it as a whole, Dr. Ralston's testimony not only fails to contradict the experts' finding that the PGSA is sufficient for this application, it supports that conclusion.

(5) The Department Staff, while suggesting the "possibility" that the aquifer "may be limited," offered no credible evidence of this and never opined that the water supply in the PGSA is insufficient for the M3 Eagle Project.

(a) The Staff presented only conjecture about the aquifer's presumed sustainability.

Rather than offering an actual opinion about ground water sufficiency, IDWR Staff offered a theoretical concern about the Aquifer's "sustainability" based on the possibility that the PGSA might be truncated by faults or somehow compartmentalized, and thus might be less productive or less strongly accepting of recharge than the testing, geophysics, geological history, geochemistry, existing ground water development, and monitoring data indicate it to be. But even on this sustainability concern, Staff's comments do not rise to the level of credible scientific opinion evidence.

Take, for example, Mr. Vincent's response to Mr. Smith's question:

> Q: Do you believe that the long-term sustainability of the aquifer beneath the M3 property is difficult to assess and that there is still some lines of evidence to suggest that it may be limited?
>
> A: I think there's room for that, yes.

Tr. p. 2204. Mr. Vincent described the Staff's concern:

> I guess when we look at the sustainability of the resource, which is the big question in my mind, the . . . number one thing for me is, we need hydraulic connection to a source of recharge. And anything that might limit that hydraulic connection is a concern to me. As a review of the water right application, that's why there was the focus on faults.

Tr. pp. 652-53. Mr. Vincent summed it up by saying, "the possibility that faulting has some sort of control on ground water flow . . . is the concern with the faults." Tr. p. 656 (Vincent). According to Mr. Vincent, the Staff's position, as set forth in the Staff Memo, Exhibit 50, is that "there are several, more or less, independent lines of evidence that . . . are offered. Nonconclusive, mind you, but suggestive that—that it's a possibility faulting is playing a role in ground water flow." Tr. p. 660.[25] He stated that these "lines of evidence":

> are suggestive that there may be faulting in the PGSA. But . . . we don't know, and I don't claim to know, whether or not it's . . . faulted and whether it affects ground water flow in a significant way.

Tr. p. 2016.[26] Mr. Vincent's testimony on these points, which is further conditioned with statements like "may," "we don't know, and I don't claim to know," is conjecture. Testimony of that nature, or testimony that "there is room for," there is a "possibility," a "concern," or "a big

---

[25] The Staff's primary focus concerning this issue was the so-called "panhandle fault" which Dr. Wood inferred as a northwest-trending fault in the deep bedrock from an M3 Eagle magnetometer survey. (The panhandle is that narrow portion of the M3 Eagle property extending toward the southwest; Exhibit 12, p. 220 (Fig. 80) contains a good depiction of it.) Staff suggested the possibility that the fault might extend up from "several thousand feet below the surface" and truncate PGSA sediments between M3 Test Well 1 ("TW1") and Test Well 4. Ex. 50 pp. 8-9 and Tr. p 668. But Mr. Vincent conceded "we don't know . . . whether that fault extends to the surface, and in any way affects water flow in the Pierce Gulch Sand Aquifer." Tr. p. 668.

[26] Mr. Vincent listed five items as comprising these "nonconclusive . . . lines of evidence":

1. "[D]uring the period of pumping we saw negative hydraulic boundary indications in the one observation well during the SVR-7 test." Tr. p. 2016.

2. "The fact that recovery was not quite complete in wells [after the aquifer tests] suggests that maybe there's limited recharge or possibly some sort of a boundary effect. . . ." Tr. p. 2016.

3. "In the modeling report they describe how the calibration was improved when they . . . simulated the fault that was identified in the panhandle region" for "one of the zones into which the piezometer was completed." Tr. p. 2017.

4. "The hydraulic gradient reversal" between the shallowest zone of TW1, which is in a shallow overlying aquifer, and the other piezometers that are completed in the PGSA. Tr. p. 2018.

5. Although the annual water level fluctuations in the panhandle wells are "harmonic . . . with those fluctuations elsewhere in the PGSA," "the order of magnitude difference in water-level fluctuation . . . on one side of the [panhandle] fault and on the other side of the fault, that suggests something to me."

Tr. pp. 2011 and 2018.

question" are examples of speculation, not opinion about the probability of something actually being true. As a matter of law, it is not testimony sufficient to support a factual finding.[27]

Indeed, it is even weaker than the testimony of the firearms expert in the *Bromley* case who, though never going so far as to admit he "does not claim to know," testified to "several possible reasons" for a shotgun malfunction. The Idaho Supreme Court ruled that such testimony "would only invite conjecture" and must not be considered in the decision. *Bromley v. Garey,* 132 Idaho at 811, 979 P.2d at 1169.[28] Even construing Staff's comments as addressing the sufficiency element, each was soundly rejected by the experts who actually studied North Ada geology, investigated the subsurface hydrogeology, evaluated the geophysics, mapped the aquifer in cross-section, measured the Aquifer, and conducted the tests in question.[29]

---

[27] *See* discussion above, pp. 7-8. The speculative nature of Staff's testimony throughout, such as their failure to cite any facts about aquifer sustainability, is underscored by the fact that they lack expertise in many of the scientific areas relevant to this case. Mr. Vincent confirmed he is not expert in geophysical log analysis, Tr. p. 692; seismic or magnetometer evaluations, Tr. p. 683; or geochemistry, Tr. p. 713. He has done no geologic mapping or geologic structural analysis in the Treasure Valley. Tr. p. 640. He has mapped no faults in the Treasure Valley or elsewhere, Tr. p. 654; he has not authored or co-authored any peer-reviewed scientific analyses of Treasure Valley geology. Tr. pp. 650-51. He has designed no wells and inspected no drill cuttings in the Treasure Valley. Tr. p. 650. His experience with aquifer testing appears limited, and he has conducted no aquifer testing in Idaho other than "slug tests" and "packer tests," neither of which is appropriate for evaluating an aquifer such as the PGSA. Tr. pp, 642-43, 645-56 and 649. Mr. Owsley lacks expertise in seismic exploration and interpretation, geophysical log analysis, geochemistry, and ground water modeling. Tr. pp. 2380-82. Mr. McVay has no expertise in these areas either and, importantly, stated that he had no training in differentiating aquifers based on water level data—the sole task he was given in this matter. Tr. p. 2457.

[28] In *Dent v. Hardware Mutual Casualty Co.*, 86 Idaho at 436, 388 P.2d at 95, the Idaho Supreme Court reversed a lower court decision because it had relied on an expert's opinion that one alleged cause of an auto accident was "a little more likely" than another. The Court found this testimony "indicative of only a weighing of possibilities, not an affirmative statement of a probability." *Id.* Similarly, in *Doe v. Sec'y of Health and Human Services*, 19 Cl.Ct 439, 450 (1990), the court refused to rely on the opinion of a witness—again, one who was an acknowledged expert—because she was able only to say that it was "highly possible" that a child's disease resulted from a vaccination.

[29] Mr. Owsley agreed that, "in preparing its memorandum and its narrative presentations in this case, . . . the staff has conducted no independent scientific inquiry, other than to . . . express [its] views of Hydro Logic's work and other than to provide [Staff's] Theis analysis and measure water levels." Tr. p. 2386. *See also* Tr. pp. 654 and 663 (Vincent stating that Staff's effort consisted of "observations of the work that was done by Hydro Logic.").

(b) The "nonconclusive" lines of evidence Staff identified concerning aquifer boundaries were disproven by aquifer testing and other hard scientific data.

The first two items on the "lines of evidence" (listed in footnote 26) concern the question whether negative hydraulic boundaries showed up in either of M3 Eagle's aquifer tests—the 50-hour Kling test or the 9-day SVR7 test. After raising this concern, Mr. Vincent eventually conceded that he saw no negative boundary from the Kling pumping well hydrograph in that aquifer test. Tr. p. 692.[30] Mr. Owsley agreed that the recovery plot in the Big Gulch stock well at the end of the SVR7 aquifer test "did not show a boundary." Tr. p. 2442.[31] Indeed, further analysis by HLI (after Staff's memo raised the point) had shown that this recovery plot indeed does not show a negative boundary. *See* Ex. 81 and Tr. pp. 3299-3300, 3303 (Squires disagreeing that the plot shows a negative boundary).

The experts who investigated the area's geology and tested the Aquifer's characteristics stated that there is no compartmentalization and no flow-impairing boundaries. Mr. Utting testified that neither the Kling nor the SVR7 aquifer test showed evidence of PGSA flow boundaries or compartmentalization. Tr. p. 1568-69. Dr. Osiensky testified that "there's absolutely no evidence of compartmentalization, based on the aquifer test data." Tr. p. 3471; *see also* Tr. pp. 3467-69. Mr. Dittus agreed, stating that "we don't see evidence of negative boundaries in our wells in the Eagle area when they are pumping." Tr. p. 608.[32] Dr. Wood

---

[30] A negative hydraulic boundary (a barrier to recharge) will show up as a deviation in the steepness of the resulting curve in a hydrograph plotting water level measurement data from an aquifer pumping test.

[31] Staff previously stated it was "a major concern" to them that water levels in this well after the SVR7 test recovered to within a quarter of a foot. Ex. 902 at 50. They also stated that this "was characteristic of the cone of depression encountering a no-flow/barrier boundary." Ex. 50 p. 11. Based on the Staff's observation, HLI found a mathematical error in their calculation; when it was corrected, the recovery was to within 0.05 feet. Ex. 45 p. 24. Mr. Owsley's testimony noted here, of course, recognizes that there is no boundary at all.

[32] If anything, he testified, United Water sees positive boundaries in its Eagle area wells—that is, boundaries where ground water encounters additional sources of recharge.

testified that no faults truncate the PGSA, Tr. p. 993, and no faulting in the surface sediments create significant flow boundaries in the PGSA. Tr. pp. 994, 1033, 2990, 2988. Mr. Glanzman testified that even the Aquifer's geochemistry reveals no compartmentalization. Tr. p. 1501.

On the question of aquifer boundaries, Mr. Squires summed it up this way:

> We looked at six to seven lines of completely different evidence. And all those lines of evidence point to the fact that there are no hydraulic boundaries
>
> And there's no evidence that points to the fact there is a hydraulic boundary, especially the hydraulic evidence itself. And our conclusion, based on all the measurements we took and all the interpretation we did and the multiple lines of evidence, our conclusion . . . is there's not a hydraulic boundary.

Tr. p. 3304.[33]

Under cross-examination attempting to elicit any evidence he might have that the PGSA contains boundaries relevant to this matter, Mr. Vincent cited a 1992 report by Squires, Wood, and Osiensky containing a hydrograph of drawdown in United Water's Goddard well during an aquifer test that shows a negative hydraulic response and lists possible causes for it, including a possible fault, effects from a nearby pumping well, and three other possibilities. Tr. p. 771; Ex. 67 at 90 (Fig. 13). Mr. Vincent did not know whether the Goddard well, which he acknowledged is "a high production well," has "suffered any loss of productivity over time due to any boundary." Tr. p. 771. He stated that the well's plot deflection "could be another pumping well. That's possible." Tr. 674.

> [T]he water levels in the wells during the summertime, for instance, in the Floating Feather well, they show a stabilization, and so they—that indicates that they are obtaining sufficient water to not continue to drawdown. That's the deviation from . . . a drawdown curve that we observe in . . . the Floating Feather well and other wells in that area.

Tr. p. 608.

[33] Mr. Squires' testimony about the lack of boundaries in the M3 Eagle portion of the PGSA was further illustrated by Exhibits 80 and 81, which demonstrate graphically how closely both the Kling and the SVR7 aquifer test results plot along no-boundary drawdown plots, and how poorly they compare with the plot that would be produced if there were any kind of a no-flow boundary (in this case, in the panhandle). *See* Tr. pp. 3293-3301.

Mr. Squires gave his opinion that the Goddard well's hydrograph deflection displayed in his 1992 report (Ex. 67) is caused by "a nearby pumping well" not by a flow-constricting fault. Tr. pp. 3288-89. Mr. Dittus noted that Goddard has been producing since at least 1992, and that United Water's production and water level data from it and other North Ada wells show:

> that the wells either are slightly above, or at their original water levels or, else in some cases in west Boise, have established a new equilibrium level, that's not significantly different from the original level, [and] that there is sufficient recharge . . . for their withdrawals.

Tr. p. 542 (emphasis supplied). Thus, the Goddard well's response to what the undisputed opinion evidence shows was probably a nearby pumping well—as depicted 17 years ago in the 1992 Report—now has stabilized in any event.

In summary, each expert who gave an opinion as to the probability of faulting, negative boundaries, or compartmentalization stated that no such impediment to flow in the PGSA shows up in hydraulic drawdown or recovery testing, in production data, in hydrographs, in the geophysical record, in the observable geology of the area, in seismic or magnetometer data, or in water level contours. The preponderance of the evidence—indeed, all the evidence—shows, again, that the PGSA in the M3 Eagle Project area is a highly productive aquifer that readily has found equilibrium at levels that are "not significantly different from the original level" in those few instances (*e.g.*, the Goddard well) where past modest declines have been noted. Indeed, as Dr. Osiensky testified, not even the known boundary—the actual edge of aquifer itself at the "green line" (or the West Boise-Eagle Fault, to the extent it forms an aquifer boundary along a similar line but further to the northeast of the Project)—shows up in aquifer tests due to the aquifer's highly transmissive characteristics and strong recharge. Tr. pp. 3648-49.

The uncontroverted conclusion is that the PGSA is not significantly affected by faults or boundaries in any way that affects the sufficiency issue. Staff provided no credible evidence to

contradict this conclusion; their statements on this subject were not only conjecture but conjecture contradicted by the evidence. Dr. Ralston did not comment.

(c) The M3 Model's simulation of a fault boundary produced inconclusive results and was properly rejected.

As to supposed line of evidence no. 3, Mr. Vincent stated that one of the versions of the M3 Model (the computer model developed specifically to determine affects of M3 Eagle's pumping on the PGSA) produced what Mr. Vincent described as an "improved" calibration when the modeler postulated a fault extending south from the M3 Eagle property. Tr. p. 2017. Here, Mr. Vincent appears to mix two instances where HLI, in an effort to consider all possibilities as it conducted testing and modeling, plugged in factors that assumed, for purposes of inquiry, a north-trending fault that might restrict flow in that part of the PGSA beneath the southwest, "panhandle" area of the M3 Eagle property.

The first instance was HLI's use of a "boundary package" in the computer software used to analyze the Kling aquifer test. HLI did this because "the aquifer transmissivity was somewhat lower" in the Kling well area and because HLI learned after the test that Dr. Wood had detected the bedrock fault beneath the panhandle. "So . . . to be, again, thorough and conservative, we looked at the possibility that a . . . fault barrier could have some effect on the transmissivity, just as an investigation." Tr. p. 3305 (Squires). As noted above, neither the drawdown nor recovery plot for the Kling test reveals <u>any</u> PGSA boundaries, but this one calculation showed "that in the early parts of those tests" one of the TW1 piezometers in particular "did fit the boundary package . . . to some extent." Tr. p. 3306. However, Mr. Squires explained that this indication in TW1:

> was an artifact of these being just individual little piezometers, because our ultimate conclusion from that was that when you added all of the four piezometers in the Pierce Gulch Sand Aquifer together, you got the same straight line that you got from the Kling drawdown recovery . . . . [and] our conclusion, based on all of the evidence, was that there was not a hydraulic barrier.

Tr. p. 3306. This is illustrated on Exhibit 80, which shows that both the Kling test drawdown and recovery plots match almost exactly with "perfect" no-boundaries plots (based on the Theis method), and vary strikingly from plots of the same data that would be produced had there been a negative boundary under the panhandle.[34]

The second instance to which we assume Mr. Vincent was referring, this time with his "improved calibration" comment, concerns the M3 Model's calibration to the Eaglefield aquifer test—one of the seventeen aquifer tests that HLI evaluated in this effort. Here, Mr. Vincent presumably is referencing the observation in the M3 Model report, Exhibit 16, p. 29, that the model's "Tmatch" version[35] "did not accurately simulate the 7-day Eaglefield test" and that "[b]etter matches were achieved in trial calibrations by allowing larger changes in transmissivity and by the inclusion of a fault in the area." Having thoroughly probed and tested the boundary hypothesis, the modelers ultimately rejected this alternative calibration and concluded that "the poor Tmatch-transient simulation of the Eaglefield test is not significant." *Id.*[36]

In any case, neither of these inquiries—using boundary-assuming software as one way to evaluate one part of the Kling test results or calibrating one model version to one of 17 aquifer tests—shows either a no-flow barrier in the PGSA (as postulated by Staff, Ex. 50 p. 9) or a partial no-flow barrier (as investigated by HLI, Ex. 12 p. 206). Nor is it any basis to conclude there is insufficient water in the PGSA for the M3 Eagle project, much less evidence of a problem with "long term sustainability." In addition to all the other testimony negating the

[34] Similarly, Exhibit 12, p. 221 (Fig. 82) shows TW1's composite drawdown curve plotting consistently with Theis, despite minor variations in individual piezometers.

[35] Tmatch is the M3 Model version designed to honor the transmissivity values measured in the Aquifer. It varies from the "Hmatch" version, which reproduces actually-measured water levels, or heads. Ex. 16 at ii.

[36] It was rejected because the model's Hmatch version produced a "good match" with Eaglefield, *id.* at 30, because faults were not detected in the area, and because Tmatch was designed to respond to changes in transmissivity. *Id.* Given the several deficiencies and limitations of the Eaglefield well test (including those having to do with its transmissivity calculations), it perhaps is not surprising that it proved difficult to calibrate to. *See Reanalysis of Sixteen Aquifer Tests*, Ex. 12, pp. 39-41 (listing problems with the Eaglefied test).

hypothesis of any truncating fault here, the hydraulic test results—real data—show most definitively that a no-flow hydraulic barrier does not exist across the panhandle.

(d) The "gradient reversal" in one piezometer in an overlying shallow aquifer also is not evidence of a no-flow boundary or compartmentalization in the PGSA.

Mr. Vincent's reference to a "downward gradient" (line of evidence #4, listed in footnote 26, above) concerned the shallowest sealed piezometer in M3 Eagle's TW1 in the panhandle. Mr. Vincent felt it was "an anomaly that's not explained" to have this shallow zone not respond like the deeper piezometers in this well which have upward gradients, as do PGSA test well piezometers on the other side of the inferred panhandle fault. Tr. p. 1982. This seems an inordinately small point. The deeper TW 1 piezometers are into the PGSA; the shallow one is not. Perhaps Mr. Vincent raised this simply to note that HLI had not explained every detail. In any event, as Mr. Squires noted, given its shallow depth in an aquifer zone above the PGSA (and immediately adjacent to Farmers Union Ditch), a downward gradient was not an anomaly and in fact "would be expected." Tr. p. 3259. On this same point, Dr. Osiensky testified:

> I don't consider that to be an anomaly. . . . I wouldn't expect anything else in the vicinity of these canals, you're going to create areas of increasing potential with depth. It has to happen.
>
> . . . . [T]hat measurement was taken very close to the Farmers Union Ditch, and that's exactly what I would expect. I would expect to see decreasing potential with depth in the shallow system in that case.

Tr. pp. 3493-94. In other words, this item of evidence in Mr. Vincent's list also is without scientific foundation. It was based on measurements in a shallow overlying aquifer (not the

PGSA) which is expected to have a downward hydraulic gradient,[37] in contrast to the artesian heads in the separate Pierce Gulch Sand Aquifer.

(e) The difference in fluctuation between the panhandle and upgulch monitoring wells, although it "suggests something" to Mr. Vincent, is expected and consistent with the conclusions that the PGSA is an extensive and highly transmissive aquifer.

Fifth and last in his "lines of evidence" was Mr. Vincent's question whether the "order of magnitude" difference in seasonal drawdowns experienced in wells on different parts of the M3 Eagle property (*e.g.*, the upgulch TW4 and downgulch TW1) might suggest some sort of boundary in the PGSA between these areas.[38] But this evidence actually shows the opposite. The difference in the gross amount of fluctuation is entirely expected given these wells' respective distances from known pumping centers. The evidence further shows that the upgulch and downgulch wells fluctuate in harmony and in response to offsite pumping. Tr. pp. 2023 (Vincent); 3307-09 (Squires). This point also was made in Ex. 45 at pp. 19-20, further illustrated in Ex. 45, Fig. 5, and elaborated in some detail in Ex. 52, an April 8, 2009 HLI memo to Staff employing yet another scientific method of charting the two areas' harmonic fluctuations.

By way of example, Mr. Squires explained that the SVR7 aquifer test's cone of depression produced an order of magnitude difference between the upgulch and downgulch monitoring wells. Tr. p. 3309 (this "is what the cone of depression looks like."). In other words, these wells' drawdowns in response to aquifer testing plot consistently on a classic Theis curve; there is nothing unexpected or unusual about the order of magnitude difference between them. The fluctuations from offsite pumping are consistent in all monitored wells, clearly indicating

[37] Mr. Squires' response to Jason Smith's "replacement well" testimony made the point that the shallow aquifer containing Protestants' wells has decreasing potential with depth, again in contrast to the PGSA. Tr. p. 3165.

[38] The "gulch" in this instance is noted as Big Gulch on local maps. On the M3 Eagle property it is a broad flat valley trending southwest to northeast.

hydraulic interconnection from the Valley to the Eagle uplands, and yet more evidence of the Aquifer's extensiveness and the lack of boundaries affecting ground water flow.

When asked his opinion of Staff's expression of "uncertainty" about potential aquifer flow barriers due to the order of magnitude difference in fluctuation between the up- and down-gulch wells, Dr. Osiensky responded, "I don't agree with it. I think that's a function of a superficial analysis." Tr. p. 3515. The difference in the wells' fluctuation "makes perfect sense" and is "a function of distance from the pumping centers." Tr. p. 3516 (Osiensky). The evidence in this case—the expert testimony, measurements, studies, tests, and exhibits—is that the PGSA is not compartmentalized or affected by no-flow barriers in any way that affects its sufficiency as a water source for the Project.

In summary, M3 Eagle's proof as to sufficiency of water supply, which is based on expert opinion grounded in scientific inquiry and physical evidence, stands in stark contrast to the testimony of the Protestants' expert and that of the Staff, none of whom directly addressed the issue. Mr. Vincent identified five "lines of evidence" suggesting to him that the PGSA might be limited in undefined ways due to hypothetical flow barriers he could not substantiate. It is more accurate to say he sees theoretical possibilities, not actual lines of physical evidence. In any event, each of these was disproven by a clear preponderance of the evidence—that is, real data and expert opinions. M3 Eagle has proved this element by evidence, "when weighed with that opposed to it, has more convincing force and from which results a greater probability of truth." *Harris v. Electrical Wholesale*, 141 Idaho 1, 3, 105 P.3d 267, 269 (2004).

B. Developing the Project's water supply will not reduce the quantity of water under existing water rights.

Idaho Code Section 42-203A(5)(a) requires the Department to evaluate whether a proposed appropriation "will reduce the quantity of water under existing water rights." IDWR's

rules describe this criterion as whether the proposed appropriation will "injure another water right." IDAPA 37.03.08.045.1.a. The record contains no evidence of any existing injury among wells in the PGSA, and no suggestion that injury would result from M3 Eagle's pumping.

(1) The "non-injury" criterion may support a monitoring requirement as a permit condition, but does not support application denial without a showing of actual injury.

This "non-injury" criterion must be evaluated in light of the "constitutionally enunciated policy of promoting optimum development of water resources in the public interest." *Baker*, 95 Idaho at 584, 513 P.2d at 636 (citing Idaho Const. art. XV, § 7). The Legislature's announced goal of promoting "full economic development," of the state's ground water resources, Idaho Code § 42-226, is consistent with this policy. *Id.*

IDWR balanced these policies (avoiding injury, promoting full economic development of water) in the recent *City of Eagle* decision.[39] In his Final Order in that case, IDWR Director Tuthill found that "full economic development of Idaho's underground water resources is required" and that, unless it is a pre-1978 domestic ground water right entitled to protection of historic pumping levels under *Parker v. Wallentine*, 103 Idaho 506, 650 P.2d 648 (1982), a senior's existing pumping level may be protected only if junior diversions "exceed the reasonably anticipated rate of future natural recharge or if pumping levels become unreasonable." Final Order at 33 ¶ 21.[40] A protestant seeking "*Parker* protection" must show:

> (1) the protestant is the holder of a domestic water right that is not subject to the reasonable pumping standard of the Ground Water Act [i.e. it is a pre-1978 domestic ground water right], and (2) the protestant's diversion equipment and facilities are capable of diverting the protestant's water right at the ground water levels at or about the time the application is being considered.

---

[39] *In the Matter of Applications to Appropriate Water Nos. 63-32089 and 63-32090 in the Name of The City of Eagle* (Feb. 26, 2008).

[40] In *City of Eagle*, a matter also involving proposed diversions from the PGSA, the Director found "there is no evidence that diversions have exceeded the reasonably anticipated rate of future natural recharge or that pumping levels are unreasonable." Final Order at 33 ¶ 22.

Final Order at 34 ¶ 28.

In *City of Eagle*, the Director deferred the question whether protestants were entitled to any relief until it is shown, through monitoring, that applicant's pumping causes actionable declines. Final Order at 35-38. Indeed, Idaho law contemplates administration of rights based on proven injury, not pre-emptive denials of applications on the contention that administration someday might be required. *See Dovel Decision* at 4 (applicant's diversions "will not impact the amount of water available to fill senior water rights . . . if the water master delivers water to the senior water rights in accordance with priority before junior water rights are filled."); *Dovel*, 122 Idaho at 64, 831 P.2d at 532 ("It would be the responsibility of the watermaster to insure that senior rights were not injured."). It would contravene Idaho law to deny an application on the fear, or even the reasonable belief, that future administration might be necessary. Moreover, such pre-emptive denial also would improperly prevent the junior appropriator from providing mitigation, an option expressly allowed under the Department's rules. IDAPA 37.03.08.045. 01.a.iv. The State cannot optimally develop its water resources without accepting the possibility that on occasion administration (including mitigation) may someday be required.

In any event, the evidence in the present case indicates that administration due to M3 Eagle's pumping, though perhaps a fear Protestants hold, is not likely.

(2) There is no evidence in this record to indicate pumping PGSA ground water for the Project will injure other water rights.

M3 Eagle presented substantial, and undisputed, evidence that its pumping will not cause unreasonable drawdowns in the PGSA or overlying aquifers and will not injure existing water rights. Neither Dr. Ralston nor Staff offered an opinion on this point.

While initially proclaiming that some of them or their neighbors have experienced "dry wells," Protestants provide no proof of this, of injury from current pumping, or of any claim that

they "will be forced to an unreasonable effort or expense to divert" their rights due to Project pumping. IDAPA 37.03.08.045.1.a.ii. They conceded their evidence shows only that some wells have been replaced in recent years, a routine event that may occur for a variety of reasons. Most of the replaced wells ("original wells") were not even in the PGSA.

In any case, the projected drawdown from M3 Eagle's proposed ground water appropriation of 6,535 acre-feet per year at full development is projected to be minimal. There is no evidence that this proposed use will cause injury to existing water rights, as shown by several scientific analyses that were conducted in this matter.

(a) All experts' calculations demonstrate modest drawdowns, even after full development and even assuming overstated withdrawals.

With its first report in July 2007, submitted with the 2007 application in this matter, Ex. 42A(4), HLI made Theis calculations of total projected PGSA drawdowns from the Project at full build-out. This assumed 13.3 cfs of pumping for 90 days. Ex. 42A(4) pp. 8-10, Figs. 9-10.[41] That is, it assumed 48% more than actually will be pumped on average at full build-out. This initial Theis analysis—set out as hypothetical best (Fig. 9) and worst (Fig. 10) cases—projected from 4 to 8 feet of drawdown in the PGSA three miles from the M3 Eagle pumping center.

Staff reported two of its own Theis analyses in its Staff Memo—one using a 50 year pumping period, the other a one-year period. Ex. 50 at 21.[42] Mr. Vincent testified that

[41] As Mr. Vincent testified, "drawdown based on the Theis solution is a function of the logarithm of time so that the difference between the drawdown at, say, 90 days and one year, a difference of approximately .6 log cycles, isn't as significant as you might expect." Tr. p. 1778. The Department typically assumes a one-year period. *Id.*

[42] Mr. Vincent disavowed the 50-year analysis at the hearing, when he testified:

> In retrospect, I regret that we chose to present the results of our intermediate calculation for a time frame of 50 years because it more likely overestimates impacts than the one-year snapshot— provided, that is, that there is hydraulic connection to the regional aquifer system from M3's pumping center.

"Department staff typically looks at a time frame of one year in order to evaluate hydrogeologic impact predictions using the Theis solution." Tr. p. 1778.[43] Using one year at a pumping rate of 10 cfs—that is, 9% greater than M3 Eagle's eventual maximum—Staff's Theis analysis projected 8 feet of drawdown at the corner of Floating Feather Road and Highway 16. Ex. 50 at 21. Mr. Vincent said this result was "similar" to those in HLI's initial "worst case" projection in its 2007 report, Ex. 42A(4). Tr. p. 1778-79. He also agreed that HLI's Theis calculation, which assumed pumping 90 days rather than Staff's one year, "is within the bounds of reason." Tr. p. 1955.

HLI's Theis analyses predict an annual rate of drawdown in the North Eagle area of from 0.08 feet (0.96 inches) to 0.16 feet (1.92 inches), assuming no equilibrium is reached first, in which case the drawdown would be even less.[44] (Recall that Theis assumes no recharge is occurring.) In any event, Project pumping is predicted to be less than two inches of drawdown annually outside the immediate vicinity (three miles) of the Project. This prediction uses pumping amounts 48% greater than what M3 Eagle actually will pump, and it is the worst-case.

> Although we pointed this out in the staff memorandum text, we only presented the figure for the 50-year prediction, and I think that we unintentionally may have given the wrong impression to readers of our memo.
>
> If we had to do it over again and we could only show results for one time frame, we would only present the graphic for the one-year time period since that is what was used to assess reasonableness.

Tr. p. 1780 (Vincent).

[43] In its Memo, Staff noted that the Idaho Department of Environmental Quality also recommends using a one-year period to predict long-term drawdowns and that using a shorter time frame such as one year "can be appropriate, in part because the Theis (1935) solution is premised on the assumption that there are no sources of recharge." Ex. 50. at 21. Using a "no recharge" assumption to predict drawdowns in the PGSA is conservative because the PGSA clearly receives recharge.

[44] Such drawdown predictions do not discuss when equilibrium would be reached, but we can expect it to occur well before the 50 years projected here. *See, e.g.,* Tr. p. 3251 (Squires noting that monitoring in the PGSA in recent years since the large municipal wells have been pumping indicates the PGSA "is in equilibrium or actually slightly increasing in water level, which would suggest that its recharge is greater than its discharge"), and Tr. p. 542 (Dittus stating that the municipal well data show the PGSA has "established a new equilibrium level"). Dr. Ralston described how an aquifer attains equilibriums after new pumping commences. Tr. pp. 2274-76.

Moreover, the Theis projections likely are "conservative," meaning they are on the high side. Each expert who addressed the point testified that the Theis method tends to over-predict drawdowns. Mr. Dittus said that using Theis "is an exercise that . . . gives you some information about . . . what the maximum drawdown would be . . . . But in my experience it always has been less." Tr. p. 570. The Theis equation "typically over estimates, gives you a conservative drawdown with respect to the impact." Tr. p. 544 (Dittus). Mr. Vincent agreed that "as the time frame over which you run the Theis analysis increases, the prediction becomes more conservative." Tr. p. 1954. Indeed, he said a one-year timeframe arguably "is conservative" when using the Theis solution, and certainly is for "some aquifer systems." Tr. p. 1778.

Mr. Utting used three methods to predict impacts from M3 Eagle pumping: "I've used simplified Theis analysis. I've used an analytical model, and I have used a numerical computer model." Tr. p. 1574. He testified that Theis "does overstate drawdowns." Tr. p. 1575.

When asked his opinion "about the adverse effects, if any, of the M3 project development on other water rights or aquifer levels," Tr. p. 1127, Mr. Squires testified:

> I believe that myself and my colleagues and our experts have painted a very conservative picture. I think we have tried to overestimate drawdowns, and I think we have tried to portray pretty much a worst-case scenario in all of our evaluations.
>
> I think that the impacts will be less than we have predicted and shown because we have been conservative. But I think that we are very solidly connected to the same kind of groundwater regime that was testified to by Mr. Dittus and his own wells in the area and the same aquifer.
>
> And I—I think that the impacts that we've shown are certainly acceptable. I don't think that there will be any damages, any unreasonable damages, to anyone. And I think that we have put in place a rather extensive groundwater [monitoring] network that will absolutely show that up.

Tr. p. 1127-28.

Dr. Osiensky testified that "in the Pierce Gulch Sand, I would expect the drawdowns to be relatively small" from pumping some 6,500 acre-feet annually at full Project build-out. Tr. p. 3495. He stated that the effect in the PGSA "is going to be less drawdown than is predicted by Theis," and that, based on the data, [l]ocal domestic wells, in my opinion, would experience less drawdown than we're predicting in the Pierce Gulch." Tr. p. 3495. "[T]here's definitely enough information . . . to make predictions as to what the drawdown effects would be." Tr. p. 3519. Dr. Osiensky backed this up by noting that the SVR7 test data show the PGSA "is a very, very transmissive aquifer" in which were measured only "very small drawdowns" despite the fact that the test "stress[ed] a very large volume of the aquifer." Tr. pp. 1368-70.

Even the Protestants' expert agreed that this worst case prediction points to an insignificant impact on nearby wells. When asked whether he considered five to eight feet of drawdown in the Eagle area after 50 years of M3 Eagle's pumping at 10 cfs to be "significant, Dr. Ralston stated "If those are true values, no." Tr. p. 2344.[45]

(b) The M3 Model runs also show minimal drawdown after 50 years of pumping, even in light of several conservative assumptions.

The M3 Model—which Dr. Ralston described as "a good model," and as having "more sophistication" than the TVHP model, Tr. p. 2369—incorporates several conservative assumptions, meaning that it too tends to overstate projected drawdowns. The M3 Model runs assumed an average annual pumping rate of 10 cfs, nine percent greater than the 9.03 cfs (4,053 gpm) that M3's average pumping at full build-out actually will be. Tr. pp.1590, 1626, and 1642;

[45] The Theis predicted drawdowns also are conservative because they assume M3 Eagle immediately will begin pumping 10 cfs (in Staff's analysis) or 13 cfs (in HLI's analysis). But this will not happen. The maximum average annual diversion rate of 9.03 cfs will not occur for 20 to 30 years, if ever. M3 Eagle's pumping will increase gradually until that time, providing substantial time to monitor M3 Eagle's effects on the Aquifer. It also is important to remember that the PGSA's saturated thickness averages well over 200 feet, which allows substantial room for wells to be established with sufficient available drawdown. Ex. 43A(4) p. 3.

Ex. 42A p. 12. The M3 Model already assumes pumping by all the large producers in the area, and also assumes a 30% increase in pumping by others in the PGSA during the build-out period. Tr. pp. 1623, 1625 and 1643; Ex. 16, Fig. 17. It further assumes pumping will induce no additional recharge across the model's input boundary in the southeast. Tr. pp.1585 and 1624; Ex. 16 at 18. Finally, it was run to assume a 20% reduction in recharge into the model domain. Tr. pp. 1619-20; Ex. 16 at 13.

Mr. Utting explained other characteristics of the M3 Model that make it a reliable tool. It calibrated accurately to ground water levels and to aquifer tests, including the Eaglefield, Lexington Hills, and SVR7 tests. Tr. p. 1608; Ex. 16 at 30. It contains transmissivity and storativity data developed from 17 aquifer tests, Tr. p. 1578, and incorporates the PGSA's "3D spatial position" and the fact that the aquifer is a "dipping system," Tr. p. 1578, rather than a flat-lying aquifer or aquifer layers, as the TVHP Model assumes. The model's upgradient boundary (i.e., to the southeast, through which recharge flows), "is far enough away [from the Project] so that we have an understanding of how much water is flowing through there, but pumping of the [Project] wells doesn't cause any change in the flow within that area." Tr. p. 1581 (Utting); and Ex. 16 at p. i (it has "model boundary conditions far from the M3-Eagle-Star vicinity that are unaffected by simulated pumping from the M3 site"). The M3 Model "incorporate[s] to a large extent the recharge information from the Treasure Valley Hydrologic Project." Tr. p. 1585-86.

Accordingly, the M3 Model "conservatively estimates ground-water underflow across the southeast boundary of the model (beneath the west Boise area)" which is "at the lower end of the range quantified in several reports issued as part of the Treasure Valley Hydrologic Project." Ex.

16 at iii.[46] There can be little question about the soundness of Mr. Utting's opinion that the M3 Model is "the most accurate and the most representative groundwater model developed to date for this area." Tr. p. 1579. *See also* Ex. 16 p. ii.

Mr. Squires expressed "high certainty that the predictions of the model are accurate to within a few feet." Tr. p. 1133. This accuracy is less beyond "5 miles of the [M3 Eagle] site [which] was a fine-tooth focal area." Tr. p. 1133. However, beyond five miles, all projections, including the Staff's Theis projections, show very small drawdowns. *See* Ex. 50, p. 22. Mr Vincent concurred that the smaller drawdowns projected by the M3 Model were "reasonable, assuming a laterally continuous aquifer system that is hydraulically connected to one or more sources of recharge." Tr. p. 1779-80.

(c) M3 Eagle's pumping will cause even smaller drawdowns in the shallow aquifer than in the PGSA.

While there was no quantitative evidence about the effect of PGSA pumping on the shallower zone into which many domestic wells are completed,[47] all experts who addressed it agreed that any effect from Project pumping would be less than in the PGSA itself. Dr. Osiensky testified: "Local domestic wells, in my opinion, would experience less drawdown than we're predicting to occur in the Pierce Gulch" from full Project development. Tr. p. 3495. After noting that long-term monitoring is not showing declines in the PGSA, Mr. Squires addressed "pumping in the PGSA potentially affecting shallower units," Tr. p. 1064:

> [I]f there were any declines in the overlying aquifers that were due to . . . pumping in the Pierce Gulch sand, . . . one would first have to have drawdown in the Pierce Gulch sand. Because, for example, if you're having a decline in the overlying aquifers, and you're not having a decline in the Pierce Gulch Sand

[46] The M3 Model also was used to predict the effect of reducing the TVHP's assumed New York Canal and Boise River leakage by 20% (through canal lining or other causes); the result was an increased predicted drawdown from full build-out pumping of from 2 to 5 feet in the M3-Eagle-Star vicinity north of the Boise River. Ex. 16 at iii.

[47] Mr. Dittus testified that "there are many, many wells in the overlying . . . productive sediments that are tapped by domestic wells." Tr. p. 538.

> Aquifer, then any declines in the overlying aquifers are not due to pumping in the [PGSA], because it would be a causative relationship. You'd have to lower heads and gradients in the Pierce Gulch Sand Aquifer to induce that to move down.

Tr. pp. 1065-66. The overlying aquifer unit is separated from the PGSA by low-permeability layers. *See, e.g.,* Ex.42A(4) p. 9 (although there is variation in them, the "overlying aquifer zones . . . are separated from the main body of the Pierce Gulch Sand Aquifer by low-permeability sediments (clay layers)." The shallow zone has downward hydraulic gradients, whereas the PGSA has upward gradients. Tr. p. 3217-18, 3258-60 (Squires); Ex. 44 Fig. 10.

Mr. Utting testified that wells in the overlying aquifer, provided they are properly constructed and sufficiently deep, "will not experience any noticeable impacts." Tr. p. 1735-36. Recall Mr. Dittus' testimony noted above, that the continuous large volume pumping from the Floating Feather well causes "no discernable impact" on the nearly adjacent Miller and Vail domestic wells. Tr. p. 528.[48] As Mr. Dittus explained, the monitoring data from these wells in the "measurement period of '96 through '98 . . . are actually trending upward." Tr. p. 597.

Moreover, the data show water levels in the Miller and Vail wells are highest in summer—the period of highest municipal pumping—a clear indication that the shallow aquifer into which they are completed is dominated by canal leakage and applied irrigation. This is the opposite of the annual fluctuation in the PGSA, and yet another fact confirming the limited connection between the two systems. *Compare, e.g.,* Ex. 12, Fig. 51 and Tr. p. 529-30 *with* Ex. 45 Fig. 5. Dr. Ralston testified that the M3 Model report did a "reasonable job of presenting" the predicted effects of M3 Eagle's pumping on overlying aquifer units. Tr. pp. 2240-41. The uncontroverted evidence is that a PGSA well's drawdown effect will be less in the overlying shallow zone than in the PGSA itself.

[48] Since the Floating Feather well began pumping, neither Miller nor Vail has contacted United Water with regard to their water levels. Tr. p. 602-03

(3) The facts concerning Protestants' wells further underscore the conclusion that the Project will not injure these water rights.

To support their allegations that wells in North Ada are experiencing problems or declining water levels Protestants called Jason Smith, a layperson[49] whose testimony established nothing other than that several old domestic and irrigation wells, in unspecified aquifers, have been replaced in recent years for unspecified reasons. Jason. Smith prepared a map depicting the wells replaced between 2005 and 2008 (Exhibit 424), a chart of the years they were replaced (Exhibit 421), and driller's reports for the replacement wells[50] and for some of the original wells. The map also depicts several large municipal wells that began pumping between 2005 and 2008 and some permitted wells. Jason Smith attempted to show that some area wells are replaced each year due to water level declines. Tr. p. 2957. But there is no evidence of this. At most, his lay testimony and exhibits show the static water levels in nine original wells drilled many years ago were higher than those in the deeper replacement wells drilled between 2005 and 2008.[51] But this hardly supports a conclusion that water level declines were the reason for replacement.[52]

Jason Smith also was unable to identify which aquifers either the original or the replacement wells are completed into. Tr. p. 2854. Mr. Squires, who mapped each well, evaluated drillers' logs, and compiled cross sections of them, testified that none of the original

---

[49] Jason Smith, who is the son of Protestant Alan Smith, testified "I am testifying as a lay person .... I am not claiming to be an expert," Tr. p. 2623. *See also* Tr. pp. 2852-53, 2861 (Jason Smith stating that he has no education or experience in hydrogeology, geochemistry or well construction, and only limited undergraduate coursework in geology).

[50] The drillers' reports are in Exs. 425, 426, and 429. M3 Eagle objected to Protestants' use of language in testimony and exhibits such as "go dry," "gone dry," and "dry wells" on the basis that there was no foundation to assert that wells failed because of declining water levels or that any well actually had no water at its base. The objections were sustained and the Protestants conceded to replacing the "dry well" phrase with the phrase "replacement wells." Tr. pp. 2664-65., 2691, 2843, 2853, 2880.

[51] Exhibit 429 includes driller's reports for only 9 of the 20 original wells on Exhibit 424's map.

[52] Jason neglected to provide information on his father's own irrigation source, Protestant Eagle Pines Water Association well, which was replaced in 2001 for well construction problems after 46 years and had a water level (in the irrigation season) that was 7 feet lower than its non-irrigation season water level when it was first drilled in 1955. Ex. 45 Fig. 27.

wells were completed into the PGSA. Tr. p. 3120. Water level measurements in the original and replacement wells, taken from well drillers' reports, were taken at different times of the year and were not corrected for seasonal fluctuations, which makes it difficult to compare them. Jason Smith presented virtually no evidence of water levels in the original wells at the time they were abandoned. Tr. pp. 2947-48. Neither Jason Smith nor any other witness addressed what a reasonable pumping level might be for the area. There is no evidence that even a single area well owner has alleged injury or sought water rights administration.[53]

In contrast to the lack of proof that water level declines occurred, much less necessitated well replacements, ample evidence points to other likely explanations. Mr. Dittus testified that, in his experience, "declining water levels . . . . are not a primary cause of well failures in my experience in United Water service area . . . or . . . other areas that I'm aware of." Tr. pp. 620-21. "[I]n my opinion . . . and in my experience, it's more likely that the problem is with the well construction." Tr. p. 621. Mr. Dittus, who has run many video surveys of well bores, stated that well casings "begin to degrade relatively rapidly," and that "degradation of the well casing is . . . quite common to see." *Id.* He has experienced "several recent cases" where wells failed to produce even though there was water above the pump. Tr. p. 618.

---

[53] Mr. Owsley stated that he had heard of five wells—Banducci, Dater, Cummins, Taylor, and Edwards—that "needed to be deepened because of lowered water levels," but could not confirm this. He did not measure pre-replacement water levels for each of these and did not know whether any were completed in the PGSA. Tr. pp. 2400-01. Mr. Squires pointed out information in the record showing these wells may have needed replacement for reasons other than water level declines. *See* Tr. pp. 3126-37, 3182-87. The Taylor well measured 114 feet deep when it was abandoned—two feet less than when it was drilled in the 1950s; Mr. Squires found this "fits with what I would expect" for a well into river gravel with an open hole two-feet below the bottom of the well casing (which extended to 114 feet). Tr. p. 3129. That is, "I would expect the gravels to cave back in to 114 [feet]." *Id.* As another example, the original Banducci well was only 64 feet deep, also reaching only the shallow aquifer and not the PGSA. The water level in the Banducci replacement well (which Mr. Owsley said is completed "substantially deeper" than the original) was reported at 65 feet below ground level ("bgl") in 1996 and more recently by Mr. Owsley at 64 feet bgl—1 foot higher. Tr. p. 3582. The Dater well is in "broken down lava"—not the PGSA—and apparently has shown stable water levels and has not been replaced (although the pump has been lowered several times). Tr. pp. 3582-83 (Owsley). The Cummins well "is completed into granite," not the PGSA. Tr. p. 3584 (Owsley). The Edwards well was not deepened or replaced. Tr. pp. 3186-87 (Squires) and Ex. 76 Tab 4.

Mr. Whitney, whose job it is to oversee well drilling, construction, and enforcement, provided testimony underscoring the fact that replacements are to be expected for reasons other than declining water levels. For example, failure to seal the annular space outside a well casing can lead to the formation caving into a well's screens or open hole, resulting in restricted water production. Tr. pp. 3011-15. Wells also have a limited life expectancy. Mr. Whitney stated that, though there are many variables at play, "it's not uncommon to see wells last 20, 30, 40 years." Tr. p. 3016. In investigating "dry well" complaints in the Eagle area, he has not seen situations where the well problems were caused by "declining water levels to the point where wells are actually physically going dry and the water level is dropping that far." Tr. pp. 3015-16.

All but one of the replaced wells in Jason Smith's analysis were over 30 years old. Tr. p. 2944-45; Ex. 72. Mr. Squires stated that this is at a well's reasonable life expectancy, Tr. p. 3121, especially where it is poorly constructed. Tr. p. 3113. Mr. Squires found that none of the original wells were adequately sealed, Tr. pp. 3113-14, and that often shallow pump settings provided minimal amounts of available drawdown (water over the pump). Tr. p. 3123.

Mr. Squires testified that water levels in the replacement wells are deeper than in the original wells because in these shallow non-PGSA aquifers, "the deeper the well, the deeper the water level"—that is, like the shallow piezometer in TW1, the aquifer overlying the PGSA has decreasing potential with depth over the entire area. The replacement wells are deeper than the original wells and therefore have lower water levels. Tr. pp. 3119-20, 3124 (Squires). In Mr. Squires' opinion, no evidence was presented showing that the original wells' problems are due to aquifer level declines. Tr. p. 3110.

Even if a shallow well had to be replaced because of water level declines—and there is no indication of this—it is possible that the unsealed wells may have contributed to their own

demise. As Mr. Whitney noted, given a flow path (such as an unsealed well), ground water will flow from one aquifer to another having lower head. Tr. pp. 3044-3047. Thus, a shallow aquifer can drain down through the annular space in an unsealed well to a lower pressure unit below. *See* Tr. p. 3046 (Whitney stating that "you could drain" an upper aquifer to a lower one). In other words, unsealed wells drilled through shallow water-bearing zones over the PGSA could exacerbate water level declines within the upper zone.

In response to the question, "How much decline have you documented in the Pierce Gulch Sand Aquifer, if any?" Mr. Owsley's response was, "I don't know." Tr. p. 2402.

In sum, no expert opinion and none of Jason Smith's lay evidence provides a basis for concluding that the M3 Eagle water right will "reduce the quantity of water under existing rights"—much less cause injury to any existing water right. All simulations show minimal impacts to ground water levels from M3 Eagle's pumping, even at full build-out. The evidence shows that there is more than enough water in the aquifer to support the full Project and that its diversions will not cause injury.

C. M3 Eagle's proposed use will not conflict with the local public interest in the water resource.

Idaho Code Section 42-202B(3) defines the "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." It is difficult to discern what potential conflict with this interest granting this water permit could have. M3 Eagle provided several scientific reports and expert testimony demonstrating the extensiveness and health of the PGSA as well as the water conservation measures planned for the development, the ongoing and planned monitoring of ground water levels, and the plan for a few high-quality municipal supply wells (instead of

hundreds, or thousands, more unsealed domestic wells) that will efficiently serve area residents while protecting the aquifer from contamination.

Neither Protestants nor Staff presented evidence expressly directed at the local public interest element. Nonetheless, and assuming the PGSA's recharge and its connection to the Boise River and tributaries may touch on that issue, M3 Eagle provides the following discussion.

(1) Even if future natural recharge were at issue here, M3 Eagle's diversion would not exceed it.

Protestants' expert did not directly address any of the statutory permit elements, and had few substantive criticisms of the science in this case. However, in addition to his questions about the flow to the Payette issue, Dr. Ralston also stated that he had a concern about recharge to and discharge from the PGSA, "where it occurs or how it happens." Tr. p. 2355. As noted, Staff raised the issue of "long-term sustainability of the resource," perhaps as shorthand for the same concern. Given the proof about the Aquifer's sufficiency and its strong recharge indicators, and the lack of evidence of any projected injury from Project pumping, it is questionable whether M3 Eagle was obligated to prove anything more about the subject of recharge.[54] Nevertheless, much was shown, and we set forth here what the record contains on this subject.

The appropriation statutes' sole reference to the subject of natural recharge is Section 42-237a(g), which indicates that this question is relevant only where the Director takes action "[t]o supervise and control the exercise and administration of all rights to the use of ground waters." This authorizes IDWR to "initiate administrative proceedings to prohibit or limit the withdrawal of water from any well during any period that he determines that water to fill any water right in said well is not there available." *Id.* This applies when IDWR administers existing water rights,

[54] There is no legal requirement that an applicant to describe aquifer discharge locations, and discharge location is not germane to resolving the question whether M3 Eagle has satisfied the statutory elements. In any event, Applicant has shown that the PGSA discharges to the Boise, the Payette, and the Snake basins.

not when it considers granting new ones. Even then, the law says nothing about how recharge is to be addressed, or whether its exact locations and amounts must be demonstrated.

Even if section 237a(g) were relevant in considering an application and Staff's "sustainability" comment were deemed to raise this issue, there is no evidence that the PGSA is in any danger of being pumped beyond its "reasonably anticipated average rate of future natural recharge." As noted above, the testimony actually is to the contrary: water levels in the PGSA are stable or even rising, and recharge exceeds discharge.

Furthermore, the M3 Eagle proposal involves an extremely small amount of the water available in the PGSA. Currently, the total pumping by all users in the 528-square mile M3 Model domain accounts for only 9 to 14% of the water believed to be flowing into the ground water system in this area. Exhibit 16 at 26; Tr. p. 1635 (Utting). M3 Eagle's pumping at full build-out will be about 1% of total inflow to the M3 Model domain, and about 6-9% of the total current pumping in the domain. Tr. p. 1635; Exhibit 16 at 26-27. The record is devoid of even a suggestion that M3 Eagle's withdrawal will push ground water withdrawals past the reasonably anticipated average rate of future natural recharge. As noted above, the effects of current pumping do not yet appear even to be stressing the system toward a lower equilibrium.

(a) The PGSA is robustly recharged.

Mr. Dittus testified about "the fact that the water level in the Floating Feather well hasn't declined since the well was completed. So there must be sufficient recharge for that to occur, at least." Tr. p. 591. He noted that all of United Water's municipal wells in the area "are either at, or slightly above, their original levels" or have "established a new equilibrium level, that's not significantly different than the original level" in the 1990s. Tr. p. 542.[55]

[55] Mr. Dittus pointed out that these wells "have artesian pressures, . . . which are nice for having low pump lifts." Tr. p. 536. United Water has had no complaints from any other well owner in this area. Tr. p. 525.

Mr. Vincent testified that "the fact that [the aquifer] stabilizes . . . suggests that there is some recharge source somewhere"; he agreed "there is a recharge source coming to the Floating Feather well." Tr. pp. 704-05. Dr. Osiensky testified that "[t]here is no question in my mind" that the Pierce Gulch Sand Aquifer "receives substantial recharge." Tr. p. 3514-15.

Dr. Ralston also testified that the PGSA is recharged, Tr. p. 2264, that the TVHP#1 and State and Linder hydrographs, Exhibit 45, Figs. 17 and 18, "suggest that there isn't a pattern of water level decline over the period from 2000 to 2008," and that there is "no long-term decline evident from these data." Tr. p. 2343. He stated that, based on the lack of decline in the Redwood Creek and Floating Feather wells despite their long-term production, the "water being pumped is ultimately coming from a source of water other than groundwater. It's ultimately coming most likely from a surface source." Tr. p. 2349. He acknowledged that M3 Eagle provided "some . . . identification of recharge areas." Tr. p. 2219.

Nonetheless, Dr. Ralston still questioned "how well [M3 Eagle has] established the recharge and discharge locations and mechanisms," Tr. p. 2249, and noted that the M3 Model boundaries do not extend to one of the five presumed recharge areas HLI identified, the Boise River above Capitol Bridge. Tr. p. 2332 . He considers it "optimum to have the recharge area within the model domain," Tr. p. 2331, but at the same time agreed it was "reasonable" for the M3 Model to establish its boundary "upgradient from flow, groundwater flow through an area of

---

> [T]he heads have remained artesian, and have remained stable during a time when the general production from the area withdrawals have increased. And I think that indicates there is recharge to resupply aquifer from the pumping . . . .
>
> I would infer that, . . . based on the production from the wells, and the fact that the information that we have shows that the wells either are slightly above, or at their original water levels, or else in some cases in West Boise, have established a new equilibrium level, that's not significantly different than the original level, that there is sufficient recharge for their . . . withdrawals.

Tr. pp. 537 and 542 (emphasis supplied).

high transmissivities and known values to establish the input boundary to the model." Tr. p. 2278-79. He stated that he uses this technique when necessary. Tr. p. 2361.

On this point, Dr. Osiensky testified that "[i]t's very common" to construct or use ground water "models whose boundaries do not extend to hydrogeologic boundaries." Tr. p. 3506. Dr. Osiensky testified that he constructs them this way "all the time," *id.*, especially "when you're dealing with a site-specific model," such as the M3 Model. Tr. p. 3507. Dr. Osiensky testified that, in his opinion, the M3 Model's boundaries are "sufficiently distant from the pumping center proposed here to make that model a useful model." Tr. pp. 3507-08. Indeed, Dr. Ralston described the M3 Model as "a good model" in that it "has a number of multiple layers and a great density of no[d]es," and it has "greater sophistication" than the TVHP model. Tr. p. 2369. Mr. Utting said the PGSA receives more recharge than TVHP projected because that study "did not recognize flow to the Payette," with the result that the amount of water in the Aquifer, and the amount of recharge, are greater than previously assumed. Tr. pp. 1627-28; *see* Ex. 331 (TVHP water budget does not account for flow outside Boise basin).

Dr. Ralston also testified that it was reasonable for HLI to rely on the "aquifer recharge findings of the Treasure Valley Hydrologic Project for evaluating what the upgradient input might be." Tr. p. 2279. He agreed that the M3 Model results are a "conservative" look at pumping effects because the model artificially constrains the input across the model's southeast corner to a constant amount and "that establishing the model boundary in that manner would tend to increase the predicted drawdown from pumping within the model." Tr. p. 2282-83. He also noted that to better define the PGSA's recharge and discharge would involve an effort that would be "extensive and much more expensive." Tr. p. 2357. He stated in response to Protestant Thornton's question that obtaining more data "may not be cost effective." Tr. p. 2366.

To obtain a water permit, an applicant is not obligated to identify recharge (or discharge) at all, at least not unless doing so is necessary to resolve a statutory issue. However, based on all of the testimony and documentary evidence, the conclusion is unavoidable that the Aquifer is strongly recharged, and that it discharges in three intersecting river basins.

(b) While exact recharge flow paths are not fully understood, its ultimate source is the Boise River, its feeder streams, and the canals diverting from it.

The question of PGSA recharge is not whether it receives it; all the experts agree it does, and there is no dispute that it receives a lot of it. The question that would be (in Dr. Ralston's words) "much more expensive to answer" concerns the exact flow paths the recharge takes.

The Boise River is a losing stream above Capitol Bridge; ground water there displays decreasing potential with depth—that is, there is downward flow into the aquifer. Tr. pp. 1139, 1143, 3219 (Squires); 1676 (Utting); Ex. 33I p. 2-6. However, as Mr. Squires stated, because the PGSA comes up-dip across much of the Boise Valley,[56] it has access to numerous other recharge sources: "any surface water body: a drain, canals, lakes, the river itself . . ." Tr. p. 3218. "There is a lot of available recharge to the Pierce Gulch Sand Aquifer. It's not just one source." *Id.*.

> The aquifer is a dipping plane of some thickness. And where it breaks the surface is not just at the Boise River, but in the river gravel that is the floodplain . . . terrace. If you looked at it in map view, you'd see this expression as a band that goes all the way across the present-day floodplain of the Boise River and would step up to the next bench and be a band across that and the next bench, and all the benches of the Boise River that have saturation in them.
>
> So, the Pierce Gulch Sand Aquifer is open to . . . shallower water at many, many locations, I think, around the valley, not just the Boise River itself. It's a broad band.

Tr. p. 3216 (Squires). Dr. Osiensky's opinion was to the same effect:

[56] Mr. Squires noted, as several exhibits show, that the PGSA does not extend to the Boise River reach above Boise's Capitol Boulevard Bridge. Tr. 3219. It comes up-dip in the Boise Valley west of there.

> The river itself is actually a relatively small contributor. I would say that most of the recharge occurs from the spreaded irrigation water in terms of all the hundreds of miles of canals that crisscross the valley.
>
> So all that river water from the reservoir is being distributed. That's recharging the gravels. And then the water is infiltrating from the gravels down into the Pierce Gulch and all the other aquifers.

Tr. p. 3513. The Staff and Dr. Ralston provided no opinion on how the Aquifer is recharged (although, as noted, they did acknowledge that recharge occurs).

In Mr. Squires' opinion, the PGSA also receives "some of the water that moves through the Terteling Springs formation [which then] moves into the Pierce Gulch Sand Aquifer." Tr. p. 3215. He described this as "overflow out of the Terteling Springs Formation," Tr. p. 3218, which consists of sands in direct connection with the Boise River in the above-Capitol Bridge reach. Tr. p. 1240. Mr. Squires defined the recharge flow path into the PGSA as a "tortuous" one, Tr. p. 3228, "an indirect path" which "affects travel time." Tr. p. 3219-20.

The TVHP's findings also support this. Although it did not expressly reference the then-unnamed PGSA (referring instead to "the deeper, regional flow system," Ex. 33A p. 13), that study concluded that recharge moves "from the recharge areas into the deeper Boise area fluvio-lacustrine aquifers," and "from the Boise area aquifers into regional lacustrine/deltaic aquifers in the central and western portions of the valley." *Id.* p. 20. The TVHP noted that "coarse-grained sediments . . . appear to serve as a manifold for deeper, regional ground water migrating horizontally into the basin." *Id.* p. 14. This suggests just the sort of complicated recharge flow path—in some cases from river into one aquifer and out of that into the PGSA— described by Dr. Osiensky and Mr. Squires. The point is that all available data show that the Aquifer receives recharge, and lots of it.

The ground water geochemistry is consistent with the evidence that the Aquifer receives recharge from a variety of sources originating with the Boise River. Contrary to Staff's

suggestions, M3 Eagle's geochemistry study and the carbon-14 age dating reported in the TVHP do not conflict with each other or with the proposition that the PGSA is recharged chiefly with Boise River water. To quote Mr. Vincent, their question is the "issue of residen[ce] time," squaring the idea that water may have entered the ground water system a couple thousand years ago with the fact that the PGSA is "a very transmissive aquifer . . . . very productive," Tr. pp. 720 and 719, and that the water must be moving at least as fast as "maybe 100 years" between "Point A downgradient to Point B." Tr. p. 720. In other words, according to Mr. Vincent:

> I don't profess to know. But I do know that these two things seem to be inconsistent. That . . . is, that we have a strongly recharged very transmissive aquifer, with no restrictions to flow. And yet, we have geologically ancestral water. Those two things . . . something has not been explained to me.

Tr. p. 721. However, to the extent residence time is even relevant given the overwhelming evidence of recharge, the explanation is in the record.

The Aquifer's geochemical signature in the North Ada area is nearly the same as Boise River water—that is, water in the Boise River itself, water leaking from the river into underlying gravels or into the Terteling Springs Formation and then into the PGSA, and river water leaking from canals and lakes that finds pathways to the Aquifer rather than to farmers' fields. Tr. pp. 3214-20. The geochemistry study also states that "the PGSA groundwater originated almost exclusively from ancestral Boise River surface water." Ex. 43 p. 4. Mr. Glanzman, who co-authored the M3 Eagle geochemistry study, explained that the term "ancestral" or "geologically ancestral" means "not modern" (i.e. older than 1952) Tr. pp. 1404, 1460, 1478.

Most important in this regard is that the North Ada PGSA water samples lack constituents typical of applied irrigation water. Tr. pp. 1276 (Squires), 1419, 1450-51, 1484-85, 1493 (Glanzman). Consequently, PGSA water being pumped in North Ada has been in the aquifer for a longer period than the time it would take for flood irrigation water to find its way to

the PGSA and move the several miles to the M3 Eagle area. Tr. pp. 1448, 1493 (Glanzman). This is not based on age dating, but on the absence of these constituents. It would be a matter of judicial notice that significant applied irrigation in the Boise Valley began just under 100 years ago, with the construction of the large canals, especially the New York Canal.

The TVHP discussed carbon-14 age dating that was carried out on ground water samples in 2002, and reported the carbon in the water from samples taken from the Goddard and HP wells to be 2,959 and 2,960 years old, respectively. Ex. 33G p. 80. The first problem with this is that carbon-14 ("^{14}C") dating of ages less than 5,000 years cannot be taken at face value; in fact they cannot be relied on at all with respect to the actual age of water. As stated in the TVHP report itself, "the practical limits of the ^{14}C-age dating method are 5,000 to 30,000 years; therefore, residence time estimates for the basin margin aquifers and some down-valley aquifers must be considered accordingly." Ex. 33G p. 55 (emphasis supplied). *See also* Tr. 1412-14 (Glanzman explaining that "we don't know" the age of the carbon in the water below 5,000 years). It therefore is unclear how TVHP authors concluded that samples from the Goddard and HP wells had residence times of from "0 – 2,000" years and "0-3,000" years, much less a specific age. Nevertheless, the TVHP report estimates the residence time for water sampled from the "fluvial sands" in the TVHP#1 monitoring well as from "0-1,000" years. Ex. 33G p. 56, Table 5.[57] As a scientific matter, the carbon age in these samples is as likely to be 0 as 3,000.

Furthermore, as Mr. Glanzman explained, carbon dating dates the carbon itself, not the water, and the two are "very different." Tr. p. 1406. With respect to carbon dating the TVHP carried out on what we now know are PGSA waters, he agreed "we don't know whether it's 160 years or 1600 years . . . that [the sampled] water has been in that aquifer." Tr. p. 1407. Mr.

[57] HLI, which did not conduct any carbon or other age studies in its geochemistry analysis, simply noted in its analysis that it had no data in which to question the accuracy of TVHP's numbers. Ex. 45 at 27. However, as noted, the TVHP itself provides the basis for questioning the age of the carbon in the samples it surveyed.

Glanzman stated that the TVHP was "not literally correct" in equating a range of carbon dates with water residence times. Tr. p. 1408. "[T]hat is not the case. They are quite separate issues."

> It's not the water that you're dating. It's the carbon. The carbon can come—old carbon can come from a variety of sources, a geothermal upwelling that we know we have in the upper basin. It can come from residence time in low permeability, even the riverbed. It can come through a tortuous path that works its way through various geologic formations and into the Pierce Gulch Sand Aquifer.

Tr. p. 3221 (Squires). Mr. Squires believes it "takes more than one hundred years" for water that enters the PGSA "to make its way to M3" where the chemical samples were taken. Tr. p. 3222.

Dr. Osiensky testified that "[t]here's no question in my mind" that the PGSA "receives substantial recharge," Tr. pp. 3514-15. However, he noted that

> recharge that's occurring today could easily take a hundred years or so forth to show up in any downgradient wells. . . .
>
> Basically, it's a capture zone analysis of where the water is coming from when you pump a specific well. And it's very, very complicated.
>
> You could have a river right next to the well and complete a capture zone analysis and find out that that well is not capturing any of the river water. It's capturing it from somewhere else. So even wells right close to the river could have relatively old water and not show the effects of recharge for easily a hundred years. . . .

Tr. pp. 3513-14.

Geochemistry certainly does not answer all questions about the complicated subjects of recharge pathways, capture zones, and carbon sequestration and release, but it reinforces findings about the Aquifer's extent and lack of compartmentalization and in no way undermines the conclusion that it is strongly recharged. There is evidence that PGSA water in the Project area has been in subsurface transit longer than 100 years. But this does not contradict the idea that the Aquifer is robust, highly transmissive, and accepting recharge. Recharge is strong, but it also is complex. Recharge from the Boise River and its tributaries, gravels and diversions evidently takes over 100 years to reach the Aquifer in the North Ada area. There is no contradiction there.

Indeed, hydraulic testing, long-term monitoring, predictable seasonal fluctuations, and aquifer stability despite decades of pumping all prove that large amounts of recharge are available to the PGSA. The fact that the geochemistry shows it to be sourced in the Boise River is simply more positive news; it is the biggest water source around.

(2) Any effect of M3 Eagle's pumping on the Boise River would have to be small and most likely would not be measurable.

According to the M3 Model, drawdowns in the PGSA caused by M3 Eagle's pumping near the Boise River would be approximately 5 feet after 50 years. Tr. pp. 1594-95 (Utting), 3384-85 (Squires); Exhibit 16 pp. 60-61 (again, estimated using several conservative calculations). Although M3 Eagle did not specifically study the potential effect its pumping might have on the Boise River, the effects likely will not be measurable. Ex. 45 p. 39-40. When asked "how do you know there's not going to be an impact to the Boise River," Mr. Squires responded:

> [T]o the extent that we are saying . . . that there . . . could be an impact to the Boise River [it] is because in the area of Eagle and Star, ... water is moving from the ground upward and into the Boise River. That is documented by the fact that the river is a gaining stream in that reach. . . .
>
> So therefore, if we through our pumping . . . were to lower the heads in the Pierce Gulch Sand Aquifer by some X number of feet, then the gradient between the Pierce Gulch Sand Aquifer and the overlying aquifers and the gravel aquifer and ultimately to the river would then be somewhat reduced.

Tr. pp. 1236-37. Thus, if M3 Eagle's pumping will affect the Boise River, it is predicted to reduce the amount of ground water flowing into the gaining reach of the River below Star.[58] In Mr. Squires' opinion, however, this impact "would be very, very small.". Tr. p. 1238. "It would be beyond the ability of us to measure it." Tr. p. 1237. Neither Staff nor Dr. Ralston

[58] As pointed out by HLI in Exhibit 45, p. 40, in its "200-foot guidance," the Department's considers ground water wells completed beneath 200 feet bgl (below ground level) as "probably tributary" to the Boise River below Star Bridge, where currently there are no restrictions on surface water appropriations. M3 Eagle's wells are proposed to be completed below 200 feet bgl.

offered any quantification of the impact of pumping on the Boise River. Thus, the only evidence in the record is that impacts will be small to the point of being immeasurable.[59]

D. It is reasonably probable that M3 Eagle can finance and build the Project.

Two experts on planned community financing, M3 Eagle's Managing Partner Bill Brownlee and special taxing district expert Carter Froelich, each testified that M3 Eagle is in strong financial shape and has sound prospects of financing the Project through institutional lending, through additional equity contributions from its funding partner, and by means of a special taxing district. Protestants presented no contrary evidence.

(1) The legal standard is whether it is "reasonably probable" that financing will be available for project construction.

The Department's rules require applicants to show that it is "reasonably probable that funding is or will be available for project construction." IDAPA 37.03.08.45.01.d.i.[60] Applicants may submit current financial statements, financial commitment letters, "or other evidence to show that it is reasonably probable that financing will be available." IDAPA 37.03.08.40.05.f. "The extent of the applicant's own investment is a strong factor to be considered." *Shokal v. Dunn*, 109 Idaho 330, 336, 707 P.2d 441, 447 (1985).

The "reasonably probable" standard does not require evidence that applicant "then and there" has the financial resources to complete the project. *Shokal*, 109 Idaho at 335-36, 707 P.2d at 446-47. A "then and there" a standard would "go[] beyond a reasonable reading of the

[59] The Staff Memorandum says that Project pumping "would cause a reduction in ground water discharge to the river" but that "[t]he magnitude and location of these impacts has not been determined." Ex. 50, p. 24.

[60] M3 Eagle has met the requirement that applicants "submit plans and specifications along with estimated construction costs for the project works. The plans shall be definite enough to allow for determination of project impacts and implications." IDAPA 37.03.08.40.05.f.ii. *See* Ex. 42A(9) (water, sewer, and pressure irrigation cost estimate) and Ex. 83, p.6 (total infrastructure cost estimate) (both prepared by Stanley Consultants).

statutory requirement of 'sufficient financial resources'" in Idaho Code Section 42-203A(5)(d).

Id. at 336, 707 P.2d at 447. The *Shokal* Court explained that:

> The "reasonably probable" standard used by Water Resources shifts the risk of failure and shows that the state is more willing to take a risk by providing individuals with the opportunity to put water to beneficial use. It indicates a willingness on the part of the state to take a chance that a proposed water use with sound prospects of financing will become a successful venture, thereby benefiting both the water user and the state. We believe this to be a more appropriate standard for the financial resources requirement of I.C. § 42-203A. The water resources of this state are not so limited that they must be safeguarded with permits issued *only* when the applicant has secured all necessary financing prior to the water appropriation permit application. At the same time, the applicant must make a showing that it is reasonably probable he or she will obtain the necessary financing within five years.

Id. (emphasis in original).[61] M3 Eagle has made such a showing.

(2) With three robust funding sources available, it is probable M3 Eagle will successfully finance the Project.

Mr. Brownlee testified that master planned communities are typically funded through a combination of funding sources as the project progresses. Tr. pp. 2580, 2584-85, 2599-601.

---

[61] Applicants for "future needs" municipal water rights should not be held to a five year deadline for making the reasonably probable showing. *Shokal's* "five years" is a reference to the statutory requirement that applicants show beneficial use within five years. Idaho Code § 42-204. In other words, *Shokal's* reference is a practical recognition that a permit holder who must prove beneficial use within five years also must obtain financing for the project within that time. Applying the same reasoning to "future needs" water rights, it is logical to conclude that the *Shokal* standard requires a showing that it is reasonably probable the applicant will obtain financing to complete the project within the planning horizon. The *Shokal* Court of course did not address municipal permits for reasonably anticipate future needs because the decision predated the 1996 Municipal Water Rights Act.

This comports with IDWR's existing policy for proving beneficial use and licensing future needs municipal water rights. *See Administrative Memorandum – Application Processing No. 63* (June 15, 1999) ("Memo 63"). Memo 63 states that, in proving beneficial use at the standard 5 (or 10, with an extension) year deadline, a municipal provide with a future needs permit must demonstrate that:

> the constructed portions of the system were shown to be significant, integral phases of implementing a detailed plan to provide the full capacity of the system and there was substantial planning, design, and investment in the unconstructed capacity of the complete system. Documentation that could be used to demonstrate substantial planning, design, and investment in the unconstructed capacity of the complete system includes the following:. . . [a] financing plan demonstrating ability to fully pay the costs of constructing the full capacity system needed to meet reasonably anticipated needs . . . .

Memo 63 at 3 (emphasis added). Thus, the Department's policy recognizes that, even 5 or 10 years after permit issuance, it is reasonable to require a future needs permittee to show only a "financing plan," not to demonstrate financing in hand for complete project costs.

They are financed in phases. "Well, the process is an ongoing process. It's not a one-time financing. It's in phases."[62] Tr. p. 149 (Brownlee). "[T]he same [financing] structure does not apply to all phases of the project." Tr. p. 2581.[63] Mr. Brownlee identified three available funding sources: institutional debt (e.g., bank loans), additional contributions from its partner, and infrastructure financing through a Community Infrastructure District ("CID") under Idaho Code §§ 50-3101 *et seq.* Tr. pp. 2580-82, 3754.

> [W]hat we are looking at is trying to not have a highly leveraged piece of property going through the entitlements phase, which is essentially what we're in, and then as the project proves itself out and becomes more reliable to be a revenue-producing entity, you increase the leverage, either through utilizing some form of bond financing, such as the community infrastructure district, or a combination of that with institutional funding.

Tr. p. 2581. Mr. Brownlee and Mr. Froelich both expressed confidence that M3 Eagle can finance the complete Project using these funding mechanisms. Mr. Froelich stated:

> In my opinion, sir, this project is well positioned to build out in accordance with its plan. It has a very, very strong financial partner with $2.5 billion in assets. It has a large amount of acreage that is currently unencumbered and available for security for additional financing. And we're moving forward with a CID.
>
> To me, this project is absolutely well set up. I mean it's probably one of the best projects I'm working with around the country for financing purposes.

---

[62] Master planned communities do not typically (if ever) have all necessary financing secured before development. As testified by Mr. Brownlee:

> I don't know of any master-plan community development that we've certainly ever been involved in or any one of my peers in the industry that I'm aware of that has a 30-year project that has the financial commitment for the complete, using your terminology, "build-out of the community." I mean that -- those types of commitments don't exist in our world that we deal in.

Tr. p. 2541. Rather, the typical process is to obtain financing for each phase "given the known start of construction date, giving a set of plans and specifications that are approved and permitted and bid by third-party contractors." Tr. p. 2542.

[63] The phasing of M3 Eagle's financing likely will coincide, to some extent, with the phased entitlement approval process contemplated by the Pre-Annexation and Development Agreement, which requires M3 Eagle to provide financial assurances to the City of Eagle and other entities, such as Idaho Transportation Department and Eagle Sewer District, before it can receive proceed with development of each Project phase. Tr. pp. 3760-61.

Tr. p. 3732. Mr. Brownlee testified that it is "absolutely" reasonably probable that M3 Eagle will be able to finance the entire M3 Eagle project. Tr. p. 3765.

(3) M3 Eagle's strong financial position is likely to attract additional financing.

M3 Eagle's financial position is uniquely well-positioned in two respects: it owns the 6,005 acre Project site free and clear and it has a strong financial partner, the Dallas Police and Fire Pension System ("DPFPS"). Mr. Brownlee and Mr. Froelich both testified that these factors will assist M3 Eagle in financing the Project. Tr. pp. 2580-82, 2598, 3752 (Brownlee); 3626-27, 3732 (Froelich).

(a) M3 Eagle's ownership of the Project site debt free gives it a strong position in the marketplace.

Mr. Brownlee testified that, because M3 Eagle owns the 6,005 acres of land for the Project "free and clear," it is "in control of [its] own destiny." Tr. p. 2537-38 (Brownlee). That is, despite cyclical economic downturns, M3 Eagle is in "the position to be able to move forward with [its] financial partner when the market so dictates to do so." *Id.* Mr. Brownlee explained:

> In our industry you don't typically see this large scale of property being owned free and clear. What it does is it allows us the flexibility to choose how to finance the project going forward, because typically in a financing structure you use the land as collateral . . . . Having all of the land free and clear provides you additional collateral to utilize to finance the infrastructure.

Tr. p. 2598. Mr. Brownlee described this as a "very conservative structure," Tr. p. 2536, compared to "other deals that are in stress because they have too much leverage or that the institutional lender is calling the loan or failure to renew the loan because of failure to meet loan covenants . . . ." Tr. p. 2537-38. *See also* Tr. p. 3752 ("The unique portion of our structure . . . is that we intentionally structured this deal with no leverage. . . . [which] gives us flexibility in how to finance the infrastructure of this project going forward.")

Mr. Froelich agreed that "it's a huge thing to have no debt on the property" because:

> it's another one of the factors that the financial institutions are going to be taking a look at, as well as the [CID] bond goes because there's less stress on the project. And so when it comes for us to go forward and issue debt [with a CID], it's definitely a positive.

Tr. p. 3626-27. Because M3 Eagle owns the land, it could "absolutely" finance the Project's entire water infrastructure without establishing a taxing district. Tr. pp. 3735-37 (Froelich).

(b) M3 Eagle's strong funding partner provides a source of funding and makes it more likely the Project will attract investors and lenders.

M3 Eagle's financial partner, DPFPS, is a pension fund worth around $3 billion. Tr. pp. 2535, 2561, 2570-73. DPFPS so far has contributed about $79 million in debt and equity to the Project. Exhibit 87 (CDK letter).[64] DPFPS can, and likely will, contribute more to the Project in the future. Tr. pp. 3750-51 (Brownlee testifying that he believed DPFPS would continue to fund approved business plans); Tr. p. 3739 (Froelich believes DPFPS will be a strong partner until Project build-out so it can "hit their investment returns").

The strength of DPFPS as a financial partner also will help M3 Eagle secure financing through institutional debt and the CID. As Mr. Brownlee testified:

> What institutional lenders typically look at is they look at who are the partners in the transaction . . . . And so when you have a financial partner in a transaction such as this that has those types of resources and balance sheet, it assists you as a developer of the property to obtain institutional or bond structured financing . . . ..

Tr. pp. 2580-82. Mr. Froelich agreed that DPFPS is a "very strong financial partner" which is "a very strong positive as relates to the project going forward." Tr. p. 3627.

[64] DPFPS's equity contribution to the Project so far is approximately $64 million, representing the cost of the land purchase for the Project. Ex. 85 (M3 Financial Statement). DPFPS's debt contribution consists of an unsecured $15 million note payable. Tr. pp. 2535, 2570-71 (Brownlee); Exhibit 85.

(4) Financial statements show M3 Eagle's solid financial position.

According to Mr. Froelich, Simek & Co.'s review of M3 Eagle's March 31, 2009 financial statements, Exhibit 85[65] was the second highest form of financial "certification" performed by a CPA (i.e. it is not an audit) and consisted of "their opinion . . . that they are comfortable that there are no material modifications that need to be made in the financial statements of M3 Eagle LLC." Tr. pp. 3667, 3731. Mr. Froelich—a certified public accountant who regularly relies upon financial statements such as these—testified that this certification provides him with confidence that they are "a fair representation of the financial condition of M3 Eagle as of that date." Tr. pp. 3670, 3731. Mr. Froelich testified that "banks will put great reliance on this type . . . of financial statement," Tr. p. 3671, and that they are "absolutely sufficient" to show that M3 Eagle is in position to develop the Project. Tr. p. 3674.

(5) M3 Eagle's proven track record of financing real estate developments, including several master planned communities, shows it has the experience to obtain financing.

Mr. Brownlee began in real estate development in 1983. Tr. p. 94. M3 Eagle's parent, M3 Companies (of which Mr. Brownlee is a founder and Managing Partner), has been building master planned communities since 1993. *Id.* In addition to M3 Eagle, it has developed, or is in the process of planning and developing, four other master planned communities in Arizona and Colorado. Tr. pp. 94-110; Exhibit 66. Through the development of these planned communities, M3 Companies has created water and sewer districts, worked with state and local governments, solved difficult ground water supply issues, and implemented water conservation measures and wastewater reuse systems. *Id.* It also has successfully weathered economic downturns. *Id.*

[65] Exhibit 86 is an M3 Eagle letter to Simek requesting their review of M3 Eagle's Financial Statements and representing that the information M3 Eagle provided to Simek is accurate and complete.

M3 Companies obtained the financing necessary to construct the infrastructure at its other master planned communities. To illustrate, Mr. Brownlee testified to raising $70 to $80 million of investor financing since 2007 at M3 Companies' Wickenburg, Arizona project. Tr. p. 2596. He also testified to financing construction of the successful American Ranch and Prescott Lakes projects through bank financing. Tr. p. 2597.[66] M3 Companies has successfully used special taxing districts like Idaho's CID for financing infrastructure at other projects. Tr. p. 3758.

(6) There is little doubt that the M3 CID will be successfully established and implemented.

M3 Eagle currently plans to finance a significant portion of the Project's public infrastructure by establishing a CID (the "M3 CID"). Mr. Froelich, an expert on the implementation and administration of special taxing districts for land development (such as Idaho's CID program), testified about the M3 CID on which his firm is working.

> [A CID is] a separate political subdivision that is enabled to issue tax-exempt bonds to finance the construction or acquisition of eligible public infrastructure. In the state of Idaho, that would be water improvements, sewer improvements, roadways, drainage, police facilities, fire facilities, public recreational facilities, impact fees, real property interests, et cetera, related to public infrastructure.

Tr. p. 3622. Mr. Froelich described how the M3 CID is expected to finance approximately $217 million of the Project's infrastructure costs. Ex. 83, pp. 3, 6. Mr. Brownlee explained:

> It's our intention to prioritize that for items such as the sewer and the water within the community and the roads, but particularly utilizing the CID to finance off-site infrastructure such as roadway and intersection improvements that have the ability to be financed utilizing impact fees over an extended period of time, but may require improvements at the earlier phases of a project.

Tr. p. 3756.

[66] M3 Companies also has restructured projects when anticipated financing becomes unavailable. Tr. p. 149 (Brownlee describing successful restructure of Prescott Lakes financing when the lender filed for bankruptcy and a partner in the project went out of business).

M3 Eagle expects the CID to be established upon annexation of the Project site into the City of Eagle. Ex. 83. Mr. Brownlee testified that M3 Eagle plans to file a petition for annexation by the end of 2009, following approval of an already filed annexation petition that will make the Project site contiguous to the City. Tr. pp. 3765-68; Exhibit 88. The M3 CID formation documents currently are being reviewed by the City's attorneys. Tr. pp. 3623, 3628 (Froelich), 3758-59 (Brownlee); Exhibit 83, pp. 3-5.

There is no evidence to suggest the M3 CID will not successfully form and issue debt to finance the Project. Mr. Brownlee testified that he believes the M3 CID will be approved and implemented. Tr. pp. 3759-60. Mr. Froelich testified that:

> [e]very indication that we have is that the City of Eagle is willing to go forward with the establishment of the district . . . . And based on every indication that I have been given, there's no reason to anticipate that a CID would not be established.

Tr. p. 3628. The opinion of Mr. Froelich, whose experience includes forming and administering over 2,000 special taxing districts, should be given considerable weight. Tr. pp. 3622, 3625 (Froelich); Ex. 83, p. 3. No expert testified on behalf of Protestants on any of these subjects. In short, M3 Eagle has met the *Shokal* "reasonably probable" standard on the financing issue.

E. The Application is consistent with the conservation of water resources within Idaho.

Idaho Code § 42-203A(5)(f) authorizes an inquiry into whether a proposed water use is "contrary to conservation of water resources within the state of Idaho." Although the Department's rules do not address this criterion, in 2002 this provision was the basis for denying two water right applications filed to serve proposed gas-fired power plants in north Idaho.[67]

[67] *In the Matter of Application for Permit No. 95-09069 in the Name of North Idaho Power LLC*, Idaho Dep't of Water Resources (Preliminary Order, July 18, 2002); *In the Matter of Application for Permit No. 95-09086 in the Name of Kootenai Generation LLC*, Idaho Dep't of Water Resources (Preliminary Order, July 18, 2002).

Both were denied because the plants would use water cooling technologies deemed too consumptive, where more efficient technologies were available.

Here, there is no evidence that M3 Eagle's proposed use of water will be inefficient. Engineer Steve Holt carefully calculated M3 Eagle's anticipated demands. Tr. p. 373; Exs. 32L, 42A(5.7). He used reliable reference data from numerous sources to estimate water demands for each foreseeable Project use. Tr. pp. 377-84; Ex. 32L. He accounted for M3 Eagle's use of its surface water rights and conservation measures, and reuse of all treated wastewater. Tr. pp. 395-96, 403-04, 409-12; Ex. 42A(5.7). Dr. Holt calculated the maximum peak diversion rate of 23.18 cfs and maximum annual diversion volume of 6,535 acre-feet. Tr. pp. 389-90; Ex. 42A(5.7) p. 3. These are, in the words of the statute, the Project's "reasonably anticipated future needs." No competent evidence contradicted Dr. Holt's conclusions. Tr. pp. 2871-73.[68]

M3 Eagle also plans water conservation measures such as limiting lawn sizes, requiring drip irrigation in non-turf areas, metering all water uses, and setting water rates to encourage less use. Tr. p. 411 (Holt); Ex. 42A pp. 4-5. M3 Eagle has a proven track record of successfully using such measures at its other projects in Colorado and Arizona. Tr. pp. 107-08 (Brownlee). Perhaps the most significant water quantity conservation factor is the plan to treat all wastewater generated within the Project to Class A standards and re-use it for irrigation and aesthetic storage. Tr. pp. 393-94 (Holt); Ex. 42A p. 3. This will reduce by over 1,800 acre-feet the amount of ground water that otherwise would be diverted annually at full build-out. Tr. p. 394-96; Ex. 42A p. 11. It also is significant, in conserving water quality in the Aquifer, that M3 Eagle will rely on a handful of properly sealed municipal wells to serve some 7,100 units instead of perhaps 7,100 domestic wells that, if experience is any guide, may not be properly sealed and

[68] Jason Smith attempted to compare M3 Eagle's use figures with those in United Water's overall system, but did not dispute that this compares "apples to oranges." Tr. pp. 2870-71. Mr. Smith also testified that he had no reason to question Dr. Holt's water use demand calculations, his methodology or his conclusions. Tr. p. 2872-73.

could threaten ground water resource. Finally, M3 Eagle seeks a 6,535 acre-foot cap on annual diversions, which results in an average diversion rate of 9.03 cfs. Tr. pp. 274-75 (Brownlee). M3 Eagle clearly satisfies the conservation criterion.

F. M3 Eagle's application is made in good faith and not for speculation.

The Department's rules concerning good faith invite evidence about the applicant's "filing and diligent pursuit of application requirements." IDAPA 37.03.08.45.01.c. "Speculation . . . is an intention to obtain a permit to appropriate water without the intention of applying the water to beneficial use with reasonable diligence." *Id.* All the evidence shows M3 Eagle has made this application in good faith and not for speculation. No evidence is to the contrary.

M3 Eagle has stated its willingness to accept permit conditions that limit the use of water to within a service area coinciding with the Project's boundaries. It is seeking a future needs water right under the Municipal Water Right Act, which itself prohibits speculation. Idaho Code §§ 42-219(1) and 42-222(1) (requiring license conditions prohibiting transfers of RAFN water rights to places of use outside of service area or to new nature of use). M3 Eagle owns the Project lands and has diligently sought and obtained land use entitlements and other necessary approvals. It already has conducted extensive scientific and engineering studies and constructed four designated, long-term monitoring wells (TW1-TW4). It fully intends to construct the Project. There are no obvious impediments to its completion. M3 Eagle satisfies this criterion.

G. M3 Eagle satisfies all requirements for obtaining a municipal water right for reasonably anticipated future needs.

The 1996 Municipal Water Rights Act provides that "municipal providers" may secure water rights for "municipal purposes" of sufficient quantity to serve all "reasonably anticipated future needs" within a "service area" during a specified "planning horizon." The record in this case shows that M3 Eagle's proposed use fits within this statutory scheme.

There is no doubt that M3 Eagle's proposed use, which is for "residential, commercial, industrial, irrigation of parks and open space, and related purposes," meets the "municipal purposes" definition in Idaho Code § 42-202B(6). And the quantity of water M3 Eagle seeks is sufficient to serve all reasonably anticipated future needs within its Project boundary (i.e. the "service area") at full build-out in about 30 years (i.e. the "planning horizon"). M3 Eagle's application expressly states, and it was reiterated during the hearing, that this water right will solely be used within the "service area" defined as the Project boundary. Tr. pp. 235-36 (Brownlee); 344 (Church); 460-61, 483 (Wonders); 396, 434 (Holt); Ex. 42A p. 6. The record also shows that 30 years is a reasonable planning horizon for this application because the Project can be financed, constructed, and its residential units absorbed by the housing market within that time frame. Tr. pp. 133-34, 137, 154, 163-64 (Brownlee); 326-27, 337-40, 344, 347, 359-60 (Church); 422 (Holt) Exs. 40; 42A p. 6, 59, 60.[69] There is no evidence to contradict Project water demands or the conclusion that these are reasonably anticipated future needs.

M3 Eagle also qualifies as a "municipal provider" entitled to a municipal water right for reasonably anticipate future needs. In the interest of space and organization, this subject is addressed in a separate brief submitted simultaneously herewith.

III. THE DEPARTMENT SHOULD REJECT APPROACHES TO PERMITTING THAT HAVE NO LEGAL OR FACTUAL BASIS.

Protestants suggest that the Department should approve the application in phases, delay approval until more studies are conducted, and account for pending applications and undeveloped permits in Basin 63. These suggestions are without legal support.

[69] M3 Eagle's application and expert testimony acknowledge that build-out could occur in 20 years, but it is more reasonable to use a conservative 30-year planning horizon because development will be influenced by factors beyond M3 Eagle's control (such as market conditions). Tr. pp. 341-44, 347 (Church); Ex. 42A p. 6.

A. There is no legal support for approving water permits in phases.

Protestants desire to have M3 Eagle's water right somehow granted in "phases," a suggestion the Department should reject as inconsistent with Idaho law. Since 1903, Idaho has used a permit system of water rights appropriation. The adoption of this system reflected a major shift from the constitutional method of water appropriation that preceded it. Under the constitutional method, a water user simply diverted the water to beneficial use and obtained a right thereby.[70] This was, in essence, a "phased" approach to establishing water rights. For example, if a farmer brought 20 acres under irrigation in 1890, he was entitled to a water right with that priority date for that amount. If three years later he managed to bring another 10 acres under irrigation, he obtained a separate right with a junior priority date. This approach put senior appropriators at significant risk because others (even those arriving later) who managed to develop their projects more quickly might jump ahead in priority. Consequently, no water user would know until their project was completed whether a reliable water right could be obtained.

The permit system changed that. A permit affords applicants a reasonable level of certainty that the permit will mature into a license (a perfected water right) if they complete the project and apply water to beneficial use in accordance with permit conditions. The permit system's benefits come with burdens. An applicant must meet applicable criteria. Notice is required, and others may protest. The permit may be conditioned in various ways.

However, there is no authority for a phased approval. With a permit in hand, the holder can begin to develop the project with assurance that the full quantity will be licensed if properly developed within the bounds of the permit. Thus, if an applicant shows upfront that its proposed use satisfies the criteria, the permit system provides the certainty needed to invest in the project.

[70] A sub-species of beneficial use rights arose under an 1881 statute, 1881 Idaho Sess. Laws, at 267 (repealed by the permit statute in 1903), allowing water users to post and record notice of their intent to appropriate water. These rights also had the advantage of "relation back" of the priority to the date of the notice.

This certainty is a fundamental purpose of the permit system. As the Colorado Supreme Court said, describing the comparable system of conditional water rights in that state:

> This makes public and private projects possible by giving appropriators the time and certainty necessary to obtain and complete engineering, financing, and construction of the necessary works for capturing, possessing, and controlling water for beneficial use in the completion of an appropriation.

Pagosa Area Water and Sanitation Dist. v. Trout Unlimited, 170 P.3d 307, 314 (Colo. 2007).

Although a permit is not yet an actual water right, it is an entitlement that the holder can rely on pending prove-up. As Mr. Hutchins noted in his treatise:

> The permit's importance lies in the fact that it fully describes the appropriative water right which the applicant is specifically authorized by the State to acquire, and which he will acquire if he completes the designated process successfully.

1 Wells A. Hutchins, *Water Rights Laws in the Nineteen Western States,* at 332 (1971) (emphasis supplied). Where the applicant meets his burden, it is inappropriate to grant less than the full water right sought or to phase its approval into separate priorities based on concerns that information available today, such as that regarding injury, ultimately may prove incorrect.

Protestants' suggested phasing would abrogate the intent of the permit system. There is no legal support for a permit granting less than the quantity sought in the absence of a preponderance of evidence showing that the project actually needs less water.

Our water law includes an ample arsenal of means to address injury if it occurs. Curtailing a junior right is always an option. Furthermore, having a water right in hand is what allows a junior the opportunity to provide mitigation should that become necessary. Mitigation is another piece of the mandate that Idaho's waters are to be placed to maximum or optimum use.

Phasing, on the other hand, would circumvent procedures for administration, mitigation, and curtailment of a water right. It would preempt and deny the permit holder all defenses to a delivery call (such as proof of material injury, futile call, or reasonable means of diversion),

eliminate the critically important option of providing mitigation, and substitute an arbitrary and draconian remedy (automatic curtailment of all further project development). The phasing concept also would impose this penalty before the fact, on the idea that it should go forward only in pieces, with separate priorities and water rights instead of the one applied for. The legal effect of the phasing conditions would be to deny the permit holder his or her rights under the prior appropriation doctrine; the practical effect in many cases may be to prevent project financing.

Phasing also would be contrary to policies favoring sound planning and comprehensive development of water resources that underlies the growing communities doctrine, Idaho's municipal water rights statute, and the state's policy of optimum development of water resources. To achieve such optimum development, it is appropriate that the Department grant full water rights for large development projects that may take many years to complete. The large-scale, master-planned developments that can implement progressive water conservation and smart growth techniques cannot be realized if developers are unable to obtain water rights for the entire project due to hypothetical concerns about injury, whether or not these concerns are legitimate or surrogates for anti-growth sentiment.

A "wait and see" approach implicit in a phased permitting policy would make it impossible for developers to proceed; they could not begin a project when their permit on its face displays insufficient water rights to complete it. Mr. Brownlee and Mr. Froelich both testified about these problems, noting the importance to the Project, particularly to its financing, of obtaining the water right applied for—that is, one necessary to support the Project at full build-out. Tr. pp. 157-59, 262-63 (Brownlee); 3630-31, 3718-20 (Froelich); Ex. 83 p. 4. Protestants' suggested phasing conditions would undermine projects that plan to efficiently develop and use the state's water resources, such as M3 Eagle's, and thwart the goal of optimum use.

Finally, there is no statute, regulation, precedential order, or guidance policy of the Department outlining how "phasing" might operate, procedurally or substantively. Presumably, one approach would be to reduce the quantity for the permit to, say, 5 cfs and require M3 Eagle to return to the Department with successive applications in future years. But this approach has no support in law.

Another (perhaps the only other) approach would be for IDWR to authorize the permit for the full quantity and priority sought but retain jurisdiction over the permit to enable IDWR to allow diversions under it in increments over time. Such a mechanism is difficult to reconcile with the statutory procedure, which contemplates that once the hearing is concluded IDWR will make a decision "from the evidence presented." Idaho Code § 42-203A. IDWR's rules contemplate retaining jurisdiction only "to insure compliance with the design, construction and operation provisions of the permit." IDAPA 37.03.08.050.09. Under this single provision, IDWR can retain jurisdiction, but only to ensure that the permittee does the things required. This was the thrust of the two letters in 2007 from M3 Eagle's counsel to former Director Tuthill. Exs. 55 and 56. However, the rule does not contemplate retaining jurisdiction to periodically re-evaluate how much water the permit holder will be allowed to develop in light of new evidence.

Retaining jurisdiction for such purposes may require IDWR to re-open the contested case periodically and hold hearings. We are at a loss to see how such an arrangement could be squared with the statute or the Department's Rules, and raises significant questions about how administrative and judicial appeals would proceed from the individual contested cases.

Finally, Protestants' phasing idea confronts a significant irony because, in a project like M3 Eagle's, real phasing—phasing that also is meaningful in water resources administration and permitting—already is a fact without bending the statutory program to fracture a water permit

into unworkable pieces. Such a project cannot be built within five years, or even ten. It will be built in phases over 30-year planning horizon, as the testimony shows. If adverse effects on other water rights become evident after one phase, M3 Eagle will be subject to administration and it will have to address the injury (through mitigation or some lawful defense) or else face curtailment. In other words, as a practical matter, there would be no phase 2 of development if phase 1 causes injury. The solution, however, is administration, not some preemptive withholding of water right based on presumed, guessed-at, or projected injury.

To assure the effectiveness of administration, and to reduce the burden and risk borne by other water right holders, M3 Eagle has expressed its willingness to continue the ground water monitoring it started three years ago using its high-quality monitoring well network. This will allow the Department to evaluate the Project's effects on the Aquifer as development proceeds. Mr. Squires suggested a hydrogeologic report every five years based on annual monitoring data:

> Q. [BY MR. THORNTON]: When they talk about a development over a 30-year period, five phases, that's six years [per phase]. So my question to you is, five years or six years—and I believe I just heard you say that that is a good amount of time to tell what's starting to go on?
>
> A. [BY MR. SQUIRES]: Well, I would say that you use every scrap of data that you have from Day One. But I would think that it would be appropriate to have phased interpretations. I certainly think that, for example, if you were monitoring water levels and you were required . . . as part of a monitoring plan to submit data . . . on an annual basis of the actual information to the Department, [and] that every five years you were required to . . . evaluate and do an interpretive report, . . . I agree with that kind of a phased approach. I think that's a very responsible way.

Tr. p. 3340. Monitoring the actual ground water resource is the best way for all interested parties to deal with water development, to track effects literally day by day, if need be, and to impose administration (including a mitigation requirement) when an if it is shown to be needed. This is the way our prior appropriation system works. It also is something that M3 Eagle has supported since at least 2007, where counsel noted in a letter to the Director that it would be

> within the bounds of the municipal water rights statute[] for the Department to approve the application but impose a condition requiring periodic reporting on well production, aquifer pressure levels, and similar information.

Exhibit 56, p. 2. However, withholding portions of the permit based on a phasing concept is not within those bounds.

In sum, Idaho's permit system affords applicants a reasonable level of certainty that if the applicant completes the project and applies water to beneficial use, the permit will mature into a license. The phasing Protestants seek would contradict this system and create a new rule for this water right that is at odds with the law and that would impair at the outset the applicant's ability to fund and complete the project. It also would deprive M3 Eagle of defenses and alternatives to curtailment, all of which are based on holding a water right in the first place. The Department should reject Protestants' suggested phasing condition.

B. There is no basis for denying or delaying this water permit on a theory that "more studies" should be done.

The Protestants and the Staff have suggested that the Department consider more studies of North Ada hydrogeology before making a decision on M3 Eagle's water right application. This suggestion has no basis in law, science, or common sense.

The Department is required to evaluate applications based on statutory criteria and the evidence in the record. Nowhere is it implied that an application (outside of a designated GWMA or CGWA) can be denied to await pending or future studies. It would be particularly arbitrary to deny or delay an application to await the completion of studies where, as here, the applicant already has conducted many and has provided not only substantial new information

about the water resource, but also information that strengthens the conclusion that the water resource is sufficient.[71]

M3 Eagle recognizes that more study could yield additional information about the PGSA, but it can be of no consequence to this application, which already has a full record. Moreover, the testimony is that, for example, another aquifer test would reveal no information that would alter the conclusion that the PGSA is sufficient to supply M3 Eagle's proposed use without causing injury to existing rights. Tr. pp. 3277-78 (Squires); 1541-42 and 1566 (Utting); 3471-79 (Osiensky). Dr. Osiensky testified that a longer or higher-volume aquifer test would not add significant information. Tr. p. 3471-75. According to him, for example, the SVR7 aquifer test was "an outstanding test." Tr. p. 3469. "[I]t was a very large-scale test, over nine days pumping a large volume of water." Tr. p. 3464. Even Mr. Vincent had testified that in his experience "[t]ypically, on the order of ten days might be a good test." Tr. p. 647. The SVR7 test was 9 days of continuous pumping, then weeks of monitoring. Mr. Utting described it, in his 30 years as a hydrologeologist, as "the best test that I have ever participated in. The most thorough, the most comprehensive, the most detailed analysis. It is a superior test, superior results." Tr. p. 1566. It is "by far the best" in the Treasure Valley that he has seen. Tr. p. 1566. "I've never seen anything close to it." *Id.* (Utting).

Dr. Osiensky disagreed with Mr. Vincent's suggestion that the SVR7 test was "insufficient to be definitive about what's happening in the aquifer." Tr. p. 3461-64. Dr. Osiensky explained how extensively the test stressed the PGSA, and concluded, "This is a very, very substantial test, and I don't agree with [Mr. Vincent's] statement. . . ." Tr. p. 3464. Dr. Osiensky continued,

[71] Exhibit 56 reports on M3 Eagle's discussions with former Director Tuthill to the effect that this water right application "will not be delayed by" the Department's ongoing North Ada hydrogeological evaluations.

> the SVR7 aquifer test is an excellent test. No question that that was a very well run test. All the data that were collected were wonderful. The data were collected on one-minute intervals, and there were no problems with the data. There were no problems with any of the data loggers. The analysis was very thorough, and the report is excellent.

Tr. p. 3470. Dr. Osiensky further explained, "If you read through the report, the report is very, very comprehensive. It has all of the data. It has all of the uncorrected data and corrected data in the report. Very thorough." Tr. p. 3470. From the SVR7 aquifer test, Dr. Osiensky testified:

> [I]n my opinion very definitive transmissivity and storativity values were derived. And what I mean by that is that there was no question with respect to how well the data points fit on our theoretical lines. Very, very good fits.
>
> And so I would say that the transmissivity and storativity values that were derived from the test are very accurate."

Tr. p. 3465. With respect to HLI's conceptual model of the aquifer, Dr. Osiensky's opinion was similarly unequivocal:

> Q. What is your opinion of the conceptual geological model testified to by Dr. Wood, Mr. Squires, and questioned by Staff? Do you agree with the conceptual model that Hydro Logic has put forward?
>
> A. I believe that the conceptual model is excellent. I fully believe the conceptual model. In my opinion, the conceptual model . . . has no deficiencies.
>
> Based on all of the data that I've looked at—and I've looked at basically all of the data. I've looked at all of the well logs as far as Stacy Douglas' master's thesis, plus . . . all that Hydro Logic has produced, I've looked at the geophysical logs, I've looked at all the well logs, I've looked at all the cross-sections, and, in my opinion, the conceptual model is very accurate.

Tr. pp. 3495-96.

In the end, even if additional studies could provide substantial new information, possible future discoveries are not before the Hearing Officer. What is before him is a record containing far more than a preponderance of evidence upon which to grant this water right.

C. The Department should not consider other applications or undeveloped permits.

Idaho Code § 42-203A(5)(a) authorizes IDWR to assess the effect on "existing water rights" of the application before it. The law does not direct IDWR to attempt to divine how much water might be developed in the future under pending water right applications or undeveloped permits (collectively, "potential future diversions")—none of which are water rights.[72] Even if it were possible to calculate what may be put to beneficial use someday under potential future diversions, denying a permit on such a calculation would violate Idaho law.[73]

The only evidence on this subject, Protestants' Exhibit 850, a list of pending Basin 63 ground water applications from IDWR's website, illustrates that it also is impractical to try to put a number on potential future diversions. Some seek diversions far removed from North Ada (such as 63-32499, on the Mountain Home Desert southeast of Boise), and most involve aquifers separate from the PGSA (like 63-32423, which is in the Dry Creek Valley), although it is difficult to tell because the list does not identify aquifers. Other applications, dating back many years, may no longer be viable (such as 63-32064, which is on the list but has been withdrawn). Regardless of location, aquifer, or degree of staleness, there is no practical way to determine which of these applications will be developed, in what amounts, or with what effect on any water

---

[72] *Hardy v. Higginson*, 123 Idaho 485, 849 P.2d 946 (1993) (permit is inchoate entitlement, not a water right). Protestants ask that M3 Eagle's application be considered in light of undeveloped ground water permits and applications in Basin 63, and argue that M3 Eagle's model projecting pumping effects, instead of just assuming a 30% increase in area pumping (which it did), also should have taken these applications and inchoate entitlements into account. *See* Tr. pp. 1644-47. The Hearing Officer mentioned that "an issue in question that I will look at" is the "possible appropriations of water" or "prospective appropriations of water" in the area. Tr. p. 3322.

[73] Mr. Vincent raised a related and equally unsubstantiated contention when he stated that "there is perhaps need for a little more scrutiny" when the Department evaluates a water right application for "reasonably anticipated future needs." Tr. pp. 2091-92. This assertion has no basis in law or logic. Neither the water code nor the Department's rules provide for any additional level of scrutiny when it considers a RAFN water right. The criteria that apply are those in Idaho Code Section 42-203A(5). Regardless of whether a water right is for RAFN, the applicant is required to provide evidence of its full impact on existing water rights and show that the supply is sufficient. There is no requirement (nor should there be) that an applicant calculate the unknowable, such as future appropriations or development under as-yet undeveloped permits.

resource relevant to M3 Eagle's application. These problems also apply to water right permits that have yet to be licensed and, to some extent, licensed rights as well: which aquifers do they involve? will permitted quantities be fully developed? are licensed quantities fully diverted? what will be their effect on diversions under this Application?

Attempting to calculate a diversion volume for pending applications or permits—much less their effect on any particular aquifer or prospective ground water right—would be pure speculation, not the type of evidence necessary to support a decision in a contested case.

In determining whether a proposed appropriation will injure existing water rights, the Department's rules, IDAPA 37.03.08.045.1.a, do not contemplate a review of potential future diversions, and instead authorize evaluating "recorded rights" or "the historical amount beneficially used by the water right holder under such recorded rights, whichever is less." *Id.* (emphasis supplied). The Rules allow calculating no more than amounts actually used.

We can find no Idaho judicial opinion dealing with potential future diversions in this context, but the Colorado Supreme Court has addressed it squarely. In *County of Arapahoe v. United States*, 891 P.2d 952 (1995) ("*Arapahoe*"), the court reviewed a denial of a conditional water right based on the assumption "that all major senior conditional rights will become absolute, and that holders of absolute water rights decrees will divert the maximum amount permitted under the decrees."[74] *Id.* at 962. The court rejected this reasoning and held "[c]onditional water rights under which no diversions have been made, or are being made, should not be considered," when evaluating the availability of unappropriated water. *Id.* "[A]bsolute water rights should be considered to the extent of historical diversions rather than on the

[74] In Colorado, a "conditional water right" is defined as "a right to perfect a water right with a certain priority upon the completion with reasonable diligence of the appropriation upon which such water right is to be based." Colo. Rev. Stat. § 37-92-103(6) (2008). A "conditional water right can be perfected into an absolute right to the extent that water is captured by diversion or storage within a reasonable time." *Arapahoe*, 891 P.2d at 970 n.22. Thus, a conditional right in Colorado is analogous to Idaho's water right permit.

assumption that maximum utilization of the decreed amount is the amount used." *Id.* at 962. This is essentially what IDAPA 37.03.08.045.1.a provides.

> The Colorado court went on to point out that
>
> > [t]he policy of maximum beneficial use is derived from an understanding that the waters of Colorado are a scarce and valuable resource [and that an] assumption that holders of absolute and major senior conditional water rights decrees will divert and appropriate to the decreed amounts projects water usage that is unrealistically high, and undermines the policy of maximum beneficial use of water.

County of Arapahoe v. United States, 891 P.2d at 962. Again, Idaho follows the same policy. *Baker v. Ore-Ida Foods, Inc.*, 95 Idaho 575, 584, 513 P.2d 627, 636 (1973) (*citing* Idaho Const. art. XV, § 7). It would undermine this policy to attempt to quantify potential future diversions when determining water sufficiency or potential injury at the application stage. IDWR should consider only water use that historically has occurred. This use is reflected in the current state of the PGSA which, as amply demonstrated in this record, show no signs of being close to full development, much less over-appropriation. In this connection, it is important to note that the TVHP's authors concluded that "the Treasure Valley does not currently have a water shortage." Ex 33A p. 24, and "there currently appears to be more capacity for ground water withdrawals in . . . the western portion of the valley," and that some of the "more than one million acre feet [that] are discharged to the Snake River every year . . . . may be available for development." *Id.* p. 25. The TVHP concluded: "Overall, total aquifer recharge to the Treasure Valley appears to exceed aquifer discharge." Ex. 33I p. 6-3.

Finally, and regarding question of considering potential future diversions, the TVHP made these conclusions after recognizing that there are "over 450 unprocessed new water right applications in the lower Boise River basin" which "could represent an approximate 20% increase over 1996 levels of ground water withdrawals." Ex. 33A p.22. In comparison, as noted

above, M3 Eagle modeled its projected impacts based on an assumed 30% increase in diversions over those currently taking place. As with most of its work in this case, M3 made this calculation even though it goes beyond what is required.

CONCLUSION

For all the above reasons, M3 Eagle's Application should be granted. M3 Eagle respectfully requests that the Hearing Officer include detailed Findings of Fact and Conclusions of Law in his decision.

Respectfully submitted this 11th day of September, 2009.

GIVENS PURSLEY LLP

By _____
Jeffrey C. Fereday

By _____
Michael P. Lawrence

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that on this 11th day of September, 2009, the foregoing was filed, served, or copied as follows:

FILED

Idaho Department of Water Resources 322 East Front Street P.O. Box 83720 Boise, ID 83720-0098	____ U. S. Mail __X__ Hand Delivered ____ Overnight Mail ____ Facsimile ____ E-mail

SERVICE

North Ada County Groundwater Users Association c/o David Head 855 Stillwell Drive Eagle, ID 83616	__X__ U. S. Mail ____ Hand Delivered ____ Overnight Mail ____ Facsimile ____ E-mail
North Ada County Groundwater Users Association c/o John Thornton 5264 N. Sky High Lane Eagle, ID 83616	__X__ U. S. Mail ____ Hand Delivered ____ Overnight Mail ____ Facsimile ____ E-mail
Norman Edwards 884 W. Beacon Light Road Eagle, ID 83616	__X__ U. S. Mail ____ Hand Delivered ____ Overnight Mail ____ Facsimile ____ E-mail
Alan Smith Eagle Pines Water Users Association 3135 N. Osprey Road Eagle, ID 83616	__X__ U. S. Mail ____ Hand Delivered ____ Overnight Mail ____ Facsimile ____ E-mail

COURTESY COPIES

Gary L. Spackman Administrator Idaho Department of Water Resources 322 East Front Street P.O. Box 83720 Boise, ID 83720-0098	____ U. S. Mail __X__ Hand Delivered ____ Overnight Mail ____ Facsimile ____ E-mail

John Westra
Manager, Western Regional Office
Idaho Department of Water Resources
2735 Airport Way
Boise, ID 83705-5082

__X__ U. S. Mail
_____Hand Delivered
_____Overnight Mail
_____ Facsimile
_____ E-mail

Jeffrey C. Fereday