BEFORE THE DEPARTMENT OF WATER RESOURCES

OF THE STATE OF IDAHO

IN THE MATTER OF APPLICATION FOR TRANSFER NO. 79380 IN THE NAME OF THOMAS AND DOROTHY LENO	)))	**FINAL ORDER APPROVING TRANSFER**

On May 20, 2014, Thomas and Dorothy Leno filed Application for Transfer No. 79380 with the Idaho Department of Water Resources ("Department"). The Department published notice of the application beginning on July 3, 2014. Protests were filed by Jimmie L. Conder, Michael and Jana Humphries, William D. Hamby, Eric Parrott, Lois M. Rice, Leslie Ellsworth (for herself and 9 other individuals), Pam Ritter, Ed Smith, Victoria Henson, Scott Houtz, Delea Miller (Andrew), Jeanie McCreary, Barbara and Lynn Stephens, Margaret Winsryg and Leroy Elliott, Elizabeth (Betty) Slifer, and Martin F. Hackard.

Evidence at the hearing established that Dorothy Leno passed away in August 2011. Even though the application was filed in the name of Thomas and Dorothy Leno, the sole surviving applicant is Thomas Leno, and will be referred to hereafter as "Leno."

A pre-hearing conference was conducted on November 19, 2014. The parties were unable to resolve the issues of protest during the conference and requested that a hearing be held to decide the contested case.

On January 20, 2015, Cedar Ridge Dairy, LLC ("Cedar Ridge") filed a motion to intervene in support of the application. The motion to intervene was granted on March 5, 2015 based on the fact that Cedar Ridge was represented by the same attorney as Thomas and Dorothy Leno and agreed to rely on the evidence presented by Leno.

On March 18 and 19, 2015, Department hearing officer James Cefalo conducted an administrative hearing in Twin Falls, Idaho. Attorney Travis Thompson represented Leno and Cedar Ridge. Attorney David Coleman represented Margaret Winsryg and Leroy Elliot. The hearing was held in conjunction with hearings for Application for Transfer Nos. 79357, 79384 and 79466. On June 1, 2015, the hearing officer issued an Amended Preliminary Order Approving Transfer 79380.

Applicant Leno and Intervenor Cedar Ridge filed timely exceptions to the hearing officer's preliminary order approving application for transfer no. 79380.

STATEMENT OF EXCEPTIONS

The following is a restatement of the exceptions:

A. Leno and Cedar Ridge assert that the hearing officer "erred in limiting the water right's season of use to May 1 to September 30."

B. Leno and Cedar Ridge assert that the hearing officer "erred in advancing the water right's priority date to the date of the transfer, rather than December 22, 1970, as decreed by the Snake River Basin Adjudication District Court."

ANALYSIS OF EXCEPTIONS

Season of Use

The hearing officer determined that water levels may fluctuate ten feet seasonally in the Berger area. During the irrigation season, surface water delivery and irrigation recharges the aquifer. During the nonirrigation season, the surface water does not recharge the ground water, resulting in declines up to ten feet.

Water levels will fluctuate between the irrigation season and the nonirrigation season regardless of whether the Department approves this application for transfer.

Hydraulic conductivity is a measure of the ease with which water can move through pore spaces or fractures of an aquifer. If the hydraulic conductivity value is high, easier transmittal of water toward a pumping well results in less drawdown in the pumping well, and consequently, less drawdown in nearby wells affected by the pumping well's cone of depression. Conversely, if the hydraulic conductivity value is low, the slow transmittal of water toward a pumping well results in a higher drawdown in the pumping well because the pumping well must draw from a greater vertical column in the well to derive the same amount of water. The deeper cone of depression in a well completed in material with a low hydraulic conductivity will cause greater drawdowns in nearby wells.

Brockway selected 10 wells near the proposed point of diversion. Brockway averaged hydraulic conductivities derived for each of the ten wells, and computed an average hydraulic conductivity of 15.3 feet/day.

The proposed point of diversion is located near one of the ten wells selected by Brockway for determination of hydraulic conductivity. Brockway computed the hydraulic conductivity for the nearest well in determining hydraulic conductivity. The data from this "nearest" well produces an individual hydraulic conductivity value of 0.4 feet/day, a much lower value than the average hydraulic conductivity for ten select wells. As a result, pumping water from the proposed points of diversion would cause more drawdown to **nearby** wells than the simulated drawdown when the data from all ten wells is averaged. Brockway's hydraulic conductivity of 15.3 ft/day is excessive.

The nearest well owned by a protestant is 1.7 miles away. By employing an excessive value of 15.3 ft/day for hydraulic conductivity, pumping the proposed well will cause a drawdown of 2.8 inches in the protestant's well.

There are other domestic wells located approximately three-quarters of a mile away from the proposed well. Brockway did not model drawdowns in these wells caused by pumping the proposed wells. The cone of depression for drawdown is steep near a pumping well, particularly when the hydraulic conductivity is low. The cone of depression flattens at greater distances from a pumping well. While drawdowns in wells with low hydraulic conductivity are larger and cause significant drawdowns in nearby wells, at distances remote from the pumping wells, the drawdown curve flattens out and approaches the static water level in a shorter horizontal distance from the pumping well. The drawdowns in a well located at remote distances from the pumping well with a small hydraulic conductivity will be smaller than the drawdown in a well at the same distance from a pumping well that has a high value of hydraulic conductivity.

In this case, even with a significantly lower value of hydraulic conductivity, the cone of depression will likely be fairly flat at three-quarters of a mile from the pumping well and, at most, would be several inches.

If the unanalyzed domestic wells were located within a few hundred feet of the pumping well, the Director would be concerned about drawdowns caused by pumping water from the proposed wells. Because the nearest domestic wells are three-quarters of a mile away, and because of the small quantity of water proposed to be pumped, the drawdowns in wells three-quarters of a mile away will not injure the domestic water right holders.

The evidence presented at the hearing established that the ground water levels in the Berger area are stable or even rising.

A drawdown of several inches in domestic wells, either during the irrigation or nonirrigation season is not a sufficient decline in the aquifer to conclude that the pumping at the proposed point of diversion will injure other water right holders. Because the demand from the ground water resource is significantly reduced in the winter, the drawdowns attributable to the small additional water diverted will be minimal.

This final order will approve the transfer of the water right for year round use.

Advancement of Priority

Because water levels in the basalt aquifer in the Berger area are stable and approval of this transfer will not destabilize water levels in the aquifer, the priority date of this transfer should not have been advanced. The water right transferred will retain its original priority date.

Miscellaneous Corrections

The Amended Preliminary Order Approving Transfer stated the following about the relationship between ground water at the location of the existing point of diversion ("from well") and the proposed points of diversion ("to wells"):

> Ground water at the existing point of diversion for water right 47-17589 flows south into Nevada toward Shoshone Creek, a tributary of Salmon Falls Creek. Bonnichsen Rebuttal Report, page 3; C. Brockway Testimony. "[T]here is absolutely no reason to believe that water from the [existing point of diversion] . . . would travel underground northward to become part of the groundwater system in the Berger area." Bonnichsen Report, page 5.

The Director interpreted this language to establish that the direction of the ground water gradient is south, and that there is "no reason to believe" that ground water traveling in a southerly direction would **ever** "travel underground northward to become part of the groundwater system in the Berger area." Finding of fact no. 32 confirms the Director's interpretation:

> "Shoshone Creek joins Salmon Falls Creek about 3.7 miles south of the Idaho-Nevada border." Bonnichsen Rebuttal Report, page 2. Ground water and surface water in this area leaves the valley as surface water in Salmon Falls Creek near Jackpot, Nevada. Bonnichsen Report. "[T]here does not appear to be any sort of subterranean rock sequence through which groundwater readily could flow out of the basin [near] Jackpot [Nevada] and into the Salmon Tract area to the north." Bonnichsen Report, page 5

The hearing officer relied on the Bonnichsen report for the above finding of fact. Brockway's expert report generally conflicts with Cefalo's finding. Brockway states:

> The general interpretation of the all (sic) referenced published reports indicate (sic) ground water recharge occurs in northern Nevada and in the Jackpot area and southern Idaho in Twin Falls County and that the aquifer flows northward towards the Snake River. Brockway Report, page 10

> In a rebuttal report, Brockway states the following:

> Based on the published reports and the data that is available, we believe that ground water flows north out of Nevada and into southern Idaho. The ground water flows northward past Rogerson and Hollister to provide ground water to the Castleford, Buhl, and Filer areas. Brockway Rebuttal Report, Page 11

Because Bonnichsen discussed the specific hydrogeology of Shoshone Creek and Salmon Falls Creek, and Brockway only generally described the hydrogeology, the Director understands why the hearing office would rely on Bonnichsen's hydrogeologic analysis. However, the protestants also employed Lloyd Kimball, another expert witness, who wrote a rebuttal report. In the Kimball rebuttal report, Kimball states:

> My general interpretation of the information provided in the reports is that the groundwater contours will generally have a tendency to follow the natural ground elevation contours. This means the groundwater in the Mule Creek drainage will travel to the south into Nevada and will eventually loop its way back into Idaho following the ground elevation decline. The groundwater at that point of re-entry into Idaho will then flow in a general north direction as Brockway's expert report has indicated. Kimball Rebuttal Report page 4

In addition, the Director must consider a general provision in the Snake River Basin Adjudication recognizing that ground water in Basin 47 is hydraulically connected. The hearing officer discusses the SRBA determination in finding of fact no 16:

> The existing point of diversion and proposed point of diversion are located within Administrative Basin 47 ("Basin 47"). On February 6, 2014, the SRBA Court issued General Provisions for Basin 47. Ex. 4. The document included the following statement: "Except as otherwise specified above [nothing is specified], all other water rights within Basin 47 will be administered as connected sources of water in the Snake River Basin in accordance with the prior appropriation doctrine as established by Idaho law." *Id.*

After considering all of the evidence, the Director concludes the weight of the evidence supports a finding that the groundwater between the original Leno point of diversion and the proposed point of diversion is hydraulically connected.

Because the director finds that the ground water at the existing point of diversion and the ground water at the proposed point of diversion are hydraulically connected, this order need not discuss the seepage of surface water stored in Salmon Falls Creek Reservoir into the ground water, losses from irrigation canals, or losses from application of water for irrigation of growing crops. These findings will be eliminated from the final order.

By eliminating these findings, the Director repudiates the hearing officer's previous reasoning in determining hydraulic connection. If the applicant for transfer discontinues diverting ground water at the point of diversion from which water is sought to be transferred, and the ground water that would have been diverted expresses itself as surface water, the water loses its character as ground water. If the surface water is diverted by a surface water right holder for irrigation, a significant portion of the surface water will be consumed by the irrigated crops. Some of the surface water will be lost to evaporation or seepage. The portion of the losses of ground water changed to surface water and applied for irrigation that seep into the ground water would increase the ground water supply by the fraction of the total attributable to seepage loss.

An applicant for ground water transfer cannot rely on the seepage from irrigation of crops with surface water to establish hydraulic connection and compensation for depletions of ground water at a new point of ground water diversion near the surface water irrigation location. This is because the losses from surface water irrigation are incidental to the beneficial use of the surface water. The surface water user is not obligated to continue the same efficiency of water delivery and

use. The surface water right holder diverting and using surface water might eliminate most if not all losses in his water use, resulting in little or no indirect hydraulic conductivity.

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

FINDINGS OF FACT

1. Application for Transfer 79380 proposes to move a split portion (35.3 acres, 0.42 cfs and 105.9 acre-feet) of water right 47-17589 from property near the Idaho-Nevada border to a dairy ("Dairy #3") located north of Berger, Idaho. Exs. 1 and 16. Thomas and Dorothy Leno are the current owners of record for water right 47-17589. Ex. 2. Thomas Leno ("Leno") signed the application.

2. Dorothy Leno passed away in August 2011. *See* Attachments to Application 79380. Leno's attorney, Travis Thompson, provided an order from the Idaho Fifth Judicial District Court settling the estate of Dorothy Leno and confirming that the entire estate was distributed to Leno.

3. In July 2014, Leno sold the property at the existing place of use for water right 47-17589 to Y-3 II (an Idaho general partnership), but reserved the portion of water right 47-17589 associated with transfer applications 79357, 79380 and 79384. *See* Attachments to Application 79380.

4. At the time Application 79380 was filed, Dairy #3 was owned by Henry Calvin Hafliger Jr. ("Hafliger") and L&S Land Holdings, LLC, each owning an undivided ½ interest in the property. Attachment to Application 79380. L&S Land Holdings, through its attorney Charles Wright, provided a letter to the Department consenting to the changes proposed in Application 79380. *Id.*

5. Application 79380 included a Contract of Agreement between Hafliger and Leno stating that Hafliger would allow Leno to move 0.42 cfs and 66.0 acre-feet of water right 47-17589 to Dairy #3. Ex. 1, page 3. The agreement states that ownership of the split portion of the water right will remain in the name of Thomas and Dorothy Leno. *Id.*

6. In June 2014, Dairy #3 was sold by Hafliger and L&S Land Holdings, LLC to Four Sisters Dairy, LLC ("Four Sisters"). The proposed place of use and points of diversion at Dairy #3 are on property now owned by Four Sisters. *See* Application for Transfer 79466 for Water Right 47-2306B. Hafliger is a member of and registered agent for Four Sisters. *Id.*

7. On May 16, 2014, Leno and Cedar Ridge signed a Water Right Purchase and Sale Agreement for a portion (1.10 cfs, 279.6 afa, 93.2 acres) of water right 47-17589. See Attachment to Application 79380. The portion of water right 47-17589 being sold to Cedar Ridge was divided into three parts, which are the water rights involved in transfer applications 79357, 79380 and 79384. *Id.*

8. On June 1, 2010, a partial decree was issued for water right 47-7106 in the Snake River Basin Adjudication ("SRBA"). Ex. 2. Water right 47-7106 bore a priority date of December 25, 1970, authorized the diversion of 1.85 cfs and an annual diversion volume of 465 acre-feet for the irrigation of 155 acres. *Id.*

9. In three previous transfers approved by the Department (77406, 77669 and 78127), portions of water right 47-7106 were moved to other locations. Brockway Report, App. C. Water right 47-7106 was split into four parts as a result of the previous transfers. The portion of water right 47-7106 remaining at the original place of use was assigned water right number 47-17589.

10. An analysis was provided with the three previous transfers, which calculated the number of acres irrigated with ground water at the original place of use for water right 47-7106. Brockway Report, pages 3-6; *Historical Water Use Analysis on Parent Water Right 47-7106* (Attachment to Application 79380). That analysis shows that 145.7 acres of the 155 acres described in water right 47-7106 were primarily irrigated with ground water. *Id.* The 35.3 acres proposed to be dried up and moved in the pending application are part of the 145.7 acres considered primary ground water acres. *Id.*

11. As it currently exists, water right 47-17589 authorizes the diversion of 1.21 cfs and an annual diversion volume of 307.5 acre-feet for the irrigation of 102.5 acres. The split portion of water right 47-17589 associated with Application 79380 authorizes the diversion of 0.42 cfs and an annual diversion volume of 105.9 acre-feet for the irrigation of 35.3 acres.

12. Application 79380 proposes to change the nature of use of the portion of water right 47-17589 from irrigation use to stockwater and commercial use. Leno proposes to limit the changed portion of the water right to an annual diversion volume of 66.0 acre-feet, the consumptive portion of the original water right.

13. The existing place of use for water right 47-17589 is located in Sections 20 and 29, T16S, R16E. The existing point of diversion is located in Section 20, T16S, R16E.

14. The existing place of use for water right 47-17589 is also irrigated with surface water rights 47-2118, 47-2048, 47-14285 and 47-7287 from Mule Creek. Ex. 13. Leno proposes to abandon or relinquish the portions of the Mule Creek rights associated with the 35.3 acres proposed to be transferred. *See* Attachments to Application 79380. Leno has demonstrated continued ownership of the portions of water rights 47-2118, 47-2048, 47-14285 and 47-7287 that are proposed to be relinquished if Application 79380 is approved. *Id.*

15. There is one existing ground water right used for commercial and stockwater purposes at Dairy #3. Water right 47-2306B bears a priority date of January 31, 1957 and authorizes a diversion rate of 0.59 cfs and an annual diversion volume of 250 acre-feet. Four Sisters is the current owner of record for water right 47-2306B.

16. Water right 47-2306B describes two authorized points of diversion: two existing ground water wells located 25 feet apart in the SENE of Section 6, T11S, R16E. Visser Testimony; Ex. 4. Application for Transfer 79466, filed shortly after Application 79380, proposes to add a third

point of diversion (a new ground water well) to water right 47-2306B. The three points of diversion described in Application 79466 are the same three points of diversion described in Application 79380.

17. Application 79466 was advertised to the public and was protested. An administrative hearing for Application 79466 was held in conjunction with the hearing for this contested case.

18. The existing wells at Dairy #3 were drilled in April 1999. Ex. 6. Both wells were drilled to a depth of 355 feet and had a static water level of 262 feet below land surface at the time of completion. *Id.*

19. In February 2005, one of the existing wells at Dairy #3 (the north well) was deepened to 450 feet. Ex. 7. The static water level was measured at 262 feet below land surface at that time. *Id.* In January 2014, the static water level of one of the existing wells at Dairy #3 was measured at 288 feet below land surface. Brockway Report, App. D; Visser Testimony.

20. Comparing a small set of depth to water measurements in an aquifer with seasonal fluctuations in water levels may not simulate increases or declines in aquifer levels. Squires Testimony. It is difficult to know whether a single water level measurement represents the maximum or minimum water level for that particular year. *Id.* There is no information in the record about whether the measured well or the other well at Dairy #3 were pumping at the time of the 2005 or 2013 depth measurements.

21. Ryan Visser, manager for Cedar Ridge, testified that ground water diverted at Dairy #3 is used for cleaning milk pipelines and tanks, cleaning equipment, cleaning floors, cooling dairy cows, providing water to cows, and cooling milk. Water is piped from the existing wells to the milking parlor, where it is used to cool milk and clean equipment. Uncontaminated water is then piped out of the parlor to provide drinking water for the cows and cool the cows.

22. A large portion of the 66.0 acre-feet proposed to be transferred to Dairy #3 would be used to cool dairy cows during the summer months. Visser Testimony. Visser testified that Dairy #3 will employ a "drench system" in the feed line and holding pens where the dairy cows are soaked with water and then cooled as water evaporates off of the animals. *Id.*

23. Visser provided a calculation sheet showing that as much as 63.1 acre-feet per year may be needed for the drench system. Ex. 13. According to Visser's calculations, the drench system water demand will occur between the months of May and September. *Id.* Visser testified that the additional 0.42 cfs and 66.0 acre-feet proposed in the pending application are primarily needed to satisfy peak demands during the summer months. Visser Testimony.

24. The proposed points of diversion are located approximately 34 miles north of the existing point of diversion for water right 47-17589. Ex. 16.

25. The existing point of diversion and proposed points of diversion are located within Administrative Basin 47 ("Basin 47"). On February 6, 2014, the SRBA Court issued General

Provisions for Basin 47. Ex. 3. The document included the following statement: "Except as otherwise specified above [nothing is specified], all other water rights within Basin 47 will be administered as connected sources of water in the Snake River Basin in accordance with the prior appropriation doctrine as established by Idaho law." *Id.*

26. The protestants in this contested case divert ground water from the local aquifer for domestic and stockwater purposes. Protestant Eric Parrott diverts water from a domestic well located 1.7 miles south of the proposed points of diversion. Brockway Report, pages 20-21. Of all of the protestants' wells, the Parrott well is the closest to the proposed points of diversion. *Id.*

27. There are homes and domestic wells located closer to the proposed points of diversion than the protestants' wells (approximately ¾ mile west of the proposed points of diversion). *See* Ex. 22. The owners of these domestic wells did not protest the pending application.

28. The term "Salmon Tract" refers to an area south of Twin Falls that lies within the service area for the Salmon River Canal Company. Berger, Idaho is located in the north central part of the Salmon Tract.

29. The productive aquifer in the Berger area is primarily comprised of basalt. Bonnichsen Report, page 1; Bonnichsen Rebuttal Report, pages 3-4. Most of the domestic, irrigation and stockwater wells in the area divert water from the basalt aquifer. *Id.* The basalt aquifer in the Berger area is underlain by geologic formations that do not readily transmit water. *Id.* Hydraulic conductivity and transmissivity values can vary greatly throughout the Salmon Tract aquifer. C. Brockway Testimony.

30. "[T]he elevation of the bottom of the basalt zone in the Berger area may vary locally by several hundred feet." Bonnichsen Report, page 3. "[T]he bottom of the basalt zone represents the bottom of the aquifer from which sustained water volumes can be obtained." *Id.* at 4. Well logs in the record suggest that the saturated zone of the aquifer is between 100 and 250 feet thick in the Berger area. *Id.*

31. Cedar Ridge hired Brockway Engineering, PLLC ("Brockway") to evaluate the effects of diverting ground water as proposed in Application 79380. Brockway prepared two Winflow models to estimate the drawdown impacts resulting from pumping an additional 66.0 acre-feet from the Dairy #3 wells (including the proposed new well) during the irrigation season. The Winflow models relied on the Theis equation to estimate drawdown and evaluate impacts after 20 years of pumping. Exs. 14-17; Sullivan Testimony.

32. The first Brockway model incorporated the following assumed aquifer parameters:

Ground water gradient: 50 feet/mile
Saturated thickness: 435 feet (265 feet to 700 feet below land surface)
Hydraulic conductivity: 55 feet/day
Storativity: 0.12

Brockway Report, page 19.

33. The conductivity and storativity values used by Brockway were taken from a regional evaluation of the Salmon Tract aquifer completed by Cosgrove, et al. in the late 1990s. Brockway Report, pages 19 and 29.

34. The first Brockway model predicted a drawdown of 1.2 inches at the Parrott well, located 1.7 miles south of the proposed points of diversion. Brockway Report, page 23. Brockway did not estimate the drawdown for the domestic wells (not owned by any of the protestants) located closer to the proposed points of diversion.

35. Brockway decided to prepare a second Winflow model to estimate the drawdown impacts at the protestants' wells. C. Brockway Testimony; Brockway Report, pages 23-25. In the second model, Brockway reduced the assumed hydraulic conductivity value to 15.3 feet/day. *Id.*

36. Brockway derived the hydraulic conductivity value of 15.3 feet/day through an analysis of short term pump tests described in well driller reports for ten wells located within five miles of the proposed points of diversion. Brockway Report, pages 23-25. The average hydraulic conductivity calculated for the ten wells is 15.3 feet/day. *Id.*

37. One of the well driller reports used in the Brockway analysis is for a domestic well ("Well #5") located right next to the Dairy #3 property in the NWNE of Section 6, T11S, R16E. Brockway Report, page 24; Ex. 22. The calculated hydraulic conductivity for Well #5 is only 0.4 feet/day. Brockway Report, page 24.

38. The second Brockway model predicted a drawdown of about 2.8 inches at the Parrott well after 20 years of pumping an additional 66.0 acre-feet per year from the proposed points of diversion. Brockway did not estimate the drawdown for the domestic wells (not owned by any of the protestants) located closer to the proposed points of diversion.

39. In addition to the Parrott well, there are other domestic wells located approximately three-quarters of a mile away from the proposed well. Brockway did not model drawdowns in these other wells caused by pumping the proposed wells. The cone of depression for drawdown is steep near a pumping well, particularly when the hydraulic conductivity is low. The cone of depression flattens at greater distances from a pumping well. While drawdown in a well with low hydraulic conductivity is larger and causes significant drawdowns in nearby wells, at distances remote from the pumping well, the drawdown curve flattens out and approaches the static water level in a shorter horizontal distance from the pumping well. The drawdowns in a well located at remote distances from a pumping well with a small hydraulic conductivity will be smaller than the drawdown in a well at the same distance from a pumping well that has a high value of hydraulic conductivity.

40. In this case, even assuming a significantly lower value of hydraulic conductivity, the cone of depression will be fairly flat at a distance of three-quarters of a mile from the pumping well and, at most, would be several inches.

41. If the unanalyzed domestic wells were located within a few hundred feet of the pumping well, the Director would be concerned about drawdowns caused by pumping water from the proposed wells. Because the nearest domestic wells are three-quarters of a mile away, and because of the small quantity of water proposed to be pumped, the drawdowns in wells three-quarters of a mile away will not injure the domestic water right holders.

42. Twin Falls Canal Company ("TFCC") operates a High Line Canal which crosses through the Berger area from east to west approximately ¾ mile north of the proposed point of diversion. *See* Ex. 22. The TFCC Low Line Canal is located a few miles farther north. *Id.* Seepage from these large canals provides elevated aquifer levels resulting in smaller depth-to-water levels to the north of the Dairy #3 wells. Brockway Report, page 18. The static water levels in the Berger area fluctuate as much as 10 feet throughout the year due to seepage from the surface water canals and seepage from irrigation. Squires Testimony; Ex. 20.

43. Seepage from surface canals in the area results in a seasonal increase in aquifer levels. *See* Ex. 20.

44. Ground water at the existing point of diversion for water right 47-17589 flows south into *Neva*da toward Shoshone Creek, a tributary of Salmon Falls Creek. Bonnichsen Rebuttal Report, page 3; C. Brockway Testimony.

45. "Shoshone Creek joins Salmon Falls Creek about 3.7 miles south of the Idaho-Nevada border." Bonnichsen Rebuttal Report, page 2.

46. "[G]roundwater in the Mule Creek drainage will travel to the south into Nevada and will eventually loop its way back into Idaho following the ground elevation decline. The groundwater at that point of re-entry into Idaho will then flow in a general north direction as Brockway's expert report has indicated." Kimball Rebuttal Report, page 4.

47. Ground water at the Leno well is hydraulically connected to ground water at the proposed point of diversion.

48. Ground water levels in the area of the proposed point of diversion are stable. Squires Testimony. Monitoring wells in the area do not show a significant decline in aquifer levels over the last 35 years. Brockway Report, pages 12-15.

ANALYSIS / CONCLUSIONS OF LAW

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

> The director of the department of water resources shall examine all the evidence and available information and shall approve the change in whole, or in part, or upon conditions, provided no other water rights are injured thereby, the change does not constitute an enlargement in use of the original right, the change is consistent with the conservation of water resources within the state of Idaho and

is in the local public interest as defined in section 42-202B, Idaho Code, the change will not adversely affect the local economy of the watershed or local area within which the source of water for the proposed use originates, in the case where the place of use is outside of the watershed or local area where the source of water originates, and the new use is a beneficial use, which in the case of a municipal provider shall be satisfied if the water right is necessary to serve reasonably anticipated future needs as provided in this chapter.

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

Injury to Other Water Rights

3. Injury between ground water users is governed by Idaho Code § 42-226, which states: "Prior appropriators of underground water shall be protected in the maintenance of reasonable ground water pumping levels as may be established by the director of the department of water resources . . ."

4. Reasonable pumping levels have not been established in Basin 47.

5. A regional analysis of the Salmon Tract aquifer estimated the hydraulic conductivity of the aquifer to be 55 feet/day. Brockway Report, page 19. Regional estimates of conductivity do not necessarily reflect the actual conductivity at a specific point in the aquifer. C. Brockway Testimony. There can be significant local variation depending on the homogeneity of the aquifer substrate.

6. Brockway predicts that the long-term drawdown to the protestants' wells caused by pumping an additional 66.0 acre-feet per year from the proposed wells will be less than 3 inches. Brockway makes this prediction based on the results of a Winflow model incorporating a hydraulic conductivity value of 15.3 feet/day.

7. Brockway asserts that using a hydraulic conductivity value of 15.3 feet/day is "very conservative" when compared to the published conductivity values for the Salmon Falls Tract. Brockway Report, page 24. However, the evidence in the administrative record shows that assuming a hydraulic conductivity value of 15.3 feet/day may not be conservative.

8. The calculated hydraulic conductivity for a domestic well (Well #5) located right next to Dairy #3 is only 0.4 feet/day. Brockway Report, page 24; Ex. 22. The calculated hydraulic conductivity for a domestic well (Well #2) located one mile to the west of the proposed wells is 3.6 feet/day. *Id.*

9. Aerial photography shows that there are a number of homes located approximately ¾ miles west of Dairy #3. Ex. 22.

10. In the absence of direct analysis from Brockway addressing the question of injury to the domestic wells (not owned by the protestants) which are closest to Dairy #3, the hearing officer

must determine whether there is any data or evidence in the record which can be used to estimate drawdown impact to these domestic wells.

11. Prior to the hearing, an expert witness for the protestants, DuWayne Kimball, prepared a simplified model to estimate drawdown effects in the Berger area. For his model, Kimball assumed a hydraulic conductivity of 0.9 feet/day, a storativity value of 0.12, an aquifer thickness of 250 feet, and an annual diversion volume of 124.8 acre-feet (twice as much as the annual diversion volume proposed in Application 79380). Kimball Testimony. Given the calculated hydraulic conductivity for Well #2 and Well #5, Kimball's assuming a hydraulic conductivity of 0.9 feet/day for his model is reasonable. *See* Brockway Report, page 24.

12. Kimball found that, after one season of pumping, the drawdown at a location 750 feet from the modeled point of diversion would be approximately 6.8 feet. Kimball Testimony. Kimball testified that 6.8 feet of drawdown represents the worst-case scenario for a well located 750 feet from a proposed point of diversion, given the assumed aquifer parameters. *Id.*

13. The actual drawdown at the domestic wells west of Dairy #3 would be much less than 6.8 feet. The domestic wells west of Dairy #3 are located nearly 4,000 feet from the proposed points of diversion (5 times farther than the 750 feet assumed in the Kimball model). Further, the volume of water pumped at the proposed point of diversion will be 66 acre-feet (1/2 the amount assumed in the Kimball model). Both of these factors result in less drawdown at the domestic wells west of Dairy #3.

14. The information contained in the Kimball model is sufficient to conclude that the changes proposed by Leno will not injury existing water rights. The magnitude of seasonal aquifer fluctuation is far greater than the anticipated drawdown impacts to the closest domestic wells to Dairy #3.

15. Evidence in the record suggests that water levels near Dairy #3 are influenced by seepage from the TFCC High Line Canal. Seepage from the canals would increase water levels in nearby domestic wells during the irrigation season.

16. Visser testified that the primary demand for the additional water at Dairy #3 will occur between the months of May and September, a time when water should be flowing in the TFCC system.

17. The proposed points of diversion are located approximately 34 miles north of the existing point of diversion for water right 47-17589. Water at the existing point of diversion must travel through Nevada to reach the proposed points of diversion.

18. Leno has sufficiently demonstrated that the proposed change will not result in unreasonable drawdown (injury) to domestic water rights located near the proposed points of diversion.

Connectivity of Ground Water in Basin 47

19. A significant amount of testimony was presented at the hearing addressing the question of whether ground water at the existing point of diversion is hydraulically connected to the ground water at the proposed points of diversion.

20. Although the evidence is conflicting, the weight of the evidence establishes that ground water at the Leno well is hydraulically connected to the ground water underlying the location of the proposed point of diversion. Brockway and Bonnichsen agree that ground water at the existing point of diversion flows south into Nevada. Brockway and Kimball agree that the direction of ground water underflow generally follows the stream topography.

21. Bonnichsen and Kimball both concluded there is a hydraulic connection between the existing point of diversion and the proposed points of diversion. In addition, the Department should rely on the general provision from the SRBA Court and treat ground water in Basin 47 as a hydraulically connected source.

Enlargement of Water Rights

22. Pursuant to Idaho Code § 42-222(1), the director may consider consumptive use, as defined in section 42-202B, Idaho Code, as a factor in determining whether a proposed change would constitute an enlargement in use of the original water right. "Consumptive Use" is defined as "that portion of the annual volume of water diverted under a water right that is transpired by growing vegetation, evaporated from soils, converted to nonrecoverable water vapor, incorporated into products, or otherwise does not return to the waters of the state." Idaho Code §42-202B(1).

23. To prevent enlargement, when a transfer application proposes to change the nature of use of a water right, the Department may limit the proposed water right to the historic consumptive use of the original right. In this case, Leno proposes to limit the split portion of water right 47-17589 to the historic consumptive use of 1.87 acre-feet per acre or a total volume of 66.0 acre-feet (1.87 af/acre x 35.3 acres). Attachment to Application 79380. The protestants did not provide evidence challenging Brockway's calculation of historic consumptive use.

24. Leno sufficiently demonstrated that approval of this transfer will not result in the enlargement of the split portion of water right 47-17589. Once the transfer is approved, the proposed water right will be limited to a diversion rate of 0.42 cfs and an annual diversion volume of 66.0 acre-feet.

Conservation of Water Resources

25. During the hearing, the protestants challenged Cedar Ridge's use of a drench system for cooling cows. Although other methods of cooling cows were discussed, no evidence was presented showing that drench systems are not used in other dairies or that drench systems are not consistent with the conservation of water resources in the state of Idaho.

26. Visser's calculation of the maximum annual water demand of the drench system is reasonable. Visser testified that any water not needed for the drench system would be used to satisfy existing peak stockwater demands at Dairy #3. Leno satisfied his burden of proof regarding conservation of water resources. There is no evidence in the record that the proposed water use would be inconsistent with the conservation of water resources in the state of Idaho.

Local Public Interest

27. The local public interest analysis under Section 42-222 is meant to be separate and distinct from the injury analysis. Local public interest is defined as "the interests that the people in the area directly affected by a proposed water use have in the effects of such use on the public water resource." Idaho Code § 42-202B(3).

28. There is no evidence in the record that the changes proposed in Application 79380 are not in the local public interest.

Summary

29. Leno has satisfied his burden of proof for all of the review criteria set forth in Idaho Code § 42-222. Leno did not provide enough information to determine the magnitude of impact to nearby domestic wells if the water right proposed to be transferred were diverted during the non-irrigation season. Therefore, the transfer approval should limit the season of use for the transferred water right to May 1 – September 30. Further, because of the large distance between the existing point of diversion for water right 47-17589 and the proposed points of diversion at Dairy #3, in the event of water right administration in the Berger area, the split portion of water right 47-17589 should bear a priority date equal to the date of this approval.

ORDER

IT IS HEREBY ORDERED that Application for Transfer No. 79380 in the name of Thomas and Dorothy Leno is APPROVED.

Dated this 13th day of October, 2015.

Gary Spackman
Director

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that on this 14th day of October 2015, true and correct copies of the documents described below were served by placing a copy of the same with the United States Postal Service, postage prepaid and properly addressed, certified with return receipt requested, to the following:

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