2018

Roger B. Arave and Kimberly L. Arave; Janet Southwick, Trustee; Venture Development Group, LLC, Plaintiffs and Appellees, v. Pineview West Water Company Defendant and Appellant : Brief of Appellee

Utah Supreme Court

No. 20180067-SC

IN THE SUPREME COURT OF THE STATE OF UTAH

ROGER B. ARAVE AND KIMBERLY L. ARAVE; JANET SOUTHWICK, TRUSTEE; VENTURE DEVELOPMENT GROUP, LLC,
Plaintiffs and Appellees,

v.

PINEVIEW WEST WATER COMPANY
Defendant and Appellant.

BRIEF OF APPELLEES

An appeal from a bench trial in the Second District Court, Weber County,
Judge Ernest W. Jones, District Court No. 130907544

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PARTIES

1. Roger Arave and Kimberly Arave	Appellees ("**Araves**")
2. Janet Southwick, Trustee	Appellee ("**Southwick**")
3. Venture Development Group, LLC (Burwen Family Trust, David Burwen, Trustee)	Appellee ("**Venture**") Venture owns the Snowberry Inn, a bed and breakfast near Pineview Reservoir. The Inn is operated under a contract with Andrea Burk, Southwick's daughter. (R593). She's not a party. *together*, "Appellees," represented by John H. Mabey, Jr. and David C. Wright of Mabey Wright & James, PLLC.
4. Pineview West Water Company, Inc.	Appellant ("**Pineview**"), represented by Edwin C. Barnes, Timothy R. Pack, and Emily E. Lewis of Clyde Snow & Sessions.

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INTRODUCTION

Nearly sixty years ago, Justice J. Allan Crockett predicted the future. Beginning with "ideas" in a 1959 dissent, Justice Crockett and this Court reckoned with first principles of water law that are on a growth-driven collision course. These principles are (1) priority, a foundation of western water law, and (2) "the highest possible development" of the state's water sources, many of which are underground. Such development, Justice Crockett wrote, is the "desideratum of our water law." That reckoning resulted ten years later in *Wayman v. Murray City's* "rule of reasonableness," which, at least regarding groundwater, directs the district courts to reconcile these first principles, using the "geology, physics, and hydrology" available to them, to spread *the* finite resource.

Telling, in this groundwater interference case, are the district court's questions during closing argument. They did not focus on Pineview's admitted interference with Appellees' senior groundwater diversions;[1] they instead probed mostly what to do about it.[2] Recognizing that there are no shortcuts to this Gordian knot, and invoking *Wayman*, the district court was wisely cautious. It ordered, modestly, that the shared aquifer be tested to determine, first, whether the wells at issue can satisfy the parties' rights without interfering with Appellees' seniority. Retaining jurisdiction to evaluate the results of this experiment, it retained the flexibility *Wayman's* "rule of reasonableness" surely intends. This, according to Pineview, *upends* groundwater law.

[1] (R.1244-50,1287-88,1296-1300).
[2] (R.1244-47,1288,1296-97).

Appellees anticipate that the Court will find no error in the pages of this record. Rather, it will find a fully engaged district court grappling with clear well interference, parties with limited resources, and a "rule of reasonableness" to guide its adjudication of the "trouble" Pineview caused. The Court will also find, we believe, that it is largely due to Appellees' efforts that we know as much about the "geology, physics, and hydrology" of these aquifers as we do. On that point, Pineview's trial and appellate focus is also telling. In this groundwater-local well interference case, Pineview seems more interested in what's happening on the surface rather than beneath it, where the parties' competing wells divert limited water from these shared, fully appropriated aquifers.

Interference disputes like this are precisely what Justice Crockett and this Court anticipated decades ago. Justice Crockett's "ideas" turned into predictions that became facts. Utah's growth guarantees that more cases like this are coming as rights move closer to rights, which is exactly what happened here. Remedies will be the hardest issue. The district court's interference finding is fully supported by the facts—none of which Pineview seriously challenges and many of which its expert admits. Far from the hellish result Pineview argues, the district court's remedy has much to recommend it. It is modest and starts with testing, which is practical and doable given party resources, and puts the onus precisely where it belongs—on Pineview, the undisputed cause of the interference.

Finally, Pineview repeatedly derides as merely of academic interest the "geology, physics, and hydrology" Appellees provided the district court. (Brf.26,28,29). That's not how the district court saw it. But more importantly, in a groundwater case, such thorough

study is inseparable from *Wayman's* directive to apply reason when attempting to reconcile first principles.

ISSUES, PRESERVATION, AND STANDARDS
(Code cites are the Utah Code)

Generally, bench tried legal conclusions are reviewed for correctness, and factual findings for clear error. *Roderick v. Ricks*, 2002 UT 84, ¶¶27-28; UtahR.Civ.P.52(a)(protects findings "unless clearly erroneous," after "due regard" for "opportunity to judge" witness "credibility"). Findings are "clearly erroneous only if … against the clear weight of the evidence." *Wilson Supply, Inc. v. Fradan Mfg. Corp.*, 2002 UT 94, ¶12 (modified).

1. Where, like other property rights, Appellees' senior water rights are bundled "sticks," each a separate element of the right, whether Pineview's underground diversion, which drains the local aquifers that are the source of those senior rights, diverted also by wells, interferes with one or more of those elements.

Preserved at R.1220-1223, and reviewed as a "mixed question." "The trial court must first find facts regarding the claim of interference and then determine whether those facts are within the ambit of interference as applied to the water right at issue." *Wayment v. Howard*, 2006 UT 56, ¶9 (citations omitted). On such "mixed question[s]," the district court's application of law to fact "typically [gets] some level of deference …." *Id.*

When "the issue of interference is extremely fact depend[e]nt," as it was here and likely always will be in groundwater cases, the district court gets "broad deference …." *Id.* The issue in this case is extremely fact-dependent and expert-driven "because underground

waters cannot be observed nor measured with precision, but must be determined on the basis of geology, physics and hydrology …," *Wayman*, at 863, relative to "the water right at issue, *Wayment,* ¶9. "[A]ppealing a highly fact dependent issue, the appellant has a duty to marshal the evidence." *Id.*; *see State v. Nielsen,* 2014 UT 10, ¶42.

Deference under mixed question review, however, depends on the nature of the issue. *State v. Levin*, 2006 UT 50, ¶25 ("selecting the appropriate standard . . . from the spectrum of possible levels of deference").[3] Concerning water, this Court invokes "a strong public policy interest in promoting consistent and predictable results in disputes over the permissible *use* of that water" such that "district court discretion [is] somewhat constrained …." *Searle v. Milburn Irr. Co.*, 2006 UT 16, ¶18 (emphasis added). This action, however, does not concern, at least directly, the "permissible use" of water. *Searle* addressed a proposed change in use—point of diversion—under §73-3-3 and -8. *Searle*, ¶¶4,23. Here, changed use is not the issue. Rather, in this straightforward interference action, junior groundwater rights are diverted too close to senior groundwater rights, interfering in multiple ways. (R.406,1248,1214). Invoking *Levin's* revised *Pena* factors, nothing about this case warrants restricted deference. *See Levin*, ¶25. Rather, *Wayman* creates a large "pasture," *State v. Pena,* 869 P.2d 932, 937-938 (Utah 1994), granting the

[3] Considering: "(1) the degree of variety and complexity in the facts to which the legal rule is to be applied; (2) the degree to which a trial court's application of the legal rule relies on 'facts' observed by the trial judge … relevant to the application of the law that cannot be adequately reflected in the record …' and (3) other 'policy reasons … for or against granting discretion ….'" *Levin*, ¶25 (citations omitted).

district court quite broad discretion, guided by what surely will be a case-specific, fact-driven "rule of reasonableness." *Wayman*, at 865.

2. Where Appellee's senior rights consist of several elements, whether full or even unauthorized use of one of those elements—quantity or purpose of use—immunizes Pineview as a matter of law against a claim of interference with other elements of the rights.

Preserved at R.221,1220. This issue of first impression presents a legal question that turns on the "interpretation of prior precedent, statutes, and the common law," reviewed for "correctness." *Ellis v. Estate of Ellis*, 2007 UT 77, ¶6.

3. Where Pineview knew or should have known that its twice pump-tested #4 well interfered with Appellees' nearby wells diverting from the same source, whether the district court erred in finding it negligent for operating that well, interfering with the function of the existing wells and their only source, thereby interfering with the senior water rights they divert.

Preserved at R.1248-1250 and reviewed as a "mixed" finding that "calls for deference to the lower court." *Manzanares v. Byington*, 2012 UT 35, ¶43.

4. On the question of injunctive relief, where the district court enjoys some of its broadest discretion to fashion a remedy under *Wayman's* "rule of reasonableness," the purpose of which is to "insur[e] the highest possible development and … the most continuous beneficial use of all available water …," *id.* 862, whether (a) the district court erred when it ordered the parties to determine aquifer yield relative to the rights of each, retaining jurisdiction to evaluate the results, thus preserving its

authority to fashion different or additional remedies, and (b) whether Pineview preserved this issue, having failed to propose meaningful alternatives under *Wayman*.

Preserved at R.223-224,293,321-322 and reviewed for abuse of discretion. *Wayman,* at 865. "[T]o the extent that the pasture is large, the trial judge has considerable freedom in applying a legal principle to the facts …." *Pena,* at 937.

5. On the question of damages, where Appellees own the senior rights in a source invaded by Pineview's junior diversion, and as a matter of law are entitled to the first water from that source, whether they are obligated to pay Pineview for that water after their access to it was cut off by Pineview's multifaceted interference.

Preserved at R.221-222, and reviewed for correctness regarding the "rule [or method] for measuring damages," *Traco Steel Erectors, Inc. v. Comtrol, Inc*., 2009 UT 81, ¶28 (citation omitted), and for clear error regarding the amount. *Id.* ¶21 ("damage determination was a question of fact").

STATEMENT OF THE CASE

(Trial exhibits are identified as "P-Ex. _," and D-Ex. _")

1. The Local Aquifers

> "The effort to try to understand the case and to try to solve it" with some semblance of the "scientific method has all been on [Appellees]. They are the ones who paid for the monitoring." They incurred "the expense to put these monitoring devices in their well and attempt to resolve the case with clear data."

(Paul Anderson, *geologist*)(R.783).[4]

[4] Anderson explained the general geology and hydrology of the area. (R.660-69).

"An aquifer is a geologic formation, or group of formations that yield usable quantities of water to wells and springs." (R.1120). Here, there are two: A bedrock formation known as the "Norwood Tuff," overlaid with unconsolidated material, (R.393,647,650), and characterized by the USGS as "low permeability." (R.648). "[T]he unconsolidated material is generally … a much better aquifer material…" because bedrock "is very tight … it has very low permeability, or porosity." (R.650-51). Fracturing, however, can "enhance its hydrologic characteristics …." (R.393,651). "An aquitard is a lower permeability layer, a less permeable geologic layer." (R.1121). The aquifers experience normal seasonal fluctuations—drawdown in the summer and recharge in the fall, winter, and spring. (R.393,779-81,1129). Overall, there is no general decline. (R.393,811). This area is within the Weber River "[d]rainage," (P-Ex.10A), which along with the Ogden River, is "fully appropriated."[5]

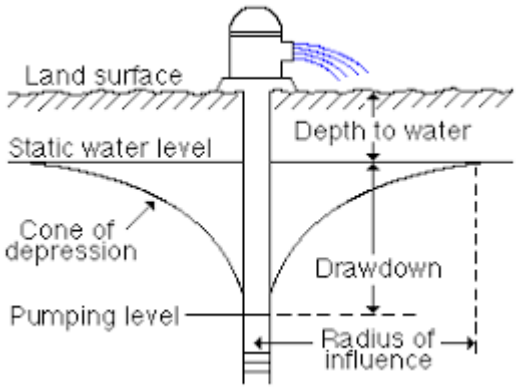
2. Water and Wells Generally

Water flows from high to low pressure. (R.394,960). "[I]t can flow uphill, or downhill, but it's related to that pressure [g]radient. If the deeper aquifer has a higher head than the shallower aquifer, but it's above it, we'd call that a pressure head differential. And that there's a differential for flow to go from one to the other." (R.960). "[S]tatic head" in

[5] Pursuant to Evidence Rule 201(c), the Court may, on request, judicially notice the records and policy of the Utah Division of Water Rights concerning the Weber River drainage. The Court may find the Division's current policy here:
http://www.waterrights.utah.gov/wrinfo/policy/wrareas/area35.asp
(Addendum 4); *see also Green River Canal Co. v. Thayn*, 2003 UT 50, ¶30, n.8 ("[J]udicial notice may be taken of [water right] documents as public records.")(modified).

a well is the water level "when the well [is] not pumping," "[v]ersus a pumping head" when it is. (R.658). Well casings are perforated to allow water in. (R.674-75).

A pumped well creates a "cone of depression," in which the water level drops "rapidly within the well. And then gradually away from the well, in this arc shape … if you think of it in three dimensions … it's a cone." (R.670,1122; *cf. Bingham v. Roosevelt City Corp.*, 2010 UT 37, ¶3.). The cone's actual three-dimensional shape depends on surrounding geology. (R.395,670-71). The cone creates a "radius of influence," a zone measured from the well outward "that is dewatered due to well pumping." (R.394).



(R.669-671;P-Ex.52).

Seasonal precipitation ("re-charge"), and withdrawals from wells ("discharge"), is typical. (R.699,857). The United States Geological Service uses monitoring wells "all around the State … in different … hydrologic basins" for "long-term [water level] monitoring." (R.766). One such well near Huntsville "is monitoring ground water level in the Ogden valley near" these parties' wells. *Id*. Monitoring shows expected seasonal fluctuations, but generally the Ogden Valley is stable. (R.393,809,810-11).

3. Snowberry Inn Rights and Well

Araves built, owned, operated, and lived in the Snowberry Inn bed and breakfast for a dozen years before moving to their current home nearby. (R.5). The Inn was originally served with a "6-inch well, 120 feet deep," (the "Red House well" (R.499)) for .015 cfs, year-round (.45 acre-feet), (P-Ex.10A;R.520,626), for "[d]omestic: [o]ne family," with a "1960" priority. (P-Ex.10A). The "source of supply" is "Underground water." *Id.*[6] They installed a "cistern," a "storage tank with a monitoring system … to ensure the pump wouldn't run dry and destroy [it]." (R.500). The cistern was measured at an "effective capacity" of approximately 300 gallons. (R.847). The Red House well was replaced in 2001 with the current SI well, (P-Ex.20;R.395), because of "poor yield" (sand may have infiltrated). (R.696-98;P-Exs.18-20;695). The new well is 75' away. (R.697). The pump fills the cistern and then turns off. Another pumping system gets the water, under pressure, to the Inn. (R.522-23). The Red House well was limited to the unconsolidated aquifer. (R.395,693).

[6] Pineview contends that the diversion rate of the SI right is a "condition" "added to avoid local shallow wells from pumping too aggressively and depleting the local aquifer." (Brf.7-8, *citing* D-Ex.55). The source for that claim, the State Engineer's 1961 Memorandum Decision approving the SI water right, states that these "small domestic and stockwatering uses" "should [] be allowed" because they "will not deplete the flow of the Weber or Ogden River systems." (D-Ex.55,¶2). It also states, "[e]ach of the applications has been reduced in quantity to .015 sec.-ft. (6.73 gallons per minute) for the domestic requirements of one family, or a forest camp, and stockwatering purposes." *Id.* There is no mention of the "condition" Pineview urges. Rather, like all appropriations and approved changes, SI's right was certificated "subject to prior rights." (P-Ex.10A). *See* §73-3-17(1),(6). So was Pineview's when it moved rights to #4. (P-Ex.33).

The old and new SI wells showed similar static water levels, within one foot, (R.395,703-04;*cf.*P-Exs.19-20), suggesting they hit the same aquifer. (R.395,704,1149-50(Loughlin: "good indication" of same aquifer)). The 2001 SI well is likely perforated in "both unconsolidated material … and [Norwood] … right across the boundary," (R.700,702), but the ratio in each is unknown. (R.986-87).[7] SI pumps between 20 and 30 gallons-per-minute ("gpm"). (R.815-16). Araves sold the Inn to Venture in 2005. (R.5). Pat Dohrer assisted in the purchase of the Inn and managed it from approximately August 2005 to August 2014. (R.540). The current SI Well is 133 feet deep, with perforations at 105 to 125 feet. (R.6,395,702).

4. Arave and Southwick Rights and Well

The Arave well "was drilled to a total depth of 187 feet, with both 6 and 4-inch diameter casing. The 4-inch casing runs from 80[’] to 187[’]. The 6-inch from 0 to 80[’]." (R.686). It is perforated at 140-170.’ (R.395,686,689). When drilled, "the static level was 28 feet below the land surface." (R.687). The lower portion of the well, from 130’ to 180’, is likely in Norwood, which is the source of its water. (R.688-89). Its perforations "are completely within the Norwood …" and "do not communicate directly with the unconsolidated material." (R.714). The Arave well was cleaned in 2013. (R.690;P-Ex.16). The Araves own Water Right 35-1483, for year-round use, "[d]omestic: one family," and

[7] "[W]e don't know how much …" (R.702). "[T]hat's an interpretation that you're forced to make by some of the ambiguities of drillers’ logs." (R.703). P-Ex.28 is Anderson’s cross-section of all the wells showing relative positions, including perforation zones. (R.706-15).

"[s]tockwatering: 2 horses." (P-Ex.11A). Its source is "[u]nderground water (well)," *id*., with a 1963 priority and a 0.15 cfs (.506 acre-feet). (P-Ex.11A;R.212,391,518-19,692).[8]

Janet Southwick's water right (35-6773) is for 1 acre-foot from the Arave well allowing .25 acres of irrigation and one EDU with a 1978 priority. (R.391,574-75;P-Ex.12A-12D). Her home is just north of the Inn. (R.573).

5. Pineview Well #4

a. Paul Anderson's prior contact

Anderson was contacted in 2001 by Radford, a developer planning to drill a well. (R.639). Using a groundwater model, they identified a location where Radford could find water. (R.639-40). "[S]hortly after that," Radford ordered Anderson to "stop all the work" because he wanted "to re-think this thing." (R.640). He contacted Anderson again in 2003 explaining that he wanted to "drill an irrigation well." *Id.* They discussed "optimal places," Anderson researched the local geology "and tried to advise [Radford]" on the likelihood "of producing the amount of water he" was looking for. *Id.*

Anderson determined that a well could encounter water based on local geology. (R.641). While he "talked in general terms," he "was never consulted about the specifics of the location." (R.642). A year later, Radford returned, explaining that he had begun drilling, was about 200' down, and had drilling samples he wanted Anderson to see. (R.642). Anderson saw, and determined that drilling had encountered Norwood. (R.642). Radford retrieved the materials; Anderson "never heard from [him] again." (R.643).

[8] "ELU" or "equivalent livestock unit" (R.195). And one EDU—"equivalent domestic unit." (R.195,520,574).

b. Pineview tests and later operates #4

Well #4 was drilled in 2004. (R.502-03). Its priority is October 14, 2005. (R.392;Brf.10-11).[9] It was pump-tested and shut down the Arave well inside of a day, (R.396,503-04), after which it recovered within a day. (R.396,504). A second pump-test shut down Arave again. (R.396,504-05).[10] The #4 is 738 feet deep, (R.395), perforated in four zones, starting in the "unconsolidated deposits," "typically where water will flow better, faster." (R.681). The lower three perforation zones are in Norwood. *Id.* #4 pulls water from both aquifers. (R.681-82,713).[11] The #4 and SI wells pull water from both the unconsolidated and Norwood. (R.713).

Well #4 is in hydrologic communication with both the SI and Arave Wells. (R.714-15,1142-45,1130-31). The SI well appears to have "a considerable influence from the [much more permeable] unconsolidated aquifer." (R.705-06). The SI Well reaction to #4 pumping is delayed, or "baffled," (R.785-89,961-63,1234-35), likely explained by "which way the fractures flow or are oriented within the Norwood," (R.962-63), or the hydrologic connection between the Norwood and the unconsolidated material (recall that SI Well perforations may intersect both the Norwood and the unconsolidated). (R.700,702).

#4's "cone of depression" grows up to 1200 feet quickly, encompassing both the Arave and SI wells, pulling water "away from those perforations." (R.794-95,1130-31).

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[9] Pineview also owns water right No.35-7263, modified by a change application, with a 2003 priority. (D-Ex.4).

[10] #4's well log, P-Ex.14, is explained at R.675-79.

[11] Anderson explained factors that complicate a precise determination of which zones produce water. (R.682-83), "but the preponderance of depth of this well is in the Norwood Tuff," suggesting that it is the largest source. (R.683).

The speed of #4's cone indicates some fracturing in the Norwood, explaining why that normally less transmissive material allows water to move more quickly. (R.795-96). #4 pumps at 100-105 gpm, (Brf.11), much more volume from the aquifer than SI or Arave. (R.794,883,885-86).

c. "Trouble"

For Pineview's expert, a non-technical definition of "safe yield" is "the amount of ground water that can be pumped from a well or wells without getting into trouble." (R.1121-22).[12] Such "trouble" means, for example, pumping the water to such a level as to interfere with someone else's water right. (R.1122). Pineview began operating #4 in 2007, effectively shutting down the Arave well again. (R.396,577). Araves agreed "to pay $20 for [Pineview] to provide [them] water through its system." (R.505). Pineview immediately connected Araves, "and disconnected [their] water system to the home from the well," making them Pineview customers. (R.397,505,1256-57).

"Trouble" in the SI well started in August 2007 after #4 came online, and the Inn "ran out" of water. (R.541). They first noticed the problem when the Inn "had no water," (R.541-42), with nothing coming out of the faucet. (R.542). Prior to #4, the Inn's new well "never had any interruptions" or "problems at all." (R.398,541,605). After #4, SI didn't have "any water." *Id.* Unable to pump, Dohrer hooked a hose to Araves home (connected to Pineview by then, R.542) "to fill the cistern." (R.605-06,1238). Until connecting to

[12] Not to be confused with the statutory definition of "safe yield," having to do with groundwater management plans. §73-5-15.

Pineview's system, it was "a constant battle of checking the cistern to make sure we had water." (R.541).

With #4 pumping, the cistern would not fill, "[a]nd we'd have to supplement through the hose up to [Arave's] house." *Id.* This lifeline from Araves was used until Pineview connected the Inn. (R.542-43). When #4 pumps, SI struggles. When #4 is off, SI works just fine. (R.943-46). The difference is stark: SI pumping alone drops the head "about 6 feet versus" "almost 40 feet during summer" when #4 pumps. (R.945-46). Even when "you see this rise in head regionally, you can still see that [SI] is still being affected by the pumping of" #4. (R.963). SI "pumping is the worst in terms of how far down it's drawn … when [#4] had its greatest effect on the Arave head." (R.964).[13]

d. More "trouble"

Following a change in Pineview management, Araves tried but were unable to agree on written terms. (R.505). After several years operating under their handshake deal, things soured, resulting in this action. (R.505-06). Araves did not pay for water when they had, and could use, their well. (R.506). Pineview even back-charged Araves at higher rates and threatened to shut off water if not paid. (R.506-08). The Pineview water caused "staining" in the Arave home. (R.509-10). Other than "normal wear and tear," Araves had no water availability or pressure issues prior to #4. (R.510-11). Neither did they have such issues with the SI well. (R.511). Araves had their well cleaned and the pump removed and

[13] Based on the underlying assumption, agreed to by Pineview's expert, that the monitored Arave well is such a good "proxy," or Laughlin's word, "surrogate" for #4 pumping. (R.963,1104).

replaced with monitoring equipment. (R.512). Araves did not want to be Pineview customers. (R.516).

They used their well indoors and for garden watering, (R.517), having been told by the Division of Water Rights that they could water their yard. (R.537-38). Araves have not reconnected their well since Pineview connected them. (R.524-25). It continues to be used for monitoring, providing cleaner data. (R.397,1132,781-82). The prior Pineview president (Brockbank) oversaw their connection to the system. (R.1065; P-Ex.56).

The Inn experienced a number of issues caused by Pineview's water—clogged faucets, for example. (R.401,543-45). The Inn's dealings with Pineview were the same as Araves—cooperative at first, deteriorating later. (R.550-51). Like Araves, the Inn also paid a flat $20 per month. (R.397,550-51). The Inn's Pineview connection was, and is, supplemented by its well. (R.556-57). Pineview water was used indoors. (R.558). Dohrer kept a log of well vs. Pineview water use, (R.398,563-64;P-Ex7), and at trial explained that his log was not perfect. (R.399,995-96). The Inn did not pay for water when it could use its well. (R.565).

Southwick lost water quickly after #4 was tested, causing her sprinklers to fill with silt, later having to replace some of them due to buildup, (R.401,576,582). The second pump test damaged her washing machine, requiring a new one. (R576,581-82). The loss of water from the Arave well "affected everything in [her] house that ran water …." (R.577). Pineview's water pressure to Southwick's home was deficient. (R.583-84). Repairs were attempted, but still she "can't do two things [using water] in [her] house" at the same time. *Id.* Prior to #4, Southwick never had water problems other than an instance of frozen pipes.

Id. Because irrigating with Pineview water is costly, Southwick lost her lawn, trees, and other foliage around her home. (R.580).[14] Additional problems were ongoing at the time of trial. (R.584). She had no such problems before connecting to Pineview. (R.582-83).[15]

Since 2014, Andrea Burk (Southwick's daughter, R.593) operates the Inn pursuant to a lease with Venture. (R.399,590). She dealt with the hard water and pressure problems when she lived with Southwick. (R.593-94). She also experienced hard water issues, sometimes such that "the system has shut down completely while" guests are there. (R.592 She did not understand the particulars of the Venture water right, and she did not measure water flow from the SI well. (R.594-95). A pump in the Inn pulls water from the cistern and fills pressurized tanks that distribute water throughout the Inn. (R.996-98). Inn sprinklers were on timers to water every few days. (R.999-1001). Burk did not realize until trial that she was using well water for the lawn. She thought she had turned it off. *Id.* She simply didn't understand the valve operation between the Pineview and well water. (R.399,1010-13,1016,1020). The original Venture right is not approved for outdoor use. (R.1011).

Dohrers assigned claims to Venture, consisting of expenses incurred. (R.604;P-Ex.1). Venture paid nearly $8,000 to connect to Pineview. (R.606). Venture asked the Dohrers and Burk to use both the SI well and Pineview water to ensure that the Venture

[14] Pineview's connection to Southwick's home leaked, causing her to pay for excess water she did not and could not use. (R.581). The leak was repaired. *Id*.
[15] The Arave well did not have an auto-shutoff that might have prevented the silt problem. (R.587).

water right was not at risk of forfeiture. (R.606,622-23).[16] The Venture right was not enough to meet SI's "needs," which admittedly exceeded its "rights." Venture squared up matters with the state engineer when it augmented its supply with a state engineer approved 2 acre-foot right, (R.398,607-08;P-Ex.10F), with 2017 priority, (R.630-31), allowing outside irrigation use (.75 acre-feet) and commercial use for 1.25 acre-feet, all based on usage calculations and estimates. (R.627-28).

Venture incurred costs as a result of losing its "water independence" and its connection to Pineview. (R.609). In November 2013, Pineview threatened to cut off water service to the Inn, forcing this action. (R.614). Venture prepared a calculation of the Inn's water use since Burk began managing it. (R.617). Neither Arave nor SI wells were metered. (R.536,619-20). During the three year period prior to trial (before augmenting its right), the Inn averaged .58 acre-feet. (R617-18). Then Venture determined its water use during the period prior to #4 turning on, typically July 1 each year. (R.618). Venture used .29 acre-feet of its right prior to July 1.[17]

6. Anderson's Well Monitoring

Araves retained Anderson, a geologist, for well monitoring, (R.635-38), and Venture agreed to split that cost "to understand more about what's going on …." (R.635).[18]

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[16] §73-1-4.

[17] The Inn's water use declined after Burk began sending out some of the laundry. (R.592,620). SI used approximately .33 af of its water right before #4 turns on. (R.1022-23,1025)(average use using Pineview figures). Prior use likely exceeded that calculation for the recent past. (R.1027-28).

[18] Pineview criticizes Anderson for conflating water "needs" with "rights." (Brf.47). Perhaps he did, (R.867-68), but he was not retained to evaluate the "rights;" he was retained to do some "science" and "to gather some … hard data to try to understand exactly what

They developed a plan and installed monitors in the Arave and SI wells, a device that "will sense the pressure in the water column" in the well, "recording pressure readings as the water levels fluctuate." (R.654).[19] Their purpose was (still is) "to try to gather some science, or some real information because [Appellees] were having great difficulty with Pineview …." (R.654-55). Anderson did not evaluate potential interference from other wells in the area. (R.936-37). The SI and Arave wells do not interfere with each other: "the impact of pumping such a low rate in the [SI], and the fact that it's a combined aquifer of the unconsolidated and the Tuff, that it's not a great enough volume of water to get that cone of depression" to the Arave well. (R.989).

Anderson's 2013 SI pump tests demonstrated that, without #4 depleting the aquifer, "[i]t's sort of the happy time for the Snowberry aquifer." (R.797). Without #4 pumping, "it only took about 10-15 minutes for [the SI well] to fill the cistern." (R.797-98;P-Ex.23 (Addendum 6). When #4 pumps, however, "there's quite a profound difference in terms of the length of time that it takes to fill the cistern." (R.805). Without #4, the SI head drops only six feet while filling the cistern. (R.804,945-46). With #4 on, it drops nearly 40 feet, and possibly more. (R.945-46).[20] Unfortunately, "there are no head values from [#4]." (R.782).

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was happening in those wells." (R.654-55). The district court credited his analysis over Loughlin's assumptions. (R.401).

[19] More water in the "tube" means more pressure, less water means less pressure. (R.654).

[20] Possibly more because it drops from 62 feet down to 99, where the sensor is, and we "don't have measurement beyond that." (R.805-06).

When #4 is off, "the length of time that the [SI] pump is on to supply the irrigation system is relatively short. And when the level gets below 58 feet, the pump seems to struggle to meet that same demand, as evidenced by the pumping head." (R.932). The problem is not about a particular "volume." *Id.* Rather, the SI well must pump longer "cycles" to keep up because "the pump has to remain on a lot longer to supply an assumed similar volume of water." (R.933).[21] Anderson's conclusions are based on 2013 data. He did not have #4 pumping dates for 2014-2017, but because the monitored Arave well is such a good "proxy" for #4, Anderson could determine #4 pumping by looking at Arave well data. (R.937-38,954). Pumping #4 is the only way to generate the data. (R.950). When #4 was restarted after an off period, the Arave well responded "immediately," (R.953), dropping "continually" as long as #4 pumps. (R.953-54).

Some of SI's drawdown is based on its own cone of depression. (R.982). True of all wells. *Bingham,* ¶3. The problem is a cascading effect triggered when #4 dewaters the aquifer, causing Arave level to plummet, creating downward pressure on SI, causing it to struggle severely. (R.789-90;P-Ex23). A "pressure differential" is created when the Arave level drops below the SI head. (R.790). As a result, "we see this relationship that when the head differential changes, that [SI] seems to struggle in order to produce the water that's being called for by the [I]nn, and this takes place in all of the monitoring years." (R.791; *see also* R.792,807-08).

[21] Anderson "assum[es] that when they sprinkle in the spring … and when they irrigate in the summer, whatever they put on [in terms of volume] "stays the same …." (R.933).

The apparent connection between the Norwood and the unconsolidated explains the different but correlated reactions in the Arave and SI wells. (R.792-93). Thus, "[r]egardless of some of the wrangling of hydrogeologists, there's this high correlation between no trouble prior to [#4], and problems after [#4]." (R.793-94, *and see* R.961). Anderson could not say precisely how those aquifers communicate. (R.809,892-93).[22] We need more data. More on that below. Pineview's hypothesis that SI pumping creates its own problems could be tested "if we could get [#4] to stop pumping for a summer season. And then we could monitor the Snowberry well …." (R.982).

7. Pineview Operation

Turner was elected Pineview president in 2009 "when the developer, at that time, was president and was bowing out …." (R.1043;P-Ex.56). Appellees are not Pineview shareholders; they are "contract users." (R.1047). #4 pumps early July to early September depending on weather. (R.397,1055-56). It "run[s]… up to 12 hours a day, ["typically every day"] during the max of the summer dry period" depending on weather. (R.1056-57). Pineview does not know how much it diverts from its surface sources—it has no weir. (R.1067-68). It has 70 connections with buildout to 114. (R.1073). Its system is plumbed to serve additional lots from #4. (R.1075-76). It remains to be determined whether

[22] The higher Arave water level compared to SI creates "an upward gradient between these two perforated zones." (R.968). That pressure "gradient" reverses when #4 pumps, pulling water away from Arave, causing SI to crash also. (R.968-69). This reversal creates the "potential for flow to go from the unconsolidated down to the Norwood." (R.969-70,987). P-Ex.28 shows "the difference in elevation between the Arave and the Snowberry there, at scale." (R.988).

Pineview expands service. (R.1078-79). It already does not have enough supply for more secondary water. (R.1079).[23]

8. Pineview's Expert – Loughlin

Loughlin sees no "relationship between pumping [SI] and the water level in the Arave well." (R.1094,95). #4 drops the level in Arave but not in SI. (R.1097-98). He contends that SI's trouble is caused by seasonal declines and its own pumping. (R.1099-1100). He agrees with Anderson that "the water level in the Arave well is a very good surrogate" for when #4 "is on and when it's off." (R.1104-05,1119-20). He used Anderson's data. (R.1106). He has no doubt that #4 was pumped as indicated on Anderson's graphs. (R.1119, *see* P-Exs.23, 24, 26 (Addendum 7); 27 (Addendum 8); 29 (Addendum 9), 30).[24] Where there was missing data, Loughlin was sure that #4 was pumping "[b]ecause we know from the pumping in 2013 that the water level--pumping [#4] lowers the water level in the Arave well." (R.1119).

He agrees that

a. A radius of influence terminates where the cone ends, as illustrated on P-Ex.52. (R.1124).

b. Water flows down gradient from high to low pressure, higher head to lower head, or in the direction of decreasing pressure. (R.1125).

[23] Turner did not know of any company records regarding existing water rights before #4 was drilled. (R.1076).

[24] Loughlin did a couple of his own graphs, (D-Ex.48)(using Anderson's data), and one that Appellees liked. (P-Ex.40)(R.1139-40)(**"**showing that connection between [#4] and Arave, correct? [Answer:] Yes.").

c. #4 interferes with Arave. (R.1125-26).[25]

d. There is no doubt the Arave well is within #4's cone of depression. (R.1129).

e. SI is closer to #4 by a couple hundred feet and also within #4's cone of depression and within its radius of influence. (R.1130-31).[26]

f. Arave responds to #4 pumping "within minutes, or at least within an hour or so." (R.1131). Arave level "drops steeply," which continues as long as #4 pumps. (R.1131;*cf.*R.772-75,777,811,813).[27]

g. The "notches" on P-Ex.27 show #4 pump cycling on and off. (R.1132). That's why Arave is a good surrogate for #4—its quick response to #4. *Id*. *See also* P-Ex.40. (R.1139-41).

h. Not pumping Arave provides cleaner data. (R.1132).[28]

i. #4 has four perorated zones, one in both the unconsolidated and Norwood and three in the Norwood. (R.1133,1135-36).

j. SI gets a portion and probably the majority of its water from the unconsolidated aquifer, (R.1133,1138), and #4 pulls from the unconsolidated

[25] Yet, it does not matter to Loughlin whether #4 is pumping to determine whether the Arave well can produce the Arave and Southwick water rights. (R.1127).

[26] Loughlin drew #4's cone on P-Ex.29, explaining, "[i]t probably looks something like that." (R.1130).

[27] Or, as Pineview counsel explained during cross, when #4 "starts, we see an immediate, or near immediate decline [in Arave]. When it stops, we see a near immediate increase." (R.979-80).

[28] Agreeing with Anderson, (R.781-82), "With no pumping [in the Arave well], we can clearly see these relationships." (R.782).

aquifer. (R.1133;P-Ex.29). Yet, he insists on "zero communication" between #4 and SI. (R.1138-39).

k. SI and Arave may communicate. (R.1142-45).

l. #4 affects Arave due to the "response of a confined aquifer . . . . It is transmitting the lower pressure created by pumping [#4] away from the [well]." (R.1146).

m. Arave water level is higher than SI. (R.1156-57,1160; P-Ex.27)(elevation above sea level).

n. Depending on the well, lowering the pump too close to or at the perforations can cause the pump to take in silt. (R.1159-60).

PROCEEDINGS AND DISPOSITION BELOW

The action was filed December, 2013. (R.1-15). Trial to the bench was August 17-18, 29, and September 25, 2017. (R.263-69,355). The parties filed trial briefs (R.191-262) and competing proposed findings of fact and conclusions of law ("FFCL"). (R.270-323). The district court rejected Pineview's FFCL October 19, 2017, (R.356-86), and adopted Appellees' in its Memorandum Decision November 14, 2017. (R.387-414)(Addendum 1).

The court found that pumping "well #4 interferes with the Arave well, thus interfering with the senior Arave [and Southwick] water rights." (R.408-409). Further, that pumping "interferes with the SI well, thus interfering with the senior Venture water rights." (R.409). The court found that "[t]he fact that, historically, SI . . . has or may have used more water than is permitted by its water right is not a defense to local well interference"

and it is not "a defense that SI used water for irrigation when it did not then have" an approved right for that purpose. (R.410).

Because the "#4, Arave and SI wells cannot coexist" under *these* circumstances, the court ordered Pineview to "stop[]" or "curtail[]" its pumping of #4 "sufficiently to permit the Arave and SI wells to function." (R.411). "[I]n aid of its judgment," the court "retain[ed] jurisdiction" to determine "whether … [#4] can be pumped at a lesser rate so as not to interfere" with both the Arave and SI wells. (R.412,440,442). If not, "the court may order that [Pineview] provide replacement water pursuant to §73-3-23 at [its] sole expense." (R.412-13,441).

The court also ruled that Pineview breached its duty of "reasonable care" when it operated #4 in a "manner that interferes with plaintiffs' wells." (R.409). It awarded damages based on interference and negligence. (R.413). Final judgment was entered January 4, 2018 (R.439-42)(Addendum 2), adding Rule 54(d) costs on January 10, 2018. (R.445-46)(Addendum 3).

SUMMARY OF ARGUMENTS

Bundling elements of a water right – quantity, place of use, purpose of use, source, diversion means and method, and priority – the law protects them all against interference. The district court understood both the analogy and the water rights at issue. It got it right and determined that pumping of Pineview's interfering well had to stop until it could figure out a way for all three wells to coexist, if possible.

The facts, at least the ones above ground where Pineview prefers to focus, are simple. The part of the case that matters most, however, is hundreds of feet below the

ground, where things get more complex. Despite their senior, year-round rights, Appellees cannot divert their water for up to three months, while #4 pumps. The data shows it, and Pineview knew it, which is why it connected them to its system that first summer of "trouble." Even without complete pumping measurements and records, the evidence of Pineview's interference with several "sticks" in Appellees' rights is clear and compelling.

The interference issue was driven mostly by expert testimony. Pineview's expert admitted that both the Arave and SI wells are inside #4's cone of depression. Analytically, that presented a problem, so he assumed that a geologic barrier, an aquitard, separated and sealed the SI well from the de-watering effects of that cone. The district court didn't buy it. Likewise, this Court should not be persuaded by Pineview's misguided argument about source – that *Bingham* applies here. The facts in that case are not only distinguishable in terms of remedy, they explain how #4's operation obstructs and hinders access to the groundwater on which Appellees have the senior call.

In this local well and groundwater interference case, the district court roamed its broad pasture and evaluated its options. Its probing questions during closing argument reveal an engaged court, duty-bound to remedy a problem no one can actually see. It appropriately awarded interference damages and fashioned remedies well within *Wayman's* "rule of reasonableness." It also ignored the competitive rallying cry that Appellees should just "chase their water." Most importantly, the district court wisely left room to adjust remedies to fit future data. Pineview is wrong in its claim that this result upends groundwater law; it is rather the precise effort district courts must undertake to both honor priority while stretching a finite resource.

ARGUMENT

A. The district court correctly found interference with senior rights.

Interference is "obstructing or hindering the quantity or quality of an existing water right." *Wayment*, ¶13 (affirming interference).[29] Interference comes in many forms because a water right consists of many things. It is real property. §57-1-1(3) (R.404).[30] As such, it is usefully described as a "bundle" of rights, *Provo City Corp. v. Knudsen*, 558 P.2d 1332, 1334 (Utah 1977)(real property is "bundle of sticks"), each representing some feature of the usufruct. *See, e.g., State v. Starley*, 413 S.W.2d 451, 463 (Tex.Civ.App. 1967)("the complex bundle of legal principles which make up the water right")(citation omitted); *Farmers Res. & Irr. Co. v. City of Golden*, 44 P.3d 241, 245 (Colo. 2002)("the bundle of rights constituting a Colorado water right")(citation omitted); *Confederated Salish and Kootenai v. Clinch*, 158 P.3d 377, 400, n.9 (Mont. 2007) ("elements in the bundle of sticks recognized as a water right.").[31]

Those sticks include quantity, place of use, purpose of use, period of use, source, method or means of diversion, and priority. (R.404-05). S*ee, e.g.*, §73-3-17(6)(Addendum 5); *Little Cottonwood Water Co. v. Sandy City*, 258 P.2d 440, 443 (Utah 1953)(protecting

[29] It means "[a]n obstruction or hindrance." (Black's Law Dictionary, 937 (10th ed. 2014)).
[30] Subject to eminent domain. §10-7-4(2).
[31] A water right's "usufructory" nature, however, distinguishes it from other real property. *Mont. Trout Unlimited v. Beaverhead Water Co.*, 255 P.3d 179, 185 (Mont. 2011) (citation omitted). "The words 'property right' draw to themselves and connote a bundle of old, sacred, absolute, and inviolate ideas of exclusivity, possession and permanence. Although these concepts are not alien to water law, they are not the language of water law ... because water law does not deal with these things, but with uses, re-uses, sharing, and priorities rather than exclusivity, possession or even permanence." *Id.* (citation omitted).

source); *Wayment*, ¶11 (protecting diversion method). The law protects them all. "From the beginning of our history, when" water is "diverted" "and applied" "to a beneficial use," the appropriator's "right" to divert "was recognized as being prior and superior to the rights of all subsequent appropriators to the extent of [its] reasonable necessities …." *Justesen v. Olsen*, 40 P.2d 802, 805 (Utah 1935).

Since then, "as new conditions presented themselves … our courts have consistently enforced this right of priority and protected appropriators not only as against all subsequent claimants taking water from the body of the stream, but as against all persons interfering with its source." *Id. See also Salt Lake City v. Silver Fork Pipeline Corp.*, 2000 UT 3, ¶33 n.14.[32] Among these "new conditions" is growth. Utah's population "trebled" since the 1960's. *Delta Canal Co. v. [Vincent]*, 2013 UT 69, ¶24. Growth requires that we develop "all available water." *Id.*

1. Interference was highly factual and expert driven.

"Determinations regarding the weight" of expert witness testimony "are within the province of the finder of fact …." *AmericanWest Bank v. Kellin*, 2015 UT App 300, ¶25 (modified). An expert "may not give an opinion which represents a mere guess, speculation, or conjecture." *State v. Jarrell*, 608 P.2d 218, 230 (Utah 1980). Experts may testify concerning "probability, possibility, or likelihood" so long as the opinion represents the expert's "best judgment to a reasonable certainty." *Id.* Helpfully, Loughlin, using all

[32] *Abrogated on other grounds by Otter Creek Res. Co. v. New Escalante Irr. Co.*, 2009 UT 16, ¶¶11-13.

of Anderson's data, agreed with much of Anderson's analysis. (R.1104-06,1119,1124-32,1139-41;P-Ex.29).

Because Pineview's interference occurs hundreds of feet below the ground, in the source where the water is, (R.1213-14), the issue was driven mostly by expert testimony. Groundwater presents a more difficult case "[b]ecause [it] cannot be observed nor measured with precision, but must be determined on the basis of geology, physics and hydrology." *Wayman,* at 863. In *Silver Fork,* for example, the city claimed that residents interfered with its Big Cottonwood Creek surface right. 2000 UT 3, ¶16. It lacked "actual measurements … illustrating that diversion of water at the mine significantly diminished [creek] flow …." *Id.* ¶27. This Court reasoned that interference, even with a surface right, does not depend on such "measurements reporting flow before and after interception of the water at its source." *Id.* If available, "their value is limited to the extent that other environmental factors dictate flow, such as season and amount of precipitation," *id.,* as Loughlin explained. (R.1101 ("water levels rise and fall seasonally")).

Pineview rests heavily on the lack of well pumping measurements and records. (Brf.13-15,27-29;R.1256-57 ("no yield data")). But the issue never was as narrow as Pineview wanted. It seemed satisfied with Loughlin's opinion that Appellees could ultimately get their water. (R.1108-09). Between approximately October through June, that is true. Between July and whenever the aquifer recovers from #4's dewatering, however, that is not true. For that entire period, as much as one-fourth of their year-round

right (R.1214), they went to the well, but "[t]he well was dry …."[33] (R.396,502-03,541-42,584). Not *completely* dry; the water is there, possibly hundreds of feet deeper than where it is before #4 turns on. (R.1113;P-Ex.54).

2. The district court found facts showing interference.

The evidence of interference is compelling, and Pineview does not challenge the facts. First, however, a word about *Wayment.* When this Court says that no one may diminish the quantity of another's rights, as it did in *North v. Marsh*, 504 P.2d 1378, 1379 and n.2 (Utah 1973), and where it prohibits "direct[]" and "indirect[]" interference, as in *Rasmussen v. Moroni Irr. Co.*, 189 P. 572, 577 (Utah 1920), it protects each of the sticks in the water right bundle. (R.404-405). The analysis breaks nicely into *Wayment's* two prongs: "The trial court must first find facts regarding the claim of interference," (accomplished here R.408-09),[34] "and then," with added emphasis, "determine whether those facts are within the ambit of interference *as applied to the water right at issue*." *Wayment*, ¶9.

In other words, "the water right at issue" is not only a bundle of many elements, it has varying features. It can be surface or groundwater or both, for any of a variety of uses, measured in cfs, acre-feet, or both, storage or direct flow or both, or other distinguishing features. The particulars of "the water right at issue" drive the interference analysis.

[33] Robert Frost, *Going for Water,* 1913 ("A Boy's Will").

[34] And not seriously challenged. Pineview does not marshal on this or any fact question and yet insists that the court got the *finding* of interference wrong. To demonstrate clear error, Pineview must "overcome[e] the healthy dose of deference owed to factual findings" by "identify[ing] and deal[ing] with [the] supportive evidence," establishing a legal problem in that evidence. *Nielsen*, ¶¶40–41.

Pineview contends, however, that the district court never reached *Wayment's* second prong. (Brf.29-33). Appellees contend that most of the case was about that second prong.

a. Pineview interfered with the period of use.

A water right's period of use is "the time during which the water is to be used each year." §73-3-17(1)(d). The Appellee senior rights are year-round. (R.1214;P-Exs.10A-12D).[35] Well #4 is turned on around July 1 each year and runs through the end of the irrigation season, typically through September. (R.397,1056-57). Interference with the Arave well is all but immediate, (R.396,1249), and lasts beyond #4's shutdown due to aquifer recharge. (R.401,891). The effect on the SI well is delayed but no less crippling as the water disappears within #4's "cone of depression," draining the aquifers. (R.961-963). For about three months of every year, the senior rights are inaccessible while #4, with its junior rights, takes the water. (R.397,399-401,408-09,1214,1223,1294). Pineview does not challenge these facts.

b. Pineview interfered with the diversion means and method.

The senior rights are groundwater rights, approved specifically for use only from the Arave and SI wells. (R.391-92). As a matter of law, the wells are the only authorized means and point of diversion. (R.3-4,405;P-Exs.10-12; *cf.* §73-3-17(6)). As a matter of fact, the wells are the only physical means. This Court has long protected diversion method or means. If a junior user could render a senior user's "diverting means or methods" ineffectual, by making "prior appropriations of water unavailable with impunity,"

[35] Except for that portion of Southwick's right permitting irrigation. (R.391,574-75).

> then there is in fact no such a right as a prior right, but all rights may, at any time, be invaded or destroyed by a subsequent appropriator by simply making the diverting means used by the prior appropriator useless. To permit such an invasion of a prior right would, in effect, amount to an indirect taking of a prior appropriator's water. This neither the legislative nor the judicial power can allow without permitting confiscation of property rights.

Salt Lake City v. Gardner, 114 P. 147, 152 (Utah 1911)(holding in connection with surface rights that the original appropriator "also acquires the right to continue use of his method or means of diver[sion]"), *relied on in Wayment,* ¶13, n.10.

Again, #4's effects on the Arave well are swift. According to Loughlin, Arave is "a good surrogate" for #4, meaning that pumping #4 is quickly detectable there. (R.1104). The cascade effect then tumbles to the SI well (R.963), which is also within #4's cone of depression. (R.1226-27). Once #4 is running, the senior rights cannot be diverted with the only possible means and method of doing so, at least not without great difficulty for SI. (R.411).[36] Pineview does not challenge these facts.

c. Pineview interfered with the source.

A water right "attaches to the point of diversion and extends to the source." *Meridian Ditch Co. v. Koosharem Irr. Co.*, 660 P.2d 217, 222 (Utah 1983)(citation omitted). The "name of the stream or water source" is a required element of the certificate of appropriation issued by the state engineer, signifying the "right to use the water …." §73-3-17(1)(e);(6). *See, e.g., Richlands Irr. Co. v. Westview Irr. Co.*, 80 P.2d 458, 465

[36] Pineview obsesses over an SI pump test showing 25 gpm for 2 hours without dropping the water level. (P-Ex.54;R.1109-1111;Brf.10,37). True, but only "[w]hen [#4] is not running." (R.895).

(Utah 1938)(water right "includes an interest in the source(s) … surface or underground."). *Silver Fork*, ¶22, and n.6. *Silver Fork* relies on *Little Cottonwood*, 443 and n.2, which in turn relies, *inter alia*, on *Justesen*:

> [O]ur courts have consistently enforced th[e] right of priority and protected appropriators not only as against all subsequent claimants taking water from the body of the stream, but as against all persons interfering with its source. It makes no difference whether the interference be with the main stream or the tributaries thereto, or whether the interference be with water flowing over the surface of the ground, flowing in subterranean streams or merely percolating through the ground.[37]

Justesen, at 805; *see also Wrathall v. Johnson*, 40 P.2d 755, 766 (Utah 1935).[38]

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[37] Appellees proposed FFCL, adopted wholesale, included the following altered quote from *Little Cottonwood Water Co. v. Sandy City*, 258 P.2d 440, 443 (Utah 1953): "[N]o one can interfere with the source of supply of [a water right], regardless of how far it may be from the place of use, and whether it flows on the surface or underground, in such a manner as will diminish the quantity or injuriously affect the quality of the water of these established rights." (R.405). Pineview is correct that the brackets replace "this stream," but that does not change the meaning of the passage, and was certainly not intended to. (Brf.31). That "stream" was and is "fully appropriated." *Id.* at 443. The Court's larger contextual point is that interference with a water right source of supply is interference with the right itself—one of its sticks. The context of that quote is the Court's treatment of the claim in that case that *additional* water was available for appropriation. Even so,

> such waters are unappropriated and available for appropriation if they can be extracted from the ground without interfering with the quantity or quality of water available for the use of the prior appropriators. The fact that this water comes from the same source of supply as the surface stream which has been fully appropriated, and in a sense has been appropriated as carrier water to bring the surface water to the diverting works, does not make it unavailable for appropriation if it can be beneficially used *without diminishing the supply available for prior appropriators.*"

Id. 444 (emphasis added). The Court's footnote 2 in that paragraph is a string cite to several cases explaining that source is among a water right's protected elements. That is all we intended with the bracketed "a water right"—shorthand for the larger point *Little Cottonwood* and many other cases make. *See, e.g., Silver Fork*, ¶33, n.10.

[38] The holdings in *Justesen* and *Wrathall* were codified in 1935 to include groundwater in the state's public waters available for appropriation "subject to existing rights." §73-1-1(1). *See Silver Fork*, ¶31, n.11.

Explaining death by a thousand cuts, *Rasmussen* observed that "[i]f a "landowner and water user [] cut[s] off a[] source of supply, and so on until all the sources of supply which pass underneath the surface of the soil are cut off . . . the lower and prior appropriator would be left without any, or at least only a meager, supply of water in the low-water season. This may not legally be done." *Id*. 577. Similarly, in *Gardner*, concerning rights in Utah Lake, this Court held that "[u]nder no condition should [a subsequent appropriator] be permitted to take water from the lake [the source of supply] until they can do so without interfering with … prior rights." *Id*. 153.

Peterson v. Wood, 262 P. 828, 831 (Utah 1927), practically reverses the burden of proof when a junior right takes or threatens water out of priority to the senior right's detriment: "The rule is well settled in this jurisdiction that whoever claims he has developed water in close proximity to the source … previously appropriated by others, is charged with the burden of proving that his alleged development of water does not interfere with the waters theretofore appropriated." *Cf. Searle*, ¶2 (change applicant must demonstrate "reason to believe" no impairment of existing rights).

Anderson explained, Loughlin admitted, and the district court found the direct effect on the Arave well, and the delayed or "baffled" effect on the SI Well. (R.400-01,961-62,1124-26,1129,1130-31,1133,1135-36,1138,1142-45).[39] Loughlin agreed concerning Arave, (R.1125-26), but testified, incredibly it turns out, that the SI well taps its own

[39] Anderson explained that the mere fact that "water [is] available" in the aquifer still leaves doubt: "There was some water available, but we don't know that until we pump test it." (R.895).

aquifer, (R.1164-65), and its problems (which did not exist before #4, R.398,541,605), are self-inflicted. (R.1110-1112). He had an analytical problem, however. Admitting that both wells are inside #4's cone of depression, (R1130-31;P-Ex.29), he had to find a way to isolate SI. To do that, he postulated an "aquitard" of some unknown nature, size, and location that sealed off SI from everything, evidently, including the dewatering effect of #4's cone of depression. (R.1121,1124,1232-33).

Loughlin's speculation about SI's own aquifer took him well beyond anything the data could support. He was impeached into admitting that SI and Arave communicate, and that if that's true, then #4 and SI must also communicate. (R.1130-1146,1239-40). By assuming the aquitard he needed, he stopped doing the "geology" expected by *Wayman* and switched to economics. *City of Los Angeles v. U.S. DOT*, 179 F.3d 937, 940, n.1 (D.C. Cir. 1999)("How does an economist escape from a 25 foot hole? Answer: Assume a ladder.").[40]

B. Bingham's holding regarding groundwater does not apply.

A centerpiece of Pineview's argument about source is *Bingham* (Brf.24-25). Pineview argues that (1) *Bingham* articulates the correct "interference analysis," and (2) it applies here because it says, minus Pineview's double emphasis, that plaintiffs there had "no protectable interest in the level of water in the soil beneath their land," and "no such

[40] Pineview asserts that "Loughlin explained in detail the lack of a correlation between [#4] and the [SI well] …[giving reasons]." (Brf.17). Actually, he was, at best, confused. He had already admitted in deposition that SI and Arave communicate, and that Arave and #4 communicate, and if so then SI and #4 must also communicate. (R.1142-45,1133,1138), *all* of which is happening inside #4's cone of depression. (R.1130-31,1129;P-Ex.29). Still, he insisted on "zero communication" between SI and #4. (R.1138-39).

enforceable right … to their soil saturation or the level of the water table." (Brf.25;2010 UT 37, ¶12). *Bingham* does not help Pineview. That case explains exactly why those plaintiffs stood in very different legal shoes than Appellees. Clarifying the interference claim, this Court distinguished *Bingham* from this case:

> [interference] can be invoked only by a party with an enforceable water right. Our prior discussion with regard to the nature of the North Hayden Group's property interest makes clear that its members have no such enforceable right with regard to their soil saturation or the level of the water table.

Bingham, ¶53.

Not only does each Appellee have "an enforceable water right," they are the senior rights in the source (R.392,408-09), which unlike the *Bingham* plaintiffs, happens to be the groundwater beneath their homes, (R.406,1222), and the same water #4 extracts first only because it has a longer, more powerful straw. (R.399-400,409). Appellees' "[s]ource of supply" is "[u]nderground water" from a "(well)." (P-Exs.10A,11A,12D). The *Bingham* plaintiffs had no such rights; they benefitted only indirectly from groundwater. *Id*. ¶6. Not so here. These plaintiffs own senior rights pumped from wells captured and invaded by Pineview's junior water diversion and the large cone of depression (between a quarter and a half mile in diameter) it creates. (R.1146;P-Ex.29).

Pineview again doubly emphasizes *Bingham's* statement that interference requires some act "obstructing or hindering [a plaintiff's] ability to obtain that water." (Brf.24-25;2010 UT 37, ¶48). "[T]hat water" is the "water to which the prior appropriator is entitled." *Bingham*, ¶48 (citation omitted). And that is the point of this case. *That water* Pineview pumps hundreds of feet below Appellees' wells is the very same "[u]nderground"

water on which Appellees have the senior call. (R.392,408-09; (*e.g.*, P-Ex.10A); §73-3-1(5)(a)). Pineview's well operation plainly obstructs and hinders their access to it. (R.406-09). Pineview does not challenge these facts.

Bingham also points out that plaintiffs there were "capable of obtaining all of the water to which they are entitled in the same manner in which they have been diverting it." *Bingham*, ¶53. Pineview argues that, because Appellees' wells are capable of producing their allotted water, there can be no interference. Those wells can indeed produce that water, and more, but only when #4 is off. Appellees cannot "obtain" their water via their wells (the "manner in which they have been diverting it") as long as #4 pumps, approximately one-fourth of the year. (R.397,399-401,408-09,1214,1223,1294).

C. Improper water use is not a defense to interference in this case.

SI overused its right. (R.398,410-411). It and Araves put water on some lawn and flowers but should not have. (R.398,1213). Curing that problem (with aid of new counsel), Venture acquired an additional to 2 acre-feet. (R.398,607-08). The district court noted correctly that water use is "regulated by the Utah State Engineer, who has enforcement powers pursuant to §73-2-25 if water is used without the right to do so, or beyond an existing right."[41] (R.411).

Pineview contends that "illegal" use, (Brf.38-39), is a complete defense to the fact of interference that its expert admits Pineview caused. (R.1130-46,1239-40). As the

[41] "[T]he state engineer may commence an enforcement action … if [he] finds that a person … is diverting, impounding or using water in violation of an existing water right …." §73-2-25(2)(a).

district court noted, nothing about this case or the evidence of interference would be different if SI had stayed within the limits of its pre-augmented right. (R.410-11). Had any Appellee used a little less water between January and June, or between October and January, the interference is the same because between July and the end of September the wells will not work. *Id*.[42] When #4 was on, SI needed the Arave lifeline just to keep its cistern filled. (R.542-43). That's why Pineview connected the Inn. Furthermore, now that Venture has acquired the water sufficient for SI's "needs," there is no doubt that Pineview's interference will not change. #4's cone of depression that invaded Appellees' source before Venture made things right with the state engineer returns each time #4 pumps.

Pineview skirts around its admitted interference, (Brf.14-15,37), instead pointing out that Appellees exceeded their rights and could have obtained more data than they did. True both times. First, in this case, the nature of the interference did not affect *how* Appellees' used their rights. That's what *Wayment* means when it focuses the analysis "on the water right at issue." Pineview's interference does not affect that particular stick in the bundle—the "*purpose"* of use. §73-3-17(1)(c). And quantity is not an issue when #4 is off. (R.398,540-41,577,582,605). Second, regarding data, with an unlimited budget we could learn a lot about the "geology" of these aquifers. Appellees spent the money to understand them sufficient to prove the interference, (R.635,654-55,783), with an assist from Loughlin. (P-Ex.29; *supra* at 21-23).

[42] Pineview had standing to counterclaim if it could have shown that overuse by senior rights interfered with its junior rights. Utah R. Civ. P. 13(a)(1). Failure to file a compulsory counterclaim "result[s in a waiver." *Kimball v. Campbell*, 699 P.2d 714, 716 (Utah 1985).

D. The finding of negligence is proper.

Negligence requires (1) a "duty" owed by Pineview to Appellees, (2) its breach, (3) a finding that "the breach …was the proximate cause of [Appellees'] injury, and (4) "damages" "in fact." *Hunsaker v. State*, 870 P.2d 893, 897 (Utah 1993). *Bingham* invoked another Justice Crockett opinion, *N.M. Long & Co. v. Cannon-Papanikolas Construction*, 343 P.2d 1100 (Utah 1959), where this Court "weighed the rights of a landowner and a water rights holder," *Bingham*, at ¶61.[43] "What is important … [is] whether the actions that caused that change were reasonable and undertaken with due care for the rights of others." *Id.* Accordingly, "every person has a right to use his own property … so long as that use does not invade" neighboring "rights" "unreasonably and substantially." *Id.* ¶61 (citation and emphasis omitted).

"Invade" describes vividly what Loughlin drew (P-Ex.29), what Anderson explained, (P-Exs.14-30), and what the district court found. (R.478-79,1130-31,1035). Pineview's #4 was pump tested in 2004, and the interference with Arave was quick and thorough. (R.396,504). A second pump test that year confirmed it. *Id*. Then, in 2007, when there is no doubt that #4 was Pineview's responsibility, (R.396,577), it put that well into service, quickly shutting down Araves' well, resulting in their and Southwick's immediate connection to Pineview's culinary system. (R.396-97,505,1256-57). SI joined them in August. (R.542-43). Pineview pumped knowing, or it should have known, that its

[43] The reasoning in *N.M. Long* is "fully applicable to a claim to prevent actions that might lower the water table." The pressures of growth and the need for water, "and the corresponding necessity for restrictions upon the manner in which property rights may be exercised," increase with time. *Bingham*, at ¶62.

well interfered with nearby senior rights. Pineview's "method" of diversion "foreseeably" harmed Appellees. *See Bingham,* at ¶65. Appellee's "damages" consist, first, in the loss of their water rights and wells and the independence that comes with those property rights. (R.401-03,441).

E. The district court imposed proper remedies.

This is a case about discretion, and specifically the size of the "pasture" in which a district court may roam for the principles necessary to reconcile inherently competitive principles. The first rule is priority—as "[b]etween appropriators, the one first in time is first in rights." §73-3-1(5)(a). A senior right is entitled to its full complement "before junior" rights get anything. *Heal Utah v. Kane Cnty. Water Conservancy Dist*., 2016 UT App 153, ¶6. "Beneficial use" is, in turn, "the basis, the measure and the limit" of a water right. §73-1-3. Embedded within beneficial use is the "desideratum of our water law"—to develop as much of the "available water" as possible without waste. *Wayman,* at 867. "The duty to" avoid waste is bound up with the objective of achieving "the greatest duty possible for the quantity of water available …. regardless of … priority …." *In re Water Rights of Escalante Valley Drainage Area*, 348 P.2d 679, 682 (Utah 1960). The objective is always and everywhere to "assure the greatest possible use of the natural resource." *Id.* (citation omitted).

1. The district court has broad discretion to fashion *Wayman* remedies.

Because we live in a desert, the legislature and this Court have "fashioned" water law "in recognition of the desirability and of the necessity of insuring the highest possible development and of the most continuous beneficial use of all available water with as little waste as possible." *Wayman,* at 862. In that statement, this Court recognized the inherent tension between the rules of priority and beneficial use. On one hand, priority is everything—"the one first in time is first in rights." §73-3-1(5)(a).[44] On the other hand, it is not everything. It shares equal footing with the need to develop as much water as we can. *Wayman,* at 867.

Finding interference was not the district court's toughest task. The evidence was practically lopsided.(R.396,398,399-403,406-10,411-12,440,502-05,582-83,592,891,961-63,1214,1223,1249,1294;P-Exs.23,26,27,29,30,40). Pineview's expert placed both Appellee wells, with their senior rights, inside #4's cone of depression, which dewaters *both* aquifers. (P-Exs.29,52;R.1130-31).

The difficulty was fashioning a remedy that honors priority while following *Wayman's* broad instruction to develop as much water as possible. Pineview contends that the district court "announce[d] a dramatic departure from established ground water law …," (Brf.1), and "failed to correctly apply the law." (Brf.2). If affirmed, Pineview warns, the decision "would upend decades of established law relating to groundwater administration." (Brf.3). Pineview sees the decision as a "guarantee [of] a particular level

[44] For example, when adopted, Utah's Constitution "recognized and confirmed" "[a]ll existing" water rights "for any useful or beneficial purpose." Utah Const. Art. XVII, §1.

of water in the water table" for "the most senior right." *Id.* It argues that the judgment "guarantees the water level in the Arave Well is always higher than" in SI. (Brf.40).

That is incorrect. The remedy only begins there, returning these rights to their proper priority now that interference is established. The district court has that discretion. The court further ordered cooperation and data collection to determine whether there is an optimum point where *all* the rights can be satisfied while honoring Appellees' priority. (R.411-13,440-41). But that is not the end of the story.

Decided in 1969, *Wayman* is cited in a handful of published decisions but never substantively applied. This may be the first post-*Wayman* well interference case to reach this Court. *Wayman's* "rule of reasonableness" in allocating rights in groundwater "involves an analysis of the total situation: the quantity of water available, the average annual recharge in the basin, [and] the existing rights *and their priorities*." *Wayman*, at 865 (emphasis added). "What is desirable," and what the district court tried to do here,

> is the best possible adjustment of the rights of these parties in relationship to each other, and without undue or unreasonable burden upon either, and at the same time serve the desideratum of our water law of putting and keeping to the beneficial use the greatest possible amount of available water.

Id. at 867.

Pineview proposes, instead, that these senior right owners should "chase their water," (Brf.39-40), not because of drought or other natural forces, but because Pineview's longer straw diverts its junior rights using a well several times more powerful and hundreds of feet deeper, taking all the water, effectively reversing priority in its favor. (R.395-

96,408).[45] Our remedy, says Pineview, is to just drill deeper, and to keep drilling, presumably at our cost, until we catch up to *its* cone of depression. This Court in another Justice Crockett opinion already rejected this appropriator-with-the-longest-straw-and-most-money-wins "chase" to the bottom:

> It must be realized that underground water basins do not emerge from some mysterious inexhaustible source. They are replenished only from natural precipitation and surface waters. Prudent management of water resources requires that only the average annual recharge be withdrawn. To do otherwise simply results in competitive chasing the water level down by ever deeper wells.

Fairfield Irr. Co. v. White, 416 P.2d 641, 645 (Utah 1966).[46]

2. The district court wisely left room to adjust remedies.

Despite a lack of substantive judicial gloss on *Wayman,* this case is not this Court's first rodeo on similar issues. Decided a few years before *Wayman, Fairfield* shows just how right our district court is. There, Fairfield had senior rights in certain spring flow. *Id.* 642. It sought an injunction against a landowner and a church from pumping their wells (two to three miles away), which caused decreased spring flow. *Id.* Tests showed, just like they do here, that when the wells were pumped spring flow dropped, and when the wells

[45] Appellees agree that they and all appropriators must "chase their water" when the source retreats or dries due to natural conditions. In California, where many of its groundwater basins are overdrafted due to drought, "extractors must dig deeper wells" when "the water table drops." Kelly Hart, The Mojave Desert as Grounds for Change: Clarifying Property Rights in California's Groundwater to Make Extraction Sustainable Statewide, 9 Hastings W.-N.W. J. Env. L. & Pol'y 31, 34 (2002). Here, however, the experts agreed that the drainage is not in general decline, but is stable, with normal seasonal fluctuations. (R.393,779-81,809-11,963,1129;P-Exs.26,27).

[46] And at whose expense? Certainly not Appellees'. *Cf. Andrews,* 533 ("reasonable basis" for interfering parties to "share equally" in the "expense" to make senior rights whole).

were off, spring flow returned "almost immediately," indicating, as similar tests did here, a shared source. *Id*. 643.

The district court there enjoined some of the well pumping and ordered replacement water. *Id*. 642. It declined to enjoin the church "but retained jurisdiction to take further evidence … as to any such interference." *Id.*;*cf.* R.412,440,442).[47] *Wayman* does not address a specific remedy in the event of local well interference; for example, whether the senior right must drill deeper. The fact-driven "rule of reasonableness" may in the right case indicate that remedy, just not here, at least because (1) #4 is 500+ feet deeper, so Appellees should not have to pay for it, and (2) it's a bad idea. *Fairfield*, at 645.

The result Pineview says upends all of our groundwater law—the district court's experimental, data-gathering, retained jurisdiction remedy designed to further water development while protecting senior rights—bears a striking resemblance to *Fairfield's,* where this Court explained, previewing *Wayman*:

> This is in conformity with the policy of the law of encouraging and promoting the development and use of water resources and of not interfering therewith unless it is clearly shown that doing so infringes some established prior water right. Nevertheless, *due to lack of certainty* about the matter the trial court *acted wisely in retaining jurisdiction* to further consider the possibility of such a relationship after more tests and observations have been made; and if any such relationship is found to exist, to grant appropriate relief.

Id. 646 (emphasis added).[48]

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[47] Experts in *Fairfield* testified that a geologic barrier separated the church's aquifer from that of the company and the landowner. *Fairfield*, 646. That testimony was, evidently and unlike Loughlin's, persuasive. *Id.*

[48] Justice Crockett dissented in *Current Creek v. Andrews*, 344 P.2d 528,533-38 (Utah 1959), because he thought the remedy too harsh, and wrote *Fairfield* and *Wayman*,

The district court in *Fairfield* and here "wisely" left itself room to adjust remedies to fit the data, virtually all of which Appellees paid Anderson to collect, that Loughlin relied on, (R.1106), and that Pineview now criticizes. The district court here did precisely what *Fairfield* and *Wayman* require—ordered data in an effort to adjust the rights to each other and the "available water," *Wayman,* 862, and left its options open, including, "[i]f … #4 cannot be pumped at a level or rate that does not interfere … the court *may* order … replacement water … at [Pineview's] sole expense." (R.441)(emphasis added), *citing* §73-3-23. *Cf. Andrews*, 531-33 (replacement water ordered).[49]

3. The district court needs flexibility and options.

A district court tasked with a "rule of reasonableness" in the allocation of rights in the use of groundwater has and must have room to roam, to experiment. This Court laid that groundwork in *Pena*, establishing a durable framework for how to think about what district courts do. The "pasture" in which all courts below this one are permitted depends on the nature of the issue. *Levin,* ¶24. Narrow fences define pure legal questions. *Id.* On the other end, the pasture is wide, allowing continuing jurisdiction and innovation. *Id.* This is that case.

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distinguishing *Andrews* in *Wayman.* 458 P.2d at 863, n.3. That distinction is important. *Wayman* was a §73-3-3 change application case involving existing wells and a plentiful source. *Wayman,* 863. Like this case (at least with respect to Appellee's local aquifer), *Andrews* was a "new withdrawal" from the source. *Id.*, and n.3.

[49] Pineview's #4 is just one of five wells approved for use at the same time as #4. (P-Exs32-33), a fact that the district court considered in evaluating its, and Pineview's, options. (R413 at ¶iii; 441 at ¶iii).

District courts employing *Wayman* must do what only courts of equity can do, which is to figure out how to stretch a finite resource as far as possible while honoring priority. (R.406-07). *Wayman,* at 865; *Fairfield,* at 646. To do that, they need flexibility—a wide pasture—to deal with unique facts, party resources, and the "ambit of interference as applied to the water right at issue." *Wayment,* ¶9.

In *Wayman,* supply was not a problem. "The underground basin involved [there] still ha[d] an abundant supply of water." *Wayman,* 863.[50] Here, supply is an issue. The "drainage area," (P-Ex.10A), in which these rights exist is "fully appropriated." (Addendum 4). And, *Wayman* did not involve "a *new* withdrawal in a basin which adversely affects the flow of wells prior in time and right." *Wayman,* 863. (emphasis in original). There, the city only improved existing wells. *Id.*, 864. A "new withdrawal" is, however, what happened here. (R.390). #4 is a new straw drilled hundreds of feet below existing diversion points in an already fully appropriated drainage where Appellee's senior rights and wells functioned just fine until Pineview showed up. (R.390,396,408).[51] These facts are closer to *Andrews* and *Fairfield* than to *Wayman*, but *Wayman's* "rule" applies.[52]

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[50] The area was then still open to appropriation. *See* https://waterrights.utah.gov/docSys/v919/w919/w919009g.pdf at 29.

[51] By way of illustration, the state engineer's Salt Lake Valley Groundwater Management Plan urges that new wells "should be designed, constructed, and operated so that, when pumped at its maximum flow rate, it will not cause more than 12 feet of draw down on an existing well unless the owner of the new well provides just compensation to the affected well owner(s)."
See https://waterrights.utah.gov/wrinfo/mmplan/ugw/slf/slvmgpln.pdf, at §4.0.

[52] *Wayman* was a §73-3-3 change application case, but *Fairfield* was not, and *Andrews* is a blend, involving state engineer decisions and other complex claims. *Andrews*, 530. Yet the remedies are similar in the sense that they are adapted to their respective facts, suggesting that the problems they addressed, that are present here, and that are sure to

The district court ordered #4 shut down or curtailed followed by testing to find the sweet spot where all three wells can, hopefully, co-exist. (R.412-13,440-41). Pineview's criticism of the district court's step-at-a-time remedy might mean something had it proposed *Wayman*-style remedies of its own. Instead, it proposed that Araves could set a pump deeper in the well, (R.278,296,332,346), starting the very "chase" this Court rejected in *Fairfield* fifty-two years ago. Perhaps with more data lowered pumps or deeper wells *could* work. The district court's retained jurisdiction "in aid of its judgment" preserves its discretion when that data comes.

Bereft of any other ideas for remedying its admitted interference, Pineview asked for its "attorney's fees and costs" based on alternate grounds, first for "injuries caused by diversion of water in violation of an existing right." §73-2-28(4). It made no such counterclaim and has no such injuries. Its other grounds were that this action is "without merit and not … in good faith." §78B-5-825. (R.295,350-52). The record, *passim*, resolves that. Pineview's expert admitted interference and all the predicate facts supporting it. (R.1124-26,1129-33,1136,1138-46,1156-57,1159-60;P-Ex.29).[53]

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follow, will be addressed in a consistent fashion. These cases are and ever will be "so complex and varying that no rule adequately addressing" all of them "can be spelled out." *Pena*, at 939. *Wayman's* "rule" is about as precise as the Court can get without risking the unintended consequences of an overly restrictive pasture.

[53] For the same reasons, the Court should dispense with Pineview's fee request here. (Brf.47-48). Seeking fees and summing up its entire appellate argument, Pineview contends that Appellees "offered no proof of the amount of authorized water that they [were] unable to obtain when" #4 pumps. (*Id.* 47). Pineview skips over that part of the case in which we proved with Loughlin's help that between July 1 and the end of the irrigation season, the Arave well pumps nothing, and the SI well cannot keep up. (R.397,399-401,408-09,1214,1223,1294). Without the lifeline from the Arave home (by then a Pineview customer), the Inn could not have functioned. (R.542-43). In these

4. The district court appropriately awarded damages based on fees paid to Pineview.

A senior right is "first in rights." §73-3-1(5)(a). In an underground aquifer shared with junior rights, therefore, the senior rights get the first water out of the ground. In other words, the senior Appellee rights divert first in priority, before junior Pineview gets a drop. Pineview's #4 reversed that order. (R.407-09;P-Exs.23,24,26,27,29). Once it was clear to the parties that #4 interfered, Pineview immediately connected Appellees so it could go right on using #4. (R.397,505,1256-57). In exchange, Appellees paid a flat $20 monthly, (R.397,505,550-51), a cheap rate that presumably accounted for the interference. When Pineview changed that deal, Appellees sued, seeking to abate the interference and damages. (R.505-06).[54]

Appellees were required to prove both the fact of damages and their amount. *See TruGreen Cos. v. Mower Bros.*, 2008 UT 81, ¶15. The "fact of damages" means "a reasonable probability that the plaintiff suffered damage." *Atkin Wright & Miles v. Mountain States Tel. & Tel. Co*., 709 P.2d 330, 336 (Utah 1985). Evidence for the amount

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unchallenged facts are found multiple instances of interference: (1) the period of use, (2) the quantity (0% from Arave and some negligible amount from SI, (R.397,399-401,408-09;P-Exs.23,24,26,27,29,30), and (3) the diversion method—the wells either do not work or barely work. *Id.* These facts added up to "obstructing or hindering the quantity or quality of" "existing water right[s]," *Wayment*, ¶13; (R.409), and explain their connection to Pineview. That's exactly what happens when your cone of depression captures existing wells—that "trouble" Laughlin helpfully described—pumping water to such a level as to interfere with someone else's right. (R.1122).

[54] Appellees' water rights add significant value to their properties. (*See* R.406). Without water, land loses tremendous, sometimes all, value. *See, e.g., Sanpete America v. Willardsen*, 2011 UT 48, ¶40, and cases cited, discussing water's importance to land value. Their water rights are appurtenant. *See* discussion at *id.* ¶¶36-48.

must "provide[] a reasonable, even though not necessarily precise, estimate of damages." *TruGreen*, ¶15.

Understanding the water right pecking order, the district court awarded Appellees what they've paid Pineview for, in effect, their own water. (R.401-02,413,441).[55] That is, their senior rights gave them the first water out of these shared, fully appropriated aquifers. Pineview's deeper well took that water first, right out from under them, reversing priority *in fact,* (R.407-09;P-Exs.23,24,26,27,29), thereby interfering with the priority stick.[56] They did not pay for water before that, but they had to afterwards. They should not have to pay for water they already appropriated and on which they have the senior call. Finally, the district court's award of damages for the hard water and related problems was entirely appropriate. Just like their pre-#4 well use, they had no such problems before connecting. (R.398,1223).[57]

CONCLUSION

The essential facts of this case could never be disputed. Pineview operated a new, much bigger well too close to existing wells that divert senior rights. Finding clear interference, the district court ordered a proportional remedy that faithfully honors those

[55] Appellees do not "own" the water, of course; they own the right to use it, and their priority puts them first in line. §73-3-1(5)(a).

[56] "[P]riority in a water right is property in itself….[T]o deprive a person of" "priority is to deprive" "a most valuable property right." *Colorado Water Cons. Brd. v. City of Central,* 125 P.3d 424, 434 (Col. 2005)(citations omitted).

[57] It was not Appellees' burden to figure out *why* Pineview's water caused their damage. It just does. Neither do they control or even know which of the "multiple sources," (R.1237), Pineview uses at a given time.

facts. That remedy does no violence to groundwater law. It furthers it. This Court should affirm.

August 21, 2018

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CERTIFICATE OF COMPLIANCE

Pursuant to Utah R. App. P. 24(a)(11)(B), this brief complies with Utah R. App. P. 21 because it does not contain any non-public information classified as private, controlled, protected, safeguarded, sealed, juvenile court legal, or juvenile court social, or any other information to which the right of public access is restricted by statute, rule, order, or case law.

Pursuant to Utah R. App. P. 24(a)(l l)(A), this brief complies with the limitation of Utah R. App. P. 24(g)(l), containing 13,487 words, excluding exemptions under Utah R. App. P. 24(g)(2).

This brief complies with the typeface requirements of Utah R. App. P. 27(b) because it has been prepared in a proportionally spaced typeface using Microsoft Word 2013, in Times New Roman, font size 13.

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CERTIFICATE OF SERVICE

I certify that on August 21, 2018, two copies of this Brief of Appellees were served via hand-delivery to Appellant's counsel:

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ADDENDA

Addendum 1 - Memorandum Decision

Addendum 2 - Final Judgment

Addendum 3 - Amended Final Judgment

Addendum 4- Utah Division of Water Rights current policy – found at:
http://www.waterrights.utah.gov/wrinfo/policy/wrareas/area35.asp.

Addendum 5 – Utah Code §73-3-17

Addendum 6 - Trial Exhibit P-Ex.23

Addendum 7 - Trial Exhibit P-Ex.26

Addendum 8 – Trial Exhibit P-Ex.27

Addendum 9 – Trial Exhibit P-Ex.29

ADDENDUM 1

**IN THE SECOND JUDICIAL DISTRICT COURT OF WEBER COUNTY
OGDEN DEPARTMENT, STATE OF UTAH**

Roger B Arave and Kimberly L Arave, Janet Southwick, Trustee, and Venture Development Group, LLC, a Utah limited liability company, Plaintiffs, vs. Pineview West Water Company, a Utah corporation, Defendant.	**MEMORANDUM DECISION** Civil No. 130907544 Judge Ernie W Jones

This action was tried to the bench August 18, 19, and 29, with closing arguments on September 25, 2017. Plaintiffs were represented by David C. Wright. Defendants were represented by Edwin C. Barnes and Emily E. Lewis. The parties also filed trial briefs. The court heard testimony from the witnesses, including expert witnesses from both sides, and has reviewed the trial exhibits. The court also heard argument from counsel. After the close of the evidence, the court asked the parties to submit proposed findings of fact and conclusions of law. Having listened to the testimony, reviewed the evidence, and applying the law concerning water right interference and negligence, the court makes the

following findings of fact and conclusions of law pursuant to Rule 52(a) of the Utah Rules of Civil Procedure:

FINDINGS OF FACT

A. The parties

1. Plaintiffs Roger B. Arave and Kimberly L. Arave, individuals and husband and wife (referred to jointly as "Araves"), are joint tenant owners and residents of a single family residential real property located in Weber County, with a street address of 1364 North Highway 158, Eden, Utah.

2. Plaintiff Janet Southwick, Trustee, (sometimes referred to herein as "Southwick"), is the sole owner and resident of certain single family residential real property located in Weber County, with a street address of 1375 North Highway 158, Eden, Utah.

3. Venture Development Group, LLC ("Venture"), owns certain improved real property located in Weber County, with a street address of 1315 North Highway 158, Eden, Utah, which property is operated as a commercial bed-and-breakfast known as the Snowberry Inn ("SI"). The Inn includes nine bedrooms and bathrooms and two kitchens. SI also serves as the year-round residence for the Inn operator, Andrea Burk.

4. Defendant Pineview West Water Company ("PWWC" or "Pineview") is a private, Utah non-profit corporation with its principal place of business in Eden, Weber County, Utah. PWWC is regulated by the Public Service Commission. It

operates multiple wells and other sources for its culinary and secondary (irrigation) water delivery purposes.

B. The parties' wells

5. Three wells are at issue:

a. Plaintiffs Arave and Southwick share the Arave well, which was drilled in 1963 (and cleaned out in 2013).

b. Venture Development owns the rights in the well operated by Snowberry Inn, a bed and breakfast establishment near the Araves ("SI well"), drilled in 2001.[1]

i. The SI well operates with a cistern, which is a tank with a functional capacity of between approximately 300 gallons and 500 gallons.

ii. The cistern contains level sensors. When the cistern drops below a certain level, it triggers the SI well pump to turn on.

iii. The pump runs until a sensor signals that the cistern is full, which then turns off the pump.

iv. Water is then pumped again, with a separate pump, into the Inn, where it is held in two tanks, which then distribute the water throughout the Inn.

[1] The current SI Well is a newer well. The original was drilled in 1960 and then replaced in 2001

v. Although the original Venture water right did not allow irrigation use, the Inn irrigated approximately 4600 square feet of lawn and garden around the structure.

vi. The SI well pump is rated at 25 gallons per minute.

vii. The SI and Arave wells are in hydrological communication.

viii. The SI well pump was rated at 25 gallons per minute when installed in 2001. The same pump is presently in the well.

ix. The SI well, which replaced a previous well drilled in 1960, was drilled into both the unconsolidated and bedrock aquifers, while the old well was completed in just the unconsolidated aquifer.

c. The third well is PWWC's #4 Well ("PWWC #4," or just "#4"), drilled in 2004.

i. The #4 is approximately 700 feet from the Arave well and approximately 460 feet from the SI well.

ii. The Arave and SI Wells are approximately 200 feet apart.

iii. PWWC #4 is used solely for secondary irrigation water.

iv. The current #4 pump is rated at 100 gallons per minute.

C. The parties' water rights

6. Roger and Kimberly Arave own appurtenant water right 35-1483, which allows them to divert from their well .015 cfs (approximately 6.7 gallons per minute) for the needs of one home and two livestock.[2]

7. Janet Southwick owns appurtenant water right 35-6733 (E1349) allowing her to divert from the Arave well up to 1 acre-foot ("af") to irrigate .25 acres and for the indoor domestic needs of one home.

8. Prior to its shutdown and use as a monitoring well, the Arave well was the sole source of culinary and secondary water for Araves and Southwick.

9. Venture Development owns the property and building where Snowberry Inn operates. It owns two appurtenant water rights that were diverted from the SI Well on its property:

a. Water right 35-1220 allows SI to divert .45 af, at the rate of .015 cubic feet per second ("cfs"), for single family domestic use.

b. Water right 35-13204 (E5647), acquired in March 2017, allows diversion up to 2 af to irrigate .25 acres and 1.25 af of commercial use at the Inn.

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[2] "The standard unit of measurement of the flow of water shall be the discharge of one cubic foot per second of time, which shall be known as a second-foot; and the standard unit of measurement of the volume of water shall be the acre-foot, being the amount of water upon an acre covered one foot deep, equivalent to 43,560 cubic feet." Utah Code §73-1-2. In these findings and conclusions, cubic feet per second is abbreviated as "cfs," and acre-foot is abbreviated as "af."

10. PWWC owns (among others) water right 35-11891 (E4625), allowing it to divert 90 af annually for irrigation of 21.66 acres and the indoor domestic requirements of 55 families ("PWWC Right").

a. In 2006, PWWC received State Engineer approval to divert this water right from any combination of five wells, including #4.

b. That approval is, as all such approvals are under the law of prior appropriation, "subject to prior rights."

11. PWWC right 35-7263 was modified by change application a27794, approved in 2013, allowing PWWC to divert 78 af at .33 cfs from the same five wells as E4625 (35-11891).[3]

12. PWWC can pump its water from any one, or any combination, of the five wells.

13. The parties' relative water right priorities are as follows:

a. Venture (SI) is October 10, 1960.

b. Arave is October 14, 1963.

c. Southwick is August 25, 1978.

d. PWWC #4 is October 14, 2005.

14. Thus, all of plaintiffs' rights are senior to PWWC's Well #4 rights.

[3] The "E" designation included with the Southwick, SI, and PWWC rights indicates simply that an exchange of water was approved. See Utah Code §73-3-20. The exchanges themselves are not at issue.

D. The local aquifers

15. There are two relevant local aquifers, an unconsolidated or alluvial aquifer, which consists mostly of sand, gravel, and cobble, and a consolidated rock aquifer, known as the Norwood Tuff.

16. Permeability is a measure of the ability of a porous material, such as rock or an unconsolidated material, to allow fluids to pass through it.

17. The unconsolidated aquifer has much higher permeability than the Norwood, which has generally poor permeability.

18. The Norwood can be fractured, which increases its permeability. The area around the three wells at issue likely contains fracturing, but the intensity and extent of fracturing are not determined.

19. There has not been a general decline in groundwater levels in the regional basin in which these aquifers are located. There are, however, seasonal fluctuations, with lower water levels in the late summer and early autumn, followed by increasing water levels during recharge in the winter and spring.

20. Aquifer recharge depends primarily on the amount of water withdrawn by well pumping and how quickly the aquifer begins to recharge with winter precipitation.

E. The effect of well pumping

21. Well pumping is a cause of seasonal discharge of water from an aquifer and consequent groundwater decline in a given aquifer.

22. When a well is drilled for production purposes, such as the three wells in this case, its casing is perforated at one or more depths. Water enters the well from the surrounding aquifer through these perforations, which supplies water to any pumps in the wells, when turned on.

23. Water flows from high pressure to low pressure or, in other words, from high head to low head.

24. When a well is pumped, the water level drops and a point of low pressure is created at the depth of the perforations in the well casing, which is at its maximum at the location of the pump itself. This has the effect of causing the water in the aquifer to draw down, flowing toward the pump or lower pressure.

25. The pumping thus creates a zone of low pressure, resulting in a cone of depression, usefully described as follows in *Bingham v. Roosevelt City*, 2010 UT 37, ¶3, 235 P.3d 730:

> The underground area of reduced soil saturation is in the shape of an inverted cone, with the point of the cone extending downward toward the point at which the water is extracted. Accordingly, the depth of the water table will be most significantly impacted at the point of extraction, but even as one moves away from this point, the water table will be lower than it otherwise might be. Therefore, the effects on the water table are apparent even on parcels of land that are not immediately adjacent to the wells.

26. A cone of depression creates a "radius of influence," a zone that is measured from the well outward and represents an area within a given aquifer that is dewatered due to well pumping.

27. An illustration of a simple cone of depression and a radius of influence is depicted below. This drawing is for illustrative purposes only and is not intended to depict any particular cone of depression from any well in this case. (*Cf.* Pltf. Trial Exhibit 52).

28. The shape and reach of a cone of depression depends on several factors, such as the nature, depth, and permeability of the surrounding aquifer(s).

29. The Arave Well is 187 feet deep. Its perforations are from 140 to 170 feet deep, entirely in the Norwood Tuff.

30. The original SI well, drilled in 1960 and replaced in 2001, was 120 feet deep. When it was abandoned, its static water level was at 55 feet from the top of the well casing. That well was drilled into the unconsolidated aquifer.

31. The current SI Well is 133 feet deep. Its perforations are from 105 to 125 feet deep, and are in both the unconsolidated aquifer and the Norwood Tuff. When drilled, its static water level was at 54 feet from the top of the well casing, which is one foot higher in water level than the original well.

32. The SI well likely gets the majority of its water from the unconsolidated aquifer but is hydrologically connected to the Norwood Tuff aquifer. The new well had a specific capacity during the initial pump test, much higher than the old well, which was exclusively completed in unconsolidated deposits.

33. PWWC #4 is 738 feet deep. It has four perforated zones. Zone 1 is from 58 to 98 feet deep, which zone is divided between the unconsolidated aquifer and the

Norwood Tuff. Zone 2 is from 208 to 228 feet deep. Zone 3 is from 408 to 448 feet deep, and Zone 4 is 648 to 738 feet deep. Zones 2-4 are entirely within the Norwood Tuff.

34. Both the Arave and SI wells lie within the cone of depression and the radius of influence created by pumping PWWC #4.

35. When #4 was first pump-tested, interference with the Arave well, expressed as a drop in the water level sufficient to leave the pump in the Arave well without water, was quickly noted by the Araves, and the test was stopped.

36. Later, after #4 was turned on again, the interference returned, first at the Arave well and later at the SI Well.

37. PWWC put well #4 well into operation, and the effect on the Arave well was again noticed within a short time. The Arave well was unable to produce any water when #4 was pumped. Because of this interference, PWWC connected the Araves to the PWWC culinary system in 2007.

38. The SI well also began to struggle to produce water in September, 2007. Because the SI well could not fill the cistern, the SI operators, the Dohrers, were forced to use a hose to connect to the Arave home and fill the Inn cistern with PWWC water obtained from the Arave connection.

39. Later, in 2007, the Inn was also connected to the PWWC system because its well could no longer meet its water needs.

40. The Araves, Southwick, and SI originally were offered and accepted an arrangement with PWWC under which they would pay a flat rate of $20.00 per month for PWWC culinary water. Later, in 2012, PWWC unilaterally increased that amount to PWWC's standard tariff rates, which plaintiffs have paid each year since.

41. The Araves have paid $7,003 to PWWC for water service. Southwick has paid $4,782. Venture has paid $19,839.

42. PWWC #4 is turned on typically around July 1 of each year and is pumped through the remainder of the irrigation season, ending in late summer/early fall.

43. Once hooked up to PWWC's water system, the Araves removed the pump from their well and have used the well as a monitoring well to document the impact of pumping #4 for several years.

44. The use of the Arave well as a monitoring well has facilitated the parties' ability to gather data concerning the effect of PWWC #4. Had the Araves attempted to pump at the same time that PWWC #4 was pumped, the data would have been more difficult to interpret.

45. The fact that the Arave Well has not been pumped has allowed good data collection to determine the impact of PWWC #4.

46. The Arave Well is a very good surrogate for PWWC #4, meaning that it reacts quickly and accurately to pumping in the #4.

47. Prior to the introduction of PWWC #4, neither the Araves (including Southwick) nor SI had any well or water availability or well pumping issues or problems in their current wells. The Arave and SI wells produced water year-round to satisfy the Arave, Southwick, and SI (Venture Dev.) water rights and uses.

48. In March of 2017, Venture Development acquired 2 acre-feet of additional water by virtue of an approved Exchange with Weber Basin Water Conservancy District. This additional water is approved for irrigation of .25 acres and year-round commercial purposes for the Inn.

49. Prior to acquiring its additional 2 af under water right 35-13204 (E5647), SI used in a typical year more water than permitted by its original water right, and it used that water for irrigating its lawn and garden even though the water right is not authorized for irrigation uses.

50. During the three years prior to trial, SI used approximately .33 af of its total .45 acre foot right (prior to the Exchange (E5647)) in the months before PWWC #4 was turned on.

51. The prior SI operators, the Dohrers, kept a record of well use versus PWWC culinary water use. Patrick Dohrer explained how he alternated between using SI well water and PWWC culinary water after SI was connected to the PWWC culinary system by turning certain valves inside the Inn.

52. The Dohrer SI well versus PWWC water use record was not perfectly kept. It showed no SI well use during a time in approximately late August to early September 2014 when the SI well was actually being used. That well use during that period is depicted on plaintiffs' Exhibits 26 and 27.

53. PWWC also kept a record of its #4 well use, but that record also was not entirely accurate.

54. These errors in record keeping by the Dohrers and by PWWC were inadvertent. No bad faith or improper motive is found in connection with those errors.[4]

55. Andrea Burk took over SI operations in 2014. She explained how she understood that valve system to work, but her understanding was incorrect. She did not understand how that valve system worked until it was shown to her during the trial.

56. When PWWC #4 starts pumping the Arave well head begins to fall within hours. When the elevation of the Arave well head falls below the elevation of the SI well head, some water moves downward and away from the SI well unconsolidated aquifer toward the lower elevation of head now present in the

[4] For example, it is clear that the SI well was pumped during the late August to early September 2014 time frame because plaintiffs' expert, Paul Anderson, collected SI pumping head (i.e. water elevation) data during that period, which data is depicted on plaintiffs' Exhibits 26 and 27. There was no way to collect such data unless the SI well was being pumped.

Norwood Tuff, essentially draining some of the water away from the unconsolidated aquifer and causing the head in the SI well to drop.

57. As PWWC #4 continues to pump, it continues to draw down the level of the Arave well due to the deepening and widening cone of depression, created by pumping this deeper and higher volume well. The SI well clearly lies within this deep and wide cone of depression; hence, water moves from higher head in the SI well's aquifers to the lower head created by the #4 deepening cone in the Norwood Tuff. The result is that the SI well head drops, and the well struggles to produce even a minimal yield.

58. In the winter-late spring of each year, the head in the Arave well is consistently higher in elevation (as shown on Plaintiffs Exhibit 27) than the SI well.

a. Water moves from high to low head, indicating that water monitored in the Norwood Tuff, at the Arave well, is moving upward toward the water monitored in the SI well, which is perforated in both the unconsolidated and Norwood Tuff aquifers.

b. When this head relationship between the Arave and SI exists, there is no problem for the SI well to quickly fill and re-fill the Inn's cistern as demonstrated in Plaintiffs Exhibits 26 and 27.

c. It is when this Arave – SI head level reverses—when the normally higher Arave head drops below the normally lower SI head—that the SI well is most noticeably affected. Its water level drops dramatically at that point.

59. PWWC #4's interference with the SI well is illustrated in plaintiffs' Exhibit 23. The graphs on that exhibit show that in December the SI well recovers quickly, filling the cistern within fifteen minutes. During August, when PWWC #4 is pumping, the SI well struggles for hours to fill the cistern.

60. The Arave and SI wells coexisted without interfering with each other.

61. After PWWC #4 stops pumping, recovery time for the water levels in the Arave and SI wells depends on the factors described above—how much #4 pumps and how quickly the aquifer is recharged.

62. The PWWC right is evidenced by an underlying Bureau of Reclamation water right, 35-7397, which has a 1930 priority.

63. In 2006, PWWC obtained approval to move the point of diversion of its water right to a complex of five wells, including #4, subject to prior rights.

64. The PWWC water delivered to plaintiffs after PWWC connected them to its system caused damage in the form of hard water deposits and build-up, requiring certain repairs and maintenance by each of the plaintiffs.

65. The Araves pump was damaged due to PWWC interference.

F. Damages

66. Araves incurred damages proximately caused by reason of PWWC's pumping of its well #4 in the form of (a) fees paid to PWWC for the water connection to PWWC's system necessitated by PWWC's interference with the Arave well, in the amount of $7,003; (b) the cost of a new pump and associated accessories estimated at $4,500.

67. Southwick incurred damages proximately caused by reason of PWWC's pumping of its well #4 in the form of (a) fees paid to PWWC for the water connection to PWWC's system necessitated by PWWC's interference with the Arave well, in the amount of $4,782, (b) expenses incurred by reason of the hard water problems and related issues in the amount of $1,000, for total damages in the amount of $5,782.[5]

68. Venture incurred damages proximately caused by reason of PWWC's pumping of its well #4 in the form of (a) fees paid to PWWC for the water connection to PWWC's system necessitated by PWWC's interference with the SI well, in the amount of $19,839; expenses incurred by reason of the hard water problems and related issues in the amount of $8,399, for total damages in the amount of $28,238.

69. Patrick and Sherrie Dohrer operated SI from August 2005 to approximately August 2014, and during that time incurred certain costs and expenses caused

[5] Southwick also lost several trees and a garden due to the inability to irrigate after connection to the PWWC system. No value was placed on these items, however.

by or related to interference with the SI well. Those expenses total $10,538.83, and are identified in plaintiffs' Exhibit 1. Dohrers assigned the claim for those expenses to Venture on May 31, 2016. That figure is included in the foregoing Venture damages calculation.

70. All of the parties' water uses are for beneficial purposes.

CONCLUSIONS OF LAW

1. The court has personal jurisdiction over the parties.

2. The court has subject matter jurisdiction pursuant to Utah Code §78A-5-102(1).

3. Venue is proper pursuant to Utah Code §78B-3-301 inasmuch as the real property and water rights at issue in this matter are located in Weber County, Utah.

A. Water Right Interference

4. A determination of interference is a mixed question of fact and law. S*ee Wayment v. Howard*, 2006 UT 56, ¶9, 144 P.3d 1147. The court "must first find facts regarding the claim of interference and then determine whether those facts are within the ambit of interference as applied to the water right at issue." *Id.*

5. Water is public property, "subject to all existing rights to the use thereof." Utah Code §73-1-1(1).

6. Beneficial use is the basis, measure, and limit of a water right. Utah Code §73-1-3.

7. The law of prior appropriation means that senior water rights have priority over junior rights. Prior appropriation applies always and everywhere to protect senior rights. "[S]enior water right holders are entitled to their full water right before junior water right holders are entitled to any water." *Heal Utah v. Kane Cnty.* etc., 2016 UT App 153, ¶6, 378 P.3d 1246).

8. Water rights are real property. Utah Code §57-1-1(3)("Real property" or "real estate" means any right, title, estate, or interest in land . . . and all water rights . . . .").

9. No one may diminish, obstruct or interfere with the approved water rights of another. See *North v. Marsh*, 504 P.2d 1378, 1379 and n.2 (Utah 1973).

10. Interference means to obstruct or hinder. *See Black's Law Dictionary* 831-32 (8th ed. 2004). Specifically, in Utah water law, "obstructing or hindering the quantity or quality of an existing water right constitutes interference." *Wayment*, 2006 UT 56,¶ 13 (citations omitted). *See also Bingham*, 2010 UT 37, ¶48.

11. "Because underground waters cannot be observed nor measured with precision, but must be determined on the basis of geology, physics and hydrology, there are greater difficulties involved in their allocation and regulation than with respect to surface waters." *Wayman v. Murray City*, 458 P.2d 861, 863 (Utah 1969).

12. A water right consists of several constituent elements, which when taken together define a right to the use of water. Those elements include (i) quantity,

either or both in terms of volume (measured in acre-feet) and flow rate (measured in cubic feet per second), (ii) purpose of use, (iii) place of use, (iv) point of diversion, (v) time during which the water may be used, (vi) the source from which the water is diverted (either above or below ground), and (vii) priority date. *See, e.g.*, Utah Code §73-3-17(1).

13. A water right also includes an appropriator's right to continue use of the "existing and historical method of diverting the water." *Wayment,* 2006 UT 56, ¶13. Here, plaintiffs' water rights are diverted solely by means of their wells.

14. Protection of a senior right extends to the source. "No one can interfere with the source of supply of [a water right], regardless of how far it may be from the place of use, and whether it flows on the surface or underground, in such a manner as will diminish the quantity or injuriously affect the quality of the water of these established rights." *Little Cottonwood Water Co. v. Sandy City*, 258 P.2d 440, 443 (Utah 1953).[6]

15. The timing of water right use is protected. When implementing a change in the use of water, as PWWC did here when it moved water rights to its #4 well, it

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[6] See also Justesen v. Olsen, 40 P.2d 802, 805 (Utah 1935)("From the beginning of our history, when a man went upon a stream of water, diverted it, and applied it to a beneficial use, his right to the use of that stream was recognized as being prior and superior to the rights of all subsequent appropriators to the extent of the reasonable necessities of the ... first appropriation. During the progress of our development, as new conditions presented themselves from time to time our courts have consistently enforced this right of priority and protected appropriators not only as against all subsequent claimants taking water from the body of the stream, but as against all persons interfering with its source.").

must ensure that senior rights are not harmed. "This requires that the vested rights of the lower users shall not be impaired by such changes either by reducing the flow of water… or by changing the time of such flow to the[] detriment [of senior rights]." *East Bench Irr. Co. v. Deseret Irr. Co.*, 271 P.2d 449, 453 (Utah 1954).[7]

16. Plaintiffs' water rights are essential to their properties. The Araves and Southwick live there and, until being interfered with, depended on their water rights and the Arave well as the sole source of their culinary and secondary water.

17. The SI well and water rights also add significant value to Venture's property.

18. Without water, land loses tremendous, sometimes all, value. *See, e.g., Sanpete America v. Willardsen*, 2011 UT 48, ¶40, 269 P.3d 118, and cases cited (discussing water's importance to land value).

19. This action concerns groundwater and local well interference. The "rule of reasonableness" governs groundwater interference. *Wayman*, 458 P.2d at 866.

20. Plaintiffs' and PWWC's respective water rights should be addressed under this "rule of reasonableness" to balance plaintiffs' senior water rights with PWWC's junior rights.

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[7] *See also Logan, Hyde Park, etc. v. Logan City*, 269 P. 776, 778 (Utah 1928)(city "perpetually" enjoined from "operating its diverting works and power plant as to impound, obstruct, or impede in any manner the free and natural flow of the water of the river to which the [senior appropriators were] entitled . . .).

21. This requires analysis of the circumstances: the quantity of water available, the average annual recharge in the basin, the existing rights, and their priorities. *Wayman*, 458 P.2d at 865.

22. All water users are required where necessary to "employ reasonable and efficient means in taking their own waters in relation to others to the end that wastage of water is avoided and that the greatest amount of available water is put to beneficial use." *Wayman*, 458 P.2d at 865.

23. *Wayman* means essentially that, when rights clash, the court invokes reason so that, as far as possible, water is developed for beneficial use.[8]

24. PWWC's #4 rights are junior in priority to plaintiffs' rights.

25. Between appropriators, the one first in time is first in rights. Utah Code §73-3-1(5)(a).

26. Accordingly, "senior water right holders are entitled to their full water right before junior water right holders are entitled to any water." *Heal Utah v. Kane Cnty. Water Conserv. Dist.*, 2016 UT App 153, ¶6, 378 P.3d 1246 (citation omitted).

27. No junior appropriator may interfere, directly or indirectly, with senior rights. *Rasmussen v. Moroni Irr. Co.*, 189 P. 572, 577 (Utah 1920)("The first appropriator

[8] The "inquiry regarding interference focuses on actual interference in the quantity or quality of water to which the prior appropriator is entitled." Salt Lake City v. Silver Fork Pipeline Corp., 2000 UT 3, ¶ 28 n.10, 5 P.3d 1206, abrogated on other grounds by Otter Creek Reservoir Co. v. New Escalante Irrigation Co., 2009 UT 16, ¶¶ 11-13, 203 P.3d 1015.

on the stream ... acquires a prior right to the use of all those waters, and no subsequent appropriator may interfere either directly or indirectly with the rights of the prior appropriator.").[9]

28. Plaintiffs' means and method of diverting their water are reasonable. Their wells are the only possible method for diverting the water under their rights. Those wells functioned without problem until PWWC #4 was drilled.

29. The PWWC change of its junior water rights to well #4, as all such changes are, was approved "subject to prior rights." Utah Code §73-3-17(6).

30. The priority of the underlying right survives the change unless it interferes with other rights. *Hague v. Nephi Irr. Co.*, 52 P. 765, 769 (Utah 1898)("When water has been lawfully appropriated the priority acquired is not lost by changing the use for which was first appropriated and applied, or the place at which it was first employed, provided that the alterations made are not injurious to the rights acquired by others prior to the change.")

31. PWWC's pumping of its well #4 interferes with the Arave well, thus interfering with the senior Arave water rights.

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[9] Moroni Irr. continues: "If ... the appellant may cut off one of the sources of supply... any other landowner and water user may cut off another source of supply, and so on until all the sources of supply which pass underneath the surface of the soil are cut off, and thus the lower and prior appropriator would be left without any, or at least only a meager, supply of water in the low-water season. This may not legally be done." 189 P. at 577.

32. PWWC's pumping of its well #4 interferes with the Arave well, thus interfering with the senior Southwick water rights.

33. PWWC's pumping of its well #4 interferes with the SI well, thus interfering with the senior Venture water rights.

34. PWWC's interference consists of dewatering the aquifers that are the source of supply for the Arave and SI wells, thus obstructing and hindering the quantity of water available to the Arave and SI wells, first by depriving the Arave well of virtually all water, and by obstructing the SI well's ability to produce water.

35. Because that change in PWWC's point of diversion interferes with the senior Arave, Southwick, and Venture Development rights, the original priority of the PWWC rights is lost.

36. The PWWC #4, Arave and SI wells cannot co-exist under these circumstances.

B. Negligence

37. PWWC owes each plaintiff a duty of reasonable care to others foreseeably harmed by the method PWWC uses to obtain its water. *See Bingham*, 2010 UT 37, ¶65 (City owed "a duty of reasonable care to landowners who will foreseeably be harmed" by the method the city used to obtain its water.").

38. PWWC breached that duty when it located, drilled, and used its #4 well in a manner that interferes with plaintiffs' wells.

39. Such interference was foreseeable given the close proximity to plaintiffs' wells, the much larger capacity of PWWC #4, and its depth and perforated zones in the aquifers used by the Arave and SI wells.

40. The harm to plaintiffs' wells is proximately caused by PWWC's pumping of its well #4.

41. Plaintiffs have been damaged by reason of PWWC's negligence as identified above.

C. Plaintiffs' water use is not a defense to local well interference.

42. The fact that, historically, SI (or any other plaintiff) has or may have used more water than permitted by its water right is not a defense to local well interference. Neither is it a defense that SI used water for irrigation when it did not then have an irrigation right.

43. The amount of water used under an approved water right, and the manner in which it is used, is a matter between the State (the Utah Division of Water Rights and the Utah State Engineer) and the water user. Utah Code §73-3-17(1)(b). The State Engineer has enforcement powers to remedy such matters.

44. Even if SI used water only within its water right limit, and even if used only for indoor, domestic purposes for a single family, PWWC's pumping of its #4 well would still interfere with Venture's water right because it interferes with both the source, by dewatering the aquifer from which Venture's senior right is drawn, and the SI well, thus interfering with Venture's means and method of diversion. The

interference would be the same even if SI used less than its full water right because the interference affects the SI (and Arave) well's ability to produce water as needed on a year-round basis.

45. Use of water pursuant to a water right is regulated by the Utah State Engineer, who has enforcement powers pursuant to Utah Code §73-2-25 if water is used without the right to do so, or beyond an existing right.[10]

46. Furthermore, if a senior water right user exceeds the limit of its right, thus taking more water from a source than is authorized, then a junior water right user on the same source (whether on the surface or underground) could have an interference claim because the excess water used by the senior user should be available to satisfy junior rights. PWWC brought no such claim.

D. Remedies

47. The PWWC #4, Arave, and SI wells cannot coexist under PWWC's current pumping routine.

a. Pumping in #4 first depletes the water in the Arave well, causing its water level to drop below the SI water level, which reverses the pressure gradient, in turn causing the SI well level to drop.

b. Accordingly, PWWC's pumping of #4 must either be stopped or curtailed sufficiently to permit the Arave and SI wells to function.

---

[10] "[T]he state engineer may commence an enforcement action ... if [he] finds that a person ... is diverting, impounding or using water in violation of an existing water right ...." Utah Code §73-2-25(2)(a).

c. Under *Wayman's* rule of reasonableness, the court must try to find a remedy that allows PWWC to use as much water as it can without interfering with the Arave and SI wells.

d. PWWC owns other wells authorized for use under the same approval that permitted it to pump water from #4.

e. PWWC is ordered to stop pumping #4 and use one or more of its other wells to satisfy its irrigation demand.

f. The court retains jurisdiction for the limited purpose of determining whether it can be shown that PWWC #4 can be pumped at a lesser rate so as not to interfere with the Arave and SI wells, and specifically to prevent the Arave head from dropping below the SI head. If so, then PWWC #4 may continue to function under those circumstances.

i. If PWWC #4 can be pumped at a level or rate that does not interfere with the Arave and SI wells, then PWWC shall install a flow meter pursuant to Utah Code §73-5-4. That meter shall be accessible by the state engineer pursuant to §73-5-4(2). PWWC shall further report its pumping data to the state engineer in a manner acceptable to the state engineer, and such pumping data shall be provided to plaintiffs on a weekly basis while #4 is pumped.

ii. If PWWC #4 cannot be pumped at a level or rate that does not interfere with the Arave and SI wells, the court may order that PWWC

provide replacement water pursuant to Utah Code §73-3-23 at PWWC's sole expense. *See Current Creek Irr. Co. v. Andrews*, 344 P.2d 528, 531 (Utah 1959)("[Junior appropriators] can appropriate water to a beneficial use from the underground basin if it is available but they must replace the flow of the wells and springs at the prior appropriator's place of diversion solely at their own cost.").

iii. Should PWWC shift any of its well pumping to any one or more of its other approved wells, those wells must be pump tested first to determine whether there is any impact to or interference with either the Arave or SI wells.

48. PWWC is ordered to pay damages as follows: Araves $11,503, Southwick $5,782, and Venture Development $28,238, plus post-judgment interest on each of these amounts at the statutory rate pursuant to Utah Code §15-1-4.

49. As the prevailing parties, plaintiffs are entitled to their costs pursuant to Rule 54(d) of the Utah Rules of Civil Procedure in an amount to be set forth in a Verified Memorandum of Costs.

E. Judgment

Pursuant to Rule 52(a)(1), a separate judgment consistent with this Memorandum Decision will be entered. Plaintiff will prepare the judgment and submit it to the court for signature.

Dated this 14 day of November, 2017.

Ernie W. Jones
District Court Judge

CERTIFICATE OF MAILING

I hereby certify that on the 14th day of November 2017, I sent a true and correct copy of the foregoing decision to counsel as follows:

John H Mabey, Jr, David C Wright, Melinda L Hill
Mabey Wright & James, PLLC
Attorneys for Plaintiffs
175 South Main Suite 1330
Salt Lake City UT 84111

Edwin C Barnes, Emily E Lewis, Jonathan S Clyde
Clyde Snow & Sessions
Attorneys for Defendants
201 South Main Street 13th Floor
Salt Lake City UT 84111-2216

Judicial Assistant

ADDENDUM 2

The Order of the Court is stated below:
Dated: January 04, 2018 05:08:41 PM
/s/ Ernie W. Jones
District Court Judge

John H. Mabey, Jr. – 4625
David C. Wright – 5566
MABEY WRIGHT & JAMES, PLLC
175 South Main, #1330
Salt Lake City, Utah 84111
Telephone: 801-359-3663
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dwright@mwjlaw.com

Counsel for Plaintiffs

STATE OF UTAH
IN THE SECOND DISTRICT COURT OF WEBER COUNTY

ROGER B. ARAVE and KIMBERLY L. ARAVE, JANET SOUTHWICK, Trustee, and VENTURE DEVELOPMENT GROUP, LLC, a Utah limited liability company; Plaintiffs, vs. PINEVIEW WEST WATER COMPANY, a Utah corporation, Defendant.	**FINAL JUDGMENT** Case No. 130907544 Judge Ernest W. Jones

This action was tried to the bench August 18, 19, and 29, with closing arguments on September 25, 2017. Plaintiffs were represented by David C. Wright. Defendants were represented by Edwin C. Barnes and Emily E. Lewis. The parties also filed trial briefs. The court heard testimony from the witnesses, including expert witnesses from both sides, and has reviewed the trial exhibits. The court also heard argument from counsel. After the close of the evidence, the court asked the parties to submit proposed findings of fact and conclusions of law,

which they did on September 21, 2017. The court entered its Memorandum Decision on November 14, 2017, instructing plaintiffs to prepare a separate judgment pursuant to Rule 52(a)(1) to be entered under Rule 58A.

Consistent with the court's Memorandum Decision, the court enters this Final Judgment as follows:

1. Judgment is hereby entered in favor of plaintiffs, and each of them, and against Pineview West Water Company ("PWWC"), on plaintiffs' First Claim for Relief for common law interference with water rights.
    a. PWWC is ordered to stop pumping its Well #4 (State of Utah Well Identification No. 28707) and use one or more of its other wells to satisfy its irrigation demand.
    b. The court retains jurisdiction for the limited purpose of determining whether it can be shown that PWWC #4 can be pumped at a lesser rate so as not to interfere with plaintiffs' wells (State of Utah Well Identification Nos. 11238 (Arave Well) and 11242 (Venture Development Well), and specifically to prevent the Arave head from dropping below the SI head. If so, then PWWC #4 may continue to function under those circumstances.
        i. If PWWC #4 can be pumped at a level or rate that does not interfere with plaintiffs' wells, then PWWC shall install a flow meter pursuant to Utah Code §73-5-4. That meter shall be accessible by the state engineer pursuant to §73-5-4(2). PWWC shall further report its pumping data to the state engineer in a manner acceptable to the state engineer, and such pumping data shall be provided to plaintiffs on a weekly basis while #4 is

pumped.

ii. If PWWC #4 cannot be pumped at a level or rate that does not interfere with plaintiffs' wells, the court may order that PWWC provide replacement water pursuant to Utah Code §73-3-23 at PWWC's sole expense.

iii. Should PWWC shift any of its well pumping to any one or more of its other approved wells (including but not limited to Well Identification Nos. 11248, 11249, 427479), those wells must be pump tested first to determine whether there is any impact to or interference with either the Arave or Venture Development wells.

2. Judgment is hereby entered in favor of plaintiffs, and each of them, and against PWWC, on plaintiffs' Second Claim for Relief for negligence.

3. Damages against PWWC are awarded on plaintiffs' First and Second Claims as follows:

   a. Roger and Kimberly Arave: $11,503, plus post-judgment interest at the statutory rate pursuant to Utah Code §15-1-4.

   b. Janet Southwick, Trustee: $5,782, plus post-judgment interest at the statutory rate pursuant to Utah Code §15-1-4.

   c. Venture Development Group, LLC: $28,238, plus post-judgment interest at the statutory rate pursuant to Utah Code §15-1-4.

4. As prevailing parties, plaintiffs are entitled to their costs pursuant to Rule 54(d) of the Utah Rules of Civil Procedure in an amount to be set forth in a Verified Memorandum of Costs.

5. The court's limited retention of jurisdiction in aid of this Judgment in ¶1.b. does not affect its finality. All of the claims and the parties' respective rights have been determined. Accordingly, there is no just reason for delay of entry of this Final Judgment as to all of the claims and all of the parties.

----------***End of Judgment***----------
Court's e-signature at top of first page

Approved as to Form:

Edwin C. Barnes (e-signature w/ permission)
Edwin C. Barnes
Emily E. Lewis
Counsel for Defendant

CERTIFICATE OF SERVICE

I certify that on December 19, 2017, the foregoing Final Judgment was served via E-Filing system to the following:

Edwin C. Barnes – ecb@clydesnow.com
Emily E. Lewis – eel@clydesnow.com
Clyde Snow & Sessions
201 South Main Street, 13th Floor
Salt Lake City, Utah 84111-2216

David C. Wright

ADDENDUM 3

The Order of the Court is stated below:
Dated: January 10, 2018 08:38:26 AM
/s/ Ernie W. Jones
District Court Judge

John H. Mabey, Jr. – 4625
David C. Wright – 5566
MABEY WRIGHT & JAMES, PLLC
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Counsel for Plaintiffs

STATE OF UTAH
IN THE SECOND DISTRICT COURT OF WEBER COUNTY

ROGER B. ARAVE and KIMBERLY L. ARAVE, JANET SOUTHWICK, Trustee, and VENTURE DEVELOPMENT GROUP, LLC, a Utah limited liability company; Plaintiffs, vs. PINEVIEW WEST WATER COMPANY, a Utah corporation, Defendant.	**AMENDED FINAL JUDGMENT** Case No. 130907544 Judge Ernest W. Jones

This action was tried to the bench August 18, 19, and 29, with closing arguments on September 25, 2017. Plaintiffs were represented by David C. Wright. Defendants were represented by Edwin C. Barnes and Emily E. Lewis. The parties also filed trial briefs. The court heard testimony from the witnesses, including expert witnesses from both sides, and has reviewed the trial exhibits. The court also heard argument from counsel. After the close of the evidence, the court asked the parties to submit proposed findings of fact and conclusions of law,

which they did on September 21, 2017. The court entered its Memorandum Decision on November 14, 2017, instructing plaintiffs to prepare a separate judgment pursuant to Rule 52(a)(1) to be entered under Rule 58A.

Consistent with the court's Memorandum Decision, the court amends paragraph 4 of its Final Judgment as follows:

> As prevailing parties, plaintiffs are awarded costs in the amount of $2,059.96 pursuant to Rule 54(d) of the Utah Rules of Civil Procedure.

----------End of Judgment----------

Court's e-signature at top of first page

Approved as to Form:

Edwin C. Barnes (e-signature w/ permission)
Edwin C. Barnes
Emily E. Lewis
Counsel for Defendant

CERTIFICATE OF SERVICE

I certify that on January 8, 2017, the foregoing Amended Final Judgment was served via E-Filing system to the following:

Edwin C. Barnes – ecb@clydesnow.com
Emily E. Lewis – eel@clydesnow.com
Clyde Snow & Sessions
201 South Main Street, 13th Floor
Salt Lake City, Utah 84111-2216

David C. Wright

ADDENDUM 4

AREA 35 - WEBER AND OGDEN RIVERS

Updated: April 3, 2018

Recent changes and additions in red text

MANAGEMENT

The 1937 Weber River Decree and the 1948 Ogden River Decree adjudicated the area's surface water rights prior to those dates. No adjudications have been ordered to update these decrees or include ground-water rights. There are two state-administered distribution systems in this area: the Weber River Distribution System and the Ogden River Distribution System. Parts of the area are also subject to the conditions of two groundwater management plans: the Groundwater Management Plan for the Weber Delta Sub-Area, and the State Engineer's Interim Policy for Snyderville and the Park City Basin. Click here to see statistics for this area.

SOURCES

Surface Water - Surface waters are considered to be fully appropriated. Diligence Claims may be filed on water uses not in the decrees and which were established prior to 1903 for surface water and 1935 for underground water. New diversions and consumptive uses in these sources must be accomplished by change applications filed on owned or acquired rights. Non-consumptive use applications, such as hydroelectric power generation, will be considered on their individual merits. Fixed period or transient projects in canyon or foothill areas must be handled by temporary change applications. Per the State Engineer's Public Meeting Response Letter dated October 26, 2004, new water diversions, based on exchange applications, will be permitted for those projects where there is water available in the proposed source that can be diverted without impairing the rights of others or where water can be released from upstream storage to directly compensate intervening rights that might be impaired.

Per the State Engineer's Public Meeting Response Letter dated October 28, 2011:

- Exchange applications will continue to be considered on their own merit. New water diversions, based on exchange applications, will be permitted for projects where there is water available in the proposed source that can be diverted without impairing the existing rights on the source, and where water can be released under the exchange to replace water for downstream rights.

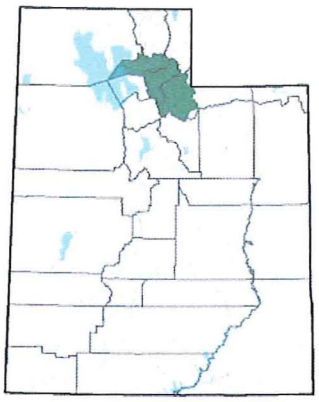
- New water diversions, based on exchange applications, that might impact tributary streams that are fully diverted under existing water rights may need a study provided by the applicant. This study will need to demonstrate that the groundwater being developed does not contribute to the flow of a surface source that does not receive a full year supply, which cannot be compensated directly by releases from upstream storage. The need for a study will be determined on a case-by-case basis.

Ground Water - There is a limited ground-water resource available. No new appropriations are approved above the mouths of the canyons. Development of new or different consumptive use projects in these areas must be accomplished by change applications on owned or acquired rights. New appropriations below the canyons are reviewed on an individual basis. Individual domestic filings for 1.0 acre-foot per year are generally approved where a public water supply is not accessible. Larger projects are generally held pending development of approved rights and data from water users. Changes from surface to underground sources, and vice versa, are also considered on their individual merits, with emphasis on their potential to interfere with existing rights and to ensure that there is no enlargement of the underlying rights. Applicants are placed on notice that development should be pursued as soon as possible. Extension of time requests will be critically reviewed beyond the initial five year period. Per the State Engineer's Public Meeting Response Letter dated October 26, 2004, the aquifer test requirement on new wells in the Kamas East Subdivision has been removed.

Approvals based on irrigation company stock or leases generally contain conditions requiring maintenance of shares or contracts for the underlying changed rights and/or installation of measuring devices. In some instances, further limitations are imposed as follows:

- Snyderville/Park City Sub-basin: Only change or exchange applications based on rights already approved within this boundaries of this sub-basin are approved. See the management plan referenced above for more details.

- Samak Area: Changes on shares of stock in Beaver and Shingle Creek Irrigation Company are subject to evaluation of the shares at 0.3 acres of irrigation per share, maintenance of those



Policy area in green, click on the map for more detail

DESCRIPTION

This area includes the main stem of the Ogden River and its tributaries (North, Middle, and South Forks) in Weber County and the main stem of the Weber River and its tributaries (Beaver Creek, East Canyon Creek, Chalk Creek, Heiners Creek, Lost Creek, and Cottonwood Creek) in Weber, Morgan, and western Summit Counties.

Click for Interactive Map

shares, installation of measuring devices, and the restriction of irrigation at the new diversion to the same period in which water is available in the original canal system.

- Garff Ranch/Kamas Area: The State Engineer's policy for this area was changed on April 3, 2018. Exchanges based on contracts with Weber Basin Water Conservancy District are limited to 1.0 acre-feet at a time. Whereas the prior policy restricted certain lots to indoor domestic use only, the new policy has no restrictions on nature of use. See the following:

  - State Engineer's Policy Letter
  - Public Meeting Notice and Materials
  - Presentation Slides from Public Meeting

- West Hoytsville Area: The West Hoytsville groundwater system is characterized by fractured volcanic rock. Fracture density appears to decrease with depth. Wells typically have low yields and can interfere with each other if the same fracture system is intercepted. Residents in the area are currently exploring alternatives to organize a community water system. The Summit County economic development director has requested he be contacted regarding the filing of additional exchange applications in the area. His email address is dsargent@co.summit.ut.us

GROUNDWATER MANAGEMENT PLANS

- Effective October 31, 1995, the East Shore Area is is subject to the conditions of the Groundwater Management Plan for the Weber Delta Sub-Area. Monitoring of groundwater levels indicated general declines over the entire sub-area. Lands previously devoted to irrigated agriculture are being converted to commercial and residential uses. This plan can, hopefully, provide a framework for the orderly and efficient development of ground-water supplies while minimizing such attendant problems as well interference, contamination, and over-utilization. Contamination concerns near Hill Air Force Base are also addressed.

- Effective February 9, 1999, the Snyderville and Park City Basin is subject to the conditions of the State Engineer's Interim Policy. The management plan was developed in response to rapid population growth in the area to maintain the viability and sustainability of the resource. Primary water uses have rapidly transformed from mining and agriculture to residential, commercial, and industrial needs.

STATISTICS FOR CURRENT EXCHANGE APPLICATIONS

Ogden River
Weber River

GENERAL

Applications are advertised in the *Ogden Standard-Examiner*, the *Morgan County News*, the *Summit County Bee*, or the *Park City Record*. Filings that may involve the diversion of water in Utah for use in Wyoming (export) would be subject to the special criteria the statutes require for such projects. The general irrigation diversion duty for this area, which the State Engineer uses for evaluation purposes, is 4.0 acre-feet per acre per year (af/ac) in valley regions of western Weber County and 3.0 af/ac in the canyons and upper valleys. The consumptive use requirements are determined from the publication Consumptive Use of Irrigated Crops in Utah, Research Report 145, Utah State University, 1994, unless the applicant submits other data for consideration. This area is administered by the Weber River Regional Office in Salt Lake City.

Other requirements

The Water Right applicant is strongly cautioned that other permits may be required before any physical development of a project can begin and it is the responsibility of the applicant to determine the applicability of and acquisition of such permits. In order to avoid delays and ensure that Water Right approvals conform to applicable local ordinances, applicants should contact local governmental entities in advance to determine what ordinances are in place that affect the proposed project and to make sure that Water Right filings conform to those ordinances. The approval of a Water Right application does not imply any approval of a project by any other governmental entity. Approval of the project proposed in the Water Right application should be obtained from local governmental entities as necessary to implement a project.

REFERENCES

Technical Publication No. 2, The Ogden Valley Artesian Reservoir, Weber County, Utah; Utah State Engineer; 1945.

Technical Publication No. 27, Water Resources of the Heber-Kamas-Park City Area, North-Central Utah; Utah Department of Natural Resources; 1970.

Technical Publication No. 35, Ground-water Conditions in the East Shore Area, Box Elder, Davis, and Weber Counties, Utah, 1960-69; Utah Department of Natural Resources; 1972.

Technical Publication No. 76, Reconnaissance of the Quality of Surface Water in the Weber River Basin, Utah; Utah Department of Natural Resources; 1983.

Technical Publication No. 77, Ground-water Reconnaissance of the Central Weber River Area, Morgan and Summit Counties, Utah; Utah Department of Natural Resources; 1984.

Technical Publication No. 85, Water Resources of the Park City Area, Utah, with Emphasis on Ground Water; Utah Department of Natural Resources; 1986.

Technical Publication No. 90, Seepage Studies of the Weber River and the Davis-Weber and Ogden Valley Canals, Davis and Weber Counties, Utah, 1985; Utah Department of Natural Resources; 1987.

Technical Publication No. 93, Ground-Water Resources of the East Shore Area of the Great Salt Lake, Utah, and Simulated Effects of Ground-Water Withdrawals; Utah Department of Natural Resources; 1990.

Technical Publication No. 99, Hydrology of Ogden Valley and the Surrounding Area, Eastern Weber County, Utah, and Computer Simulation of the Valley-Fill Aquifer System; Utah Department of Natural Resources; 1990.

Technical Publication No. 115, Hydrology and snowmelt simulation of Snyderville Basin, Park City, and adjacent areas, Summit County, Utah; Utah Department of Natural Resources; 1998.

Basic Data Report No. 1, Records and Water-Level Measurements of Selected Wells and Chemical Analyses of Ground Water, East Shores Areas, Weber and Box Elder Counties, Utah; Utah State Engineer; 1961.

Basic Data Report No. 45, Selected Hydrologic Data from Wells in the East Shore Area of the Great Salt Lake, Utah, 1985; Utah Department of Natural Resources; 1986.

Information Bulletin No. 9, Projected 1975 Municipal Water Use Requirements, Weber County, Utah; Utah State Engineer; 1962.

Water Resource Bulletin No. 29, The Geology of the Kamas-Coalville Region, Summit County, Utah, and its Relation to Ground-Water Conditions; Utah Geological Survey; 2002. *Note: Very large download!*

UGS Special Study, Hydrogeology of Morgan Valley, Morgan County, Utah; Utah Geological Survey; 2011.

MODELING

Regional Ground-Water Flow, Carbonate-Rock Province, Nevada, Utah, and Adjacent States; USGS Open-File Reports 93-170 and 93-420; 1993.

Morgan Valley Ground-water Flow Model; 1984.

Ogden Valley Ground-water Flow Model; 1991.

Weber Delta Ground-water Flow Model, 1990.

PREVIOUS PAGE UPDATES

December 24, 2002, June 14, 2004, September 24, 2004, October 26, 2004, April 10, 2011, October 28, 2011

ADDENDUM 5

Utah Code Ann. § 73-3-17

Statutes current through the 2018 Second Special Session

Utah Code Annotated > Title 73 Water and Irrigation (Chs. 1 — 30) > Chapter 3 Appropriation (§§ 73-3-1 — 73-3-31)

73-3-17. Certificate of appropriation — Evidence.

(1) Upon the satisfaction of the state engineer that an appropriation, a permanent change of point of diversion, place or purpose of use, or a fixed time change authorized by *Section 73-3-30* has been perfected in accordance with the application, and that the water appropriated or affected by the change has been put to a beneficial use, as required by *Section 73-3-16* or *73-3-30*, the state engineer shall issue a certificate, in duplicate, setting forth:

(a)the name and post-office address of the person by whom the water is used;

(b)the quantity of water in acre-feet or the flow in second-feet appropriated;

(c)the purpose for which the water is used;

(d)the time during which the water is to be used each year;

(e)the name of the stream or water source:

(i)from which the water is diverted; or

(ii)within which an instream flow is maintained;

(f)the date of the appropriation or change; and

(g)other information that defines the extent and conditions of actual application of the water to a beneficial use.

(2)A certificate issued on an application for one of the following types of projects need show no more than the facts shown in the proof submitted under *Section 73-3-16*:

(a)a project constructed according to Title 73, Chapter 10, Board of Water Resources — Division of Water Resources;

(b)a federal project constructed by the United States Bureau of Reclamation, referred to in *Section 73-3-16*; and

(c)a surface water storage facility in excess of 1,000 acre-feet constructed by a public water supplier.

(3)A certificate under this section does not extend the rights described in the application.

(4) Failure to file proof of appropriation or proof of change of the water on or before the date set therefor causes the application to lapse.

(5) One copy of a certificate issued under this section shall be filed in the office of the state engineer and the other shall be delivered to the appropriator or to the person making the change who may record the certificate in the office of the county recorder of the county in which the water is diverted from the natural stream or source.

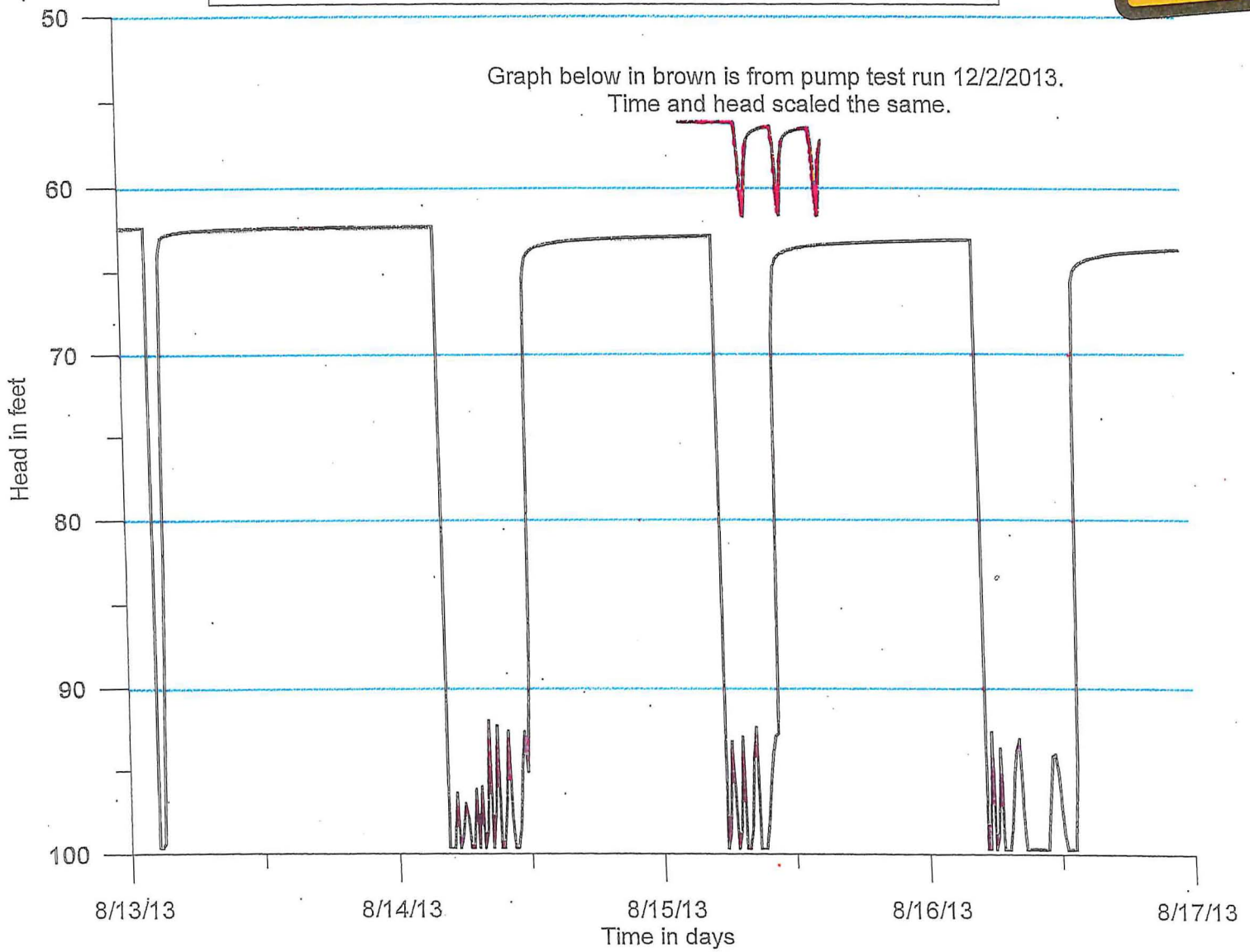
(6) The certificate issued under this section is prima facie evidence of the owner's right to use the water in the quantity, for the purpose, at the place, and during the time specified therein, subject to prior rights.

ADDENDUM 6

Exhibit 3

PLAINTIFF'S EXHIBIT 23

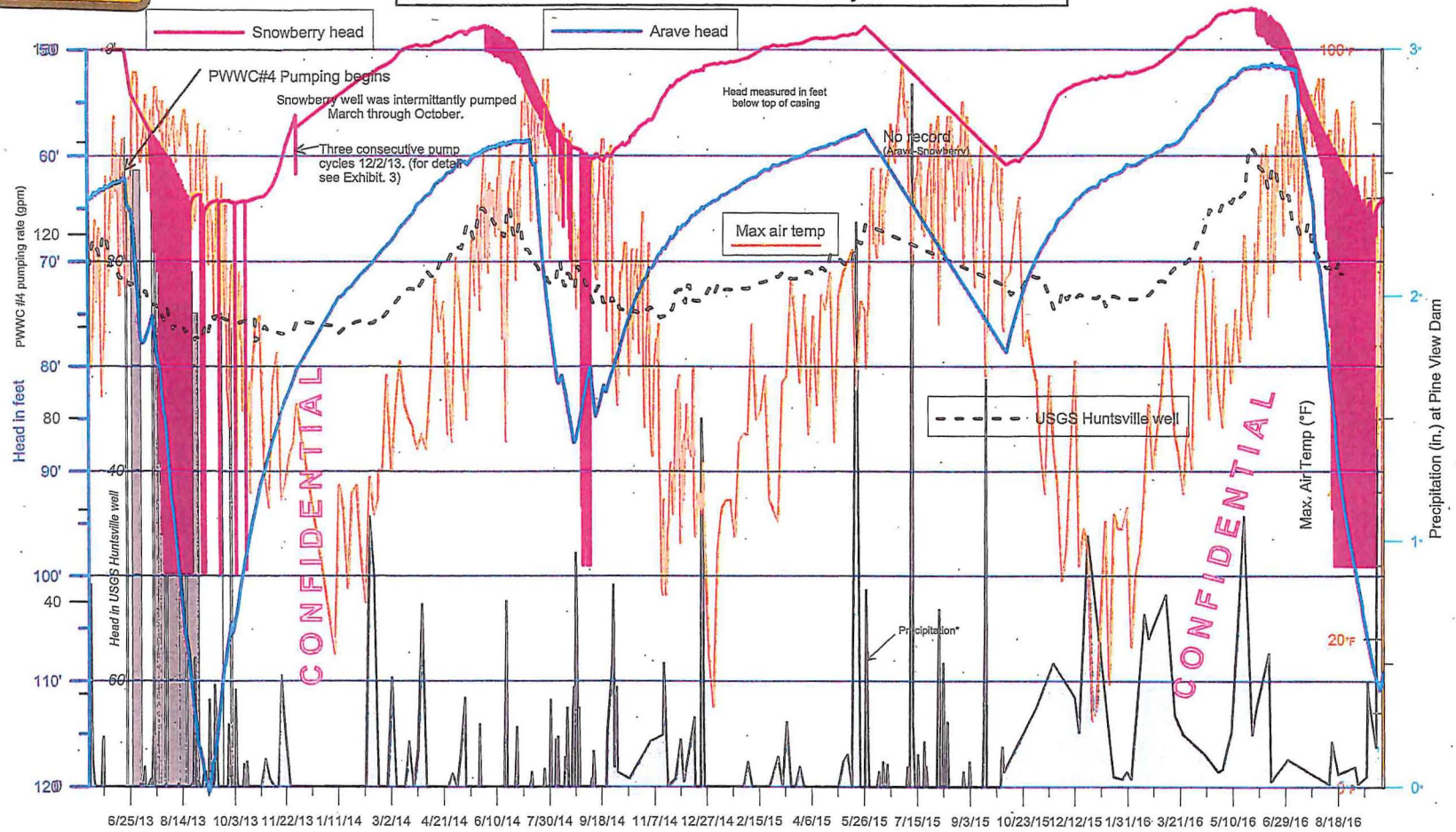
Snowberry Well: Detail Head 8/13/13-8/17/13 (black) and 12/2/12 (brown)



ADDENDUM 7

PLAINTIFF'S EXHIBIT 26

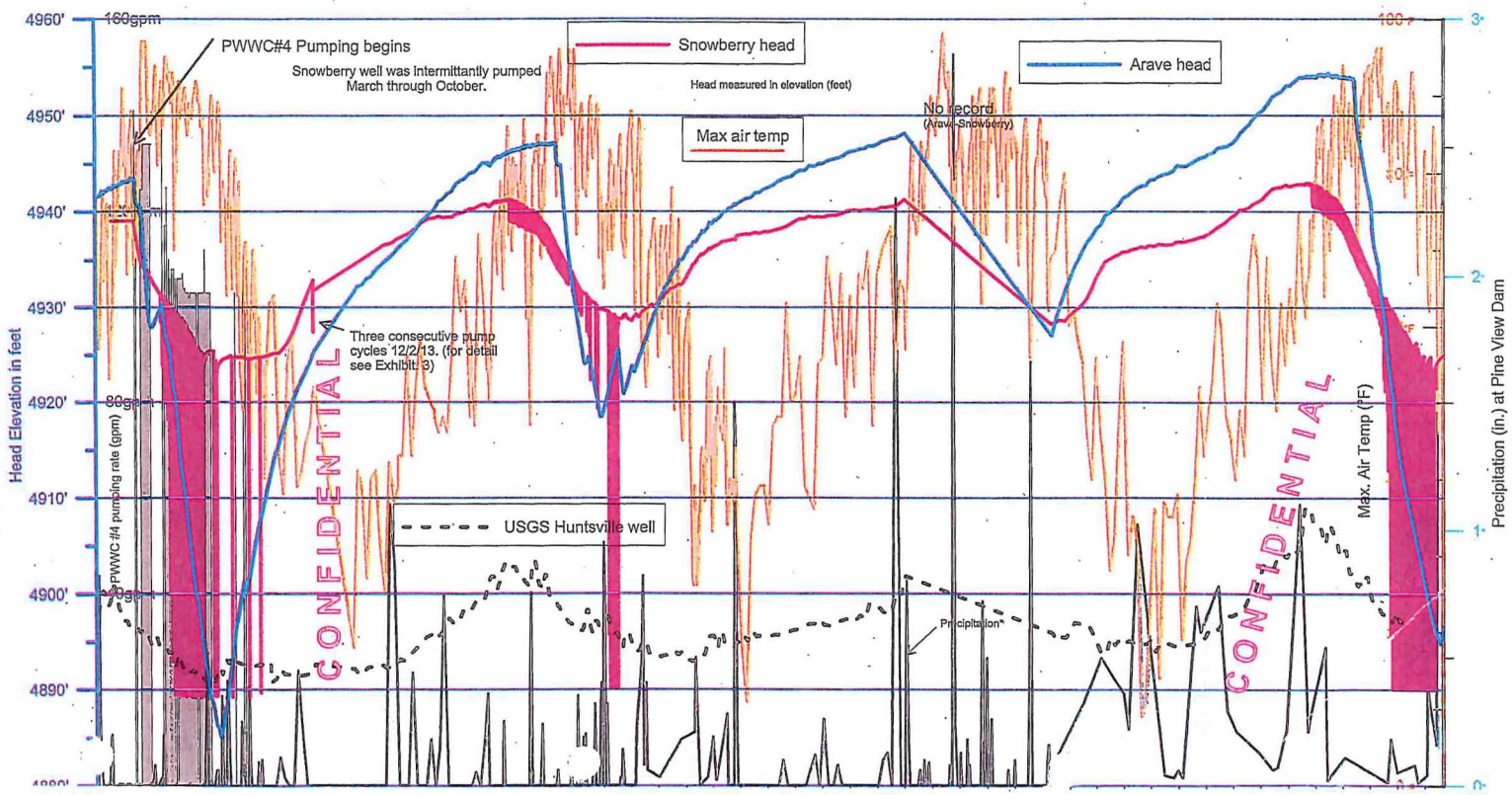
Exhibit A. Head in Arave and Snowberry wells 2013-2016



ADDENDUM 8

PLAINTIFF EXHIBIT 27

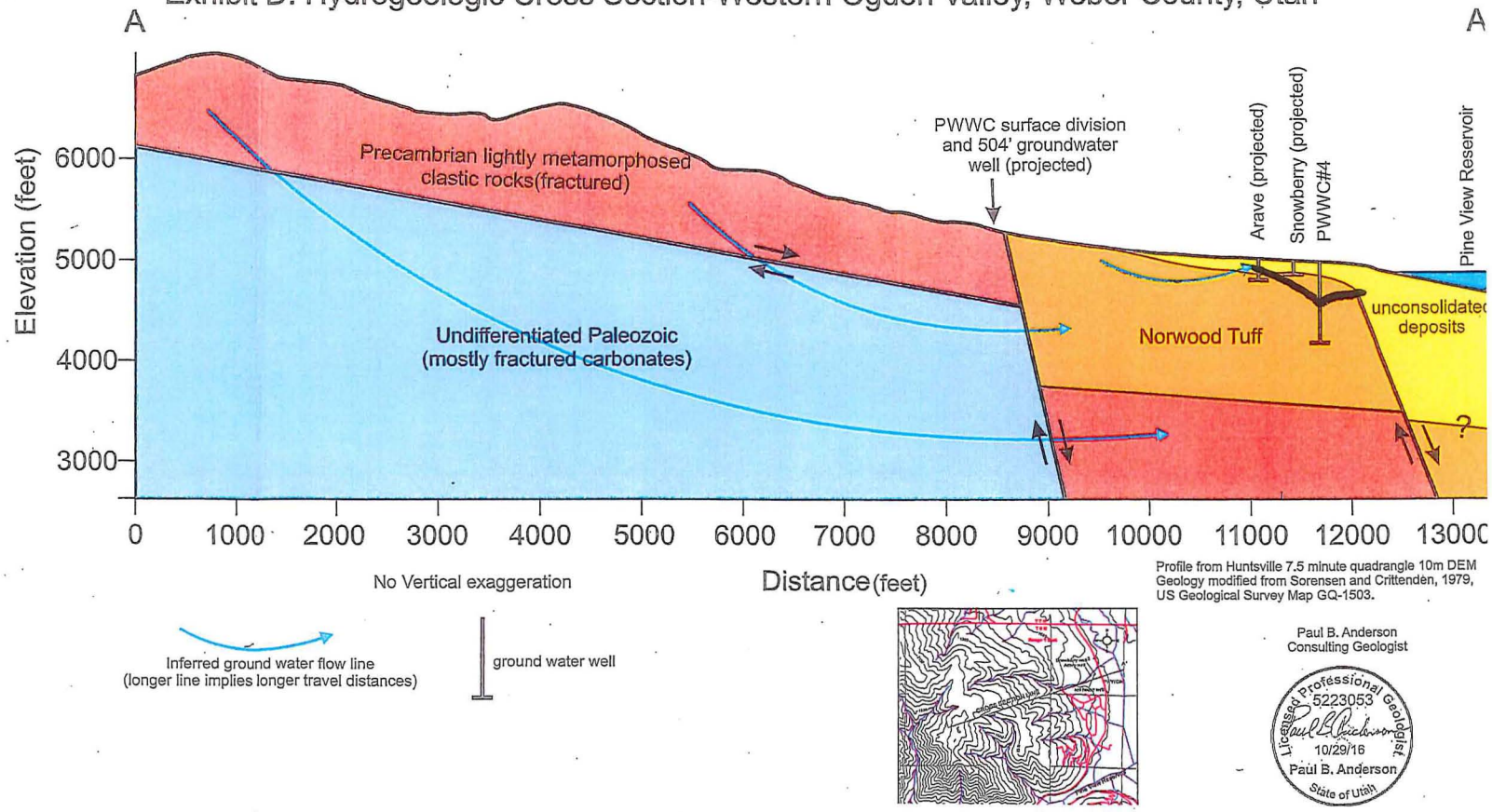
Exhibit B. Elevation of Head in Arave and Snowberry wells 2013-2016



ADDENDUM 9

PLAINTIFF'S EXHIBIT 29

Exhibit D. Hydrogeologic Cross Section-Western Ogden Valley, Weber County, Utah



Profile from Huntsville 7.5 minute quadrangle 10m DEM
Geology modified from Sorensen and Crittenden, 1979, US Geological Survey Map GQ-1503.

Paul B. Anderson
Consulting Geologist

Licensed Professional Geologist
5223053
10/29/16
Paul B. Anderson
State of Utah