

BEFORE THE DEPARTMENT OF WATER RESOURCES
OF THE STATE OF IDAHO

IN THE MATTER OF APPLICATION	)	
FOR TRANSFER NO. 76286 IN THE	)	
NAME OF TELFORD LANDS, LLC	)	PRELIMINARY ORDER
_____	)	DENYING APPLICATION

On February 2, 2010, Telford Lands, LLC (“Telford Lands” or “Applicant”) filed amended Application for Transfer No. 76286 with the Idaho Department of Water Resources (“Department”), seeking to add a point of diversion to ten ground water rights. The transfer was advertised to the public beginning on March 4, 2010. Protests were filed by Fred Burt, Heather Shosted, Jeffrey Allen, Jerry Brown, Jim Scouten, Kim Baldwin, Kirby Jensen, Nathan Carpenter, Reuben (Harold) Babcock, Russell Babcock, and Wade Waddoups. A petition to intervene was filed by Moore Water and Sewer Association (“MWSA”) on March 23, 2010.

A pre-hearing conference was held on October 20, 2010. The parties were unable to resolve the protests at that time and asked the Department to conduct a formal hearing. Protestants Fred Burt, Russell Babcock and MWSA were not present at the conference and did not notify the Department of their inability to attend. A Notice of Proposed Default Order was issued to Fred Burt, Russell Babcock, and MWSA on October 25, 2010. Russell Babcock responded to the Notice and asked to continue as a protestant. A Default Order was issued against Fred Burt and MWSA on April 5, 2011, dismissing them as parties to this case.

Telford Lands is represented in this matter by Robert Harris, attorney at law. On March 10, 2011, the Department was notified that James Speck, attorney at law, would represent protestants Nathan Carpenter, Wade Waddoups, Jeffrey Allen, Jerry Brown, Jim Scouten, Kim Baldwin, Reuben Babcock and Russell Babcock in this matter. Protestant Kirby Jensen represented himself in the proceedings.

Heather Shosted withdrew her protest on December 23, 2010. Jim Scouten withdrew his protest on March 14, 2011.

A hearing was held on May 26 and 27, 2011 in Arco. The parties were allowed to offer testimonial evidence, expert reports, and other documents into the record. After considering the evidence presented, the Department finds, concludes, and orders as follows:

FINDINGS OF FACT

1. Transfer Application No. 76286 seeks to add a point of diversion to ten combined water rights: 34-7179, 34-2330B, 34-7077, 34-7080B, 34-7092, 34-7121A, 34-7121B, 34-12376, 34-

13840, and 34-13842. Water diverted under these rights is discharged into the Moore Canal, the UC Canal, and/or the Timberdome Canal and conveyed, with surface water from the Big Lost River, to the south end of the Big Lost River Valley for the irrigation of the Applicant's property. These ten water rights have priority dates ranging from 1974 to 1982 and authorize the combined diversion of 37.03 cfs and the irrigation of 1,985 acres. All ten water rights list the same seven points of diversion:

L2 (NENWNE) Sec. 4, T04N, R26E	(Dad's Place Well)
L2 (NWNWNE) Sec. 4, T04N, R26E	(River #2 Well)
L3 (NENENW) Sec. 5, T04N R 26E	(Niederer Well)
SWNWNW Sec. 21, T05N, R26E	(Burnett Well)
SEWSE Sec. 29, T05N, R26E	(Babcock Well)
SESWNE Sec. 32, T05N, R26E	(North McAfee Well)
SEWSE Sec. 32, T05N, R26E	(South McAfee Well)

2. The additional point of diversion proposed in this transfer is located in the SENESE of Sec. 29, T05N, R26E (hereinafter "proposed well"). Water from the proposed well would be piped to the UC Canal, then conveyed in the canal to the Telford Lands property at the south end of the valley. The transfer application included a 2009 easement granted by Boyd Burnett, allowing Telford Lands to construct the proposed well on the Burnett property and to install a pipeline to convey water from the well to the UC Canal.

3. The ten ground water rights listed in the current transfer application were combined in a previous transfer approval. In July 2006, the Department approved Transfer No. 71254, filed by Mickelsen Properties, LLC ("Mickelsen"). The transfer, among other things, added all of the then-existing ground water wells as authorized points of diversion on all of the ten ground water rights. At that time, the River #2 Well had not yet been added to any of the rights. Essentially, the transfer allowed Mickelsen to divert any of the ten water rights through any of the six listed points of diversion. The places of use (irrigated acres) for the ten water rights were also combined in the transfer. The following condition was added to each of the ground water rights:

Construction of new wells at the location of existing points of diversion is not authorized unless the water right holder obtains approval through an application for transfer, and the Department determines, by considering the transfer, whether the construction of and pumping from new wells will injure other water rights.

4. This condition was added to the water rights to prevent injury to other water users. Mickelsen was limited to the maximum diversion capacity achievable through efficiency and maintenance at any of the six existing ground water points of diversion. To construct a new well or a replacement well under the ten water rights, the owner must first file a transfer application.

5. In 2008, Telford Lands purchased from Mickelsen the property irrigated by the ten water rights described above. The Department's ownership records were updated to list Telford Lands as the current owner of the rights.

6. In January 2009, the Department approved Transfer 74921, adding a seventh point of diversion to the ten ground water rights. The new point of diversion was located in Lot 2 (NWNWNE) of Sec. 4, T04N, R26E (identified above as the "River #2 Well"). A condition was included on all of the water rights stating: "Diversion of water from [the River #2 Well] shall not exceed a maximum diversion rate of 5.00 cfs."

7. Over time, the pumping capacity and efficiency of the original six wells had declined. The River #2 Well was added to the rights to make it possible for Telford Lands to divert the full 37.03 cfs authorized under its rights. According to Mr. Telford, water was supposed to be pumped from the River #2 Well, conveyed in a pipeline buried in a county road barrow pit, discharged into a canal, and conveyed in the canal to the irrigated property. After Transfer 74921 was approved, and after Mr. Telford had begun construction of the River #2 Well, he discovered that Butte County does not own the barrow pits on the side of the county roads. A private party owned the property where Mr. Telford had intended to run the mainline from the well to the canal. Mr. Telford has been unable to secure an easement from the private property owner of the barrow pit.

8. The River #2 Well has not been completed. (See Photo #10, Jensen Exhibit 4) Mr. Telford testified that the River #2 Well will likely never be completed and can be removed from the water rights if this transfer is approved. The Higgs Report confirms Mr. Telford's statement. "[I]f this Transfer is approved, the [River #2 Well] will be replaced with the proposed point of diversion sought under this Transfer." (Higgs Report, page 2, Exhibit A11 (emphasis removed)) "The authorized point of diversion located at [the River #2 Well] will no longer be listed as an authorized point of diversion on Telford's water rights." (Id.)

9. The Babcock Well is shared by Telford Lands and Reuben (Harold) Babcock and is used to supply irrigation water to Mr. Babcock and Telford Lands. In 1999, an agreement relating to the use of the Babcock Well was signed by Harold and Marjorie Babcock and Cannon Shelley Property Limited Partnership (Telford Lands' predecessor in interest). (See Exhibit P15) The agreement confirms the use of the well to deliver water under rights 34-2330B and 34-12376. (See id.) These two rights authorize a combined diversion rate of 3.00 cfs. Mr. Telford testified that Telford Lands is not allowed to draw more than 3.00 cfs under its water rights from the Babcock Well. The Babcock water rights associated with the well also carry a combined diversion rate of 3.00 cfs. The total amount of water diverted from the Babcock Well cannot exceed 6.00 cfs.

10. Mr. Telford testified that, prior to 2011 the Babcock Well was in serious disrepair and was not producing 6.00 cfs. Timberdome Canal Company records show that in 2009, Telford Lands was able to pump 2.70 cfs from the well. (See Exhibit A6). Mr. Babcock's use of the Babcock Well in 2009 is unclear.

11. Recently, Mr. Telford and Mr. Babcock resolved a civil dispute regarding access to the well and maintenance of the well and pump. Babcock and Telford entered into a stipulated agreement regarding the well. In the spring of 2011, Mr. Telford initiated maintenance work on the Babcock Well, with the intent of increasing the diversion capacity of the well.

12. The transfer application states: “The application is necessary because of a shared well dispute between the Applicant and Babcock.” (Exhibit A1) Although the Telford/Babcock dispute was resolved and maintenance work has been performed on the well, which should increase its production capacity, Mr. Telford still wants to pursue this transfer for the right to draw 5.00 cfs from an additional point of diversion (the proposed well).

13. Telford Lands offered Timberdome Canal Company records to support its argument that it is not able to divert the full 37.03 cfs authorized under its ground water rights. (See Exhibits A7) Mr. Jensen offered a similar exhibit as part of his case. (Jensen Exhibit 1) The Timberdome Canal Company records are poorly organized and confusing. No testimony was offered explaining what the records mean. Without adequate testimony deciphering the records, they carry little weight in the evidentiary record.

14. In their current state, Telford Lands’ wells are not able to produce the 37.03 cfs authorized under the Telford Lands’ rights. (See Exhibit A6) Even if the Babcock Well is brought into full working order, Telford Lands would still be 2.63 cfs short of its full authorized diversion rate. (See *id.*) In a drought year, the pumping capacity of the wells decreases and the shortage will be more than 2.63 cfs.

15. Protestant Nathan Carpenter owns a ground water well, located approximately 0.7 miles to the northwest of the proposed well, which is used to irrigate 181 acres, in combination with water rights from the Big Lost River. The ground water rights associated with the well are 34-14168 (1960 priority date) and 34-14170 (1972 priority date). In dry years, Mr. Carpenter relies more heavily on his ground water supply. The well is 167 feet deep. In April 2011, the depth to water in the Carpenter irrigation well was measured and found to be 54 feet.

16. Mr. Carpenter also owns a domestic well, located approximately 0.4 miles to the east of the proposed well. The domestic water right associated with the well, 34-10134, carries an 1896 priority date. Due to drought conditions, a replacement domestic well was drilled in 2002. The existing 80-foot domestic well had gone dry. The Well Driller’s Report, completed by Guthrie Drilling, indicated that water was first encountered at a depth of 88 feet, a point where the aquifer material changed from brown clay to sand and gravel. (Exhibit P5) After the well was completed, the static water level was found to be 78 feet below land surface, indicating localized artesian pressure and suggesting that the aquifer may be partially confined near the Carpenter domestic well. The 2002 Carpenter domestic well is 140 feet deep.

17. Reuben Babcock co-owns a ground water well (identified above as the “Babcock Well”), located approximately 0.3 miles to the east of the proposed well, which he uses to irrigate 153 acres, in combination with water rights from the Big Lost River. The Babcock ground water rights associated with the well are 34-2330A (1955 priority date) and 34-12377 (1961 priority date). The well is 180 feet deep. In April 2011, the depth to water was measured and found to be 75 feet.

18. Mr. Babcock also owns a domestic well, located approximately 0.3 miles to the east of the proposed well. The domestic water right associated with the well, 34-10404, carries an 1889 priority date. Due to drought conditions, a replacement domestic well was drilled in 1988. After

the well was completed, the static water level was found to be 70 feet below land surface. The 1988 well was drilled 120 feet deep. During another drought cycle in the early 2000s, the bowls had to be lowered to the bottom of the well.

19. Mr. Babcock also owns a stockwater well, located approximately 0.3 miles to the east of the proposed well. The stockwater well was originally drilled in 1969. The Well Driller's Report, completed by Findlay Well Drilling, stated that the well was 68 feet deep and the static water level was 42 feet below land surface. (Exhibit P13) Due to drought conditions, a replacement well was drilled in 1990. The Well Driller's Report, completed by Findlay Drilling, states that the replacement well is 111 feet deep and the static water level in the well was 93 feet below land surface. (Exhibit P14) The stockwater well went dry in 2003 and did not have water in it again until 2005.

20. The Big Lost River Valley forms a long, narrow ground water aquifer, particularly in the area of the proposed well. The most productive zone of the aquifer, the main water bearing layer, is made up of unconsolidated alluvial deposits. "The alluvial deposits can vary significantly from one location to the next and include clay, silt, sand, gravel and boulders." (Wood Report, page 4, Exhibit P21)

21. There is significant interaction between the surface water and ground water within the Big Lost River basin. Drought and flood cycles can have a dramatic impact on water levels in the aquifer. A monitoring well (05N26E32DBA1) located approximately 1 mile southwest of the proposed well confirms a strong correlation between flows of the Big Lost River and water levels in the monitoring well. (See Wood Report, Figure 4, Exhibit P21)

22. Water levels in the aquifer can rise during the irrigation season due to the influx of surface water, made up of seepage from the Big Lost River, canals, and flood irrigation. Ground water levels are sometimes at their highest at the end of the irrigation season. During drought years, the surface water contribution to the aquifer is greatly reduced because the Big Lost River is dried-up completely at the Moore diversion, located 3.5 miles north of the proposed well. Aquifer levels fall throughout a drought irrigation season, due, in part, to increased ground water pumping. Water levels near the proposed well can vary by more than 75 feet between a good water year and the last year in a drought cycle. (See Wood Report, Figure 14, Exhibit P21)

23. Three aquifer boundaries or barriers to flow exist in the vicinity of the proposed well. One boundary is located to the west of the Carpenter and Babcock wells, where the Big Lost River aquifer, made up of unconsolidated alluvial deposits, comes into contact with the less-permeable carbonate rock of the hillside. (See Wood Response, Figure 3 (taken from a 1970 Crosthwaite et al. Report), Exhibit P29 and Exhibit P19) A similar aquifer boundary exists on the east side of the valley, where the aquifer's alluvial material intersects the rock layers of the mountain. (See id.)

24. A third boundary exists at the south end of the aquifer. "The southern boundary is also considered a no flow boundary because of the steep hydraulic gradient, perched water lens and the numerous pumping wells to the south, which prevent water from flowing up-gradient from a southerly direction." (Wood Report, page 9, Exhibit P21) At the south end of the Big Lost River

Valley, the aquifer gradient descends quickly as the local aquifer flows down to join the larger, deeper Eastern Snake Plain Aquifer (“ESPA”). Water cannot be drawn back up the water gradient to satisfy the demands of ground water wells located in the Big Lost River aquifer, resulting in a conceptual boundary to flow.

25. Aquifer boundaries have the effect of deforming cones of depression between an active ground water well and the boundary. Drawdown between the point of diversion and the aquifer boundary is greater due to a lack of available water supply in the direction of the boundary. (See Wood Report, Figure 9, Exhibit P21)

26. To be able to predict the possible drawdown effects of the proposed well, it is essential to know the physical properties of the local aquifer, including the transmissivity of the local aquifer substrate. Transmissivity is a measure of how quickly water moves through the aquifer. A higher transmissivity means water travels through the aquifer more easily and results in a larger and shallower cone of depression. A lower transmissivity means water travels through the aquifer slowly and results in a smaller and deeper cone of depression. Transmissivity can vary greatly throughout an aquifer and can even vary within a vertical column of the aquifer. To determine drawdown effects of a proposed well, the combined or collective transmissivity of the local aquifer area must be determined.

27. Previous groundwater studies have tried to estimate the transmissivity within the Big Lost River aquifer. In a 2003 water budget analysis of the basin, Said, Stevens, and Sehlke used a transmissivity value of 75,000 ft²/day for the upper Big Lost River, including the area where the proposed well would be located. (See Said et al. Report, Table 1 and Figure 3, Exhibit P18). In April 1991, a pump test was performed on a well located approximately 2 miles south of the proposed well. (See Bassick and Jones 1992 Report, Description of Aquifer Test, Exhibit P19). Bassick and Jones found that transmissivity in the area ranged from 61,000 to 330,000 ft²/day; values of 130,000 to 200,000 ft²/day were most probable. (See id., Results of Aquifer Test)

28. Water Well Consultants, Inc. (Brian Higgs) was hired by Telford Lands to “determine the possible impacts to surrounding well owners.” (Higgs Report, page 3, Exhibit A11) Mr. Higgs developed a method for determining the transmissivity of the local aquifer (the “Higgs Method”). The Higgs Method involved modeling the expected drawdown caused by the five largest nearby ground water diversions at varying transmissivity values and comparing the modeled drawdown to the actual measured drawdown observed during the 2010 irrigation season. According to Mr. Higgs, the transmissivity of the local aquifer would be the transmissivity of the modeled drawdown that most closely matched the measured 2010 drawdown.

29. First, Mr. Higgs set up a model based on a standard Theis equation. Higgs ground water model incorporated the following assumptions: 1) The five largest existing ground water diversions within a 1.5 mile radius of the proposed well were pumped for 100 days at the maximum measured diversion rate for each well; 2) The model aquifer did not include any surface water contributions; 3) The storativity of the local aquifer was 0.024; 4) The model aquifer was not bounded on any side and extended continuously in all directions from the proposed well. The storativity value used by Mr. Higgs was derived from a 1964 study by Mundorf and others. (Higgs Report, page 3, Exhibit

A11) Mr. Higgs ran the model using four different transmissivity values (50,000, 100,000, 250,000, and 500,000 ft²/day).

30. During the 2010 irrigation season, Mr. Higgs measured the water levels of four wells in the area (Old Moss Well, Babcock Well, Dad's Place Well, and USGS Well 05N26E23CDA1). The first of the measurements were taken on June 28, 2010. The last of the measurements were taken on September 13, 2010, 77 days later. An initial measurement was not performed at the Old Moss Well until August 9, 2010, resulting in a 35-day measurement period. Mr. Higgs observed drawdown in the wells ranging from a 3.5 foot decline in water level to a 1.0 foot gain in water level. 2010 was a good water year and water flowed in the Big Lost River near Arco for a large portion of the irrigation season.

31. Mr. Higgs compared his modeled drawdown to the measurement data and concluded that "the [transmissivity] of the aquifer when taken as an areal formation is much greater than 250,000 ft²/day and closer to 500,000 ft²/day." (Higgs Report, page 14, Exhibit A11) "The conclusion of this study determines the average [transmissivity] throughout the proposed location area is greater than 500,000 ft²/day." (Id.)

32. Mr. Higgs then calculated the potential drawdown effects of the proposed well, assuming a transmissivity value of 500,000 ft²/day and the proposed well diverting 5.00 cfs for 100 days. Mr. Higgs found that the drawdown at the Babcock Well (located approximately 0.3 miles to the west of the proposed well) would be 0.5 feet. (Higgs Report, page 14, Exhibit A11)

33. Clearwater Geosciences, LLP (Tom Wood) was hired by the protestants, Kirby Jensen excluded, to determine the potential impact to surrounding wells if the proposed well were approved. Mr. Wood performed a pump test on the Carpenter irrigation well. The well was pumped at 1,500 gpm (3.34 cfs) for three days. During the pump test, the ground water levels were monitored in the Carpenter irrigation well, the Babcock well (located 0.7 miles from the test well), and the Loftus well (located 0.3 miles from the test well).

34. Mr. Wood testified that the data collected at the Babcock and Loftus wells was unreliable and not used in his analysis. "Drawdown observed in both observation wells [were] rendered [uninterpretable] due to fluctuations in barometric pressure and rising aquifer levels due to the apparent influx of river water." (Wood Report, page 7, Exhibit P21) "Unstable weather conditions (i.e. a storm) during the three day test cause[d] significant barometric effects to water levels." (Id.) The only data used by Mr. Wood in his analysis was collected at the Carpenter irrigation well.

35. Mr. Wood used the Cooper-Jacob form of the Theis solution for a confined aquifer to calculate the aquifer parameters at the test pump location. Mr. Wood's use of a "confined" aquifer solution is supported by the 2002 Well Driller's report for the Carpenter irrigation well and by the 1992 Bassick and Jones study, conducted about three miles south of the Carpenter well. (See Exhibit P5 and Bassick and Jones 1992 Report, Theis Analysis, Exhibit P19) Mr. Wood estimated the transmissivity of the local aquifer to be 84,000 ft²/day.

36. Mr. Wood then created a model to determine the drawdown impacts of the proposed well. The model was based on a standard Theis equation and incorporated the following assumptions: 1) a transmissivity of 84,000 ft²/day; 2) a storativity value of 0.001; 3) diversion from the proposed well at 5.00 cfs for the entire irrigation season – 214 days; 4) an aquifer boundary existing 3,200 feet to the west of the proposed well where the alluvial aquifer intersects the impermeable rock of the mountainside; 5) a similar aquifer boundary existing 2 miles to the east of the proposed well; and 6) an aquifer boundary existing 2 miles to the south of the proposed well. (See Wood Report, Table A3-1, Exhibit P21) The storativity value used by Mr. Wood (0.001) is consistent with the findings of previous aquifer studies in the area. (See Bassick and Jones 1992 Report, Results of Aquifer Test, Exhibit P19) Mr. Wood concluded that the drawdown in the nearby wells could be as much as 40 feet in a drought year, when there are little or no surface water contributions to the aquifer. (See Wood Report, page 12, Exhibit P21)

ANALYSIS / ADDITIONAL FINDINGS OF FACT

1. The Higgs Method of determining transmissivity in the area of the proposed well is not reliable and suffers from three major flaws. First, the Higgs Method compares expected drawdown derived from a model, which does not account for surface water contributions to the aquifer, to drawdown measurements collected in 2010, a year when surface water contributions to the aquifer were very significant. A hydrograph for a nearby monitoring well (05N 26E 05 SESWNE), included in the Higgs Report, shows that the water table can rise as much as 10 feet during the irrigation season. (Higgs Report, Figure 2, Exhibit A11) This rise in water level still does not account for all of the surface water contributions because some of the influx of surface water is masking the drawdown from ground water pumping. (See Higgs Report, pages 9-10, Exhibit A11) In a good water year, such as 2010, the actual effect of surface water contributions on ground water levels could be far greater than 10 feet. Matching modeled water levels that do not account for the contributions from surface water sources, to observed data that is heavily influenced by contributions from surface water sources does not work.

2. Second, the Higgs Method does not account for existing aquifer boundaries. In his testimony, Mr. Higgs acknowledged that a flow boundary exists to the west of the proposed well. As described above, barriers to flow also exist to the east and to the south of the proposed well. Mr. Higgs stated that he chose not to include the aquifer boundaries because he was unsure of the exact boundary locations. Although the precise location of these boundaries may not be known, a conservative analysis of the potential drawdown impacts of the proposed well should have included these boundary conditions at a best-estimate location.

3. During the hearing, Mr. Harris challenged Mr. Wood's inclusion of a southern boundary in his model as being inconsistent with the Department's ESPA Model. Mr. Harris noted that the ESPA Model shows impacts hundreds of miles away with a large hydraulic gradient between points. Mr. Harris' analogy to the ESPA Model is misplaced. The purpose of including no-flow boundaries in ground water modeling is to limit the areal extent of recharge or supply to a pumping well. The impacts of pumping from the proposed well can reasonably be assumed to propagate down-gradient to the ESPA, depriving the ESPA of a source of recharge. However,

due to the physical relationship of the well and the ESPA (the well resides at an elevation significantly above the ESPA) the ESPA cannot in turn serve as source of recharge or supply to the well.

4. Mr. Wood may have modeled the southern aquifer boundary too close to the proposed well. According to the water level contour bars displayed in the 1992 Bassick and Jones Report, the change in the water table elevation between the proposed well and Mr. Wood's southern aquifer boundary is only 50 feet. (See Exhibit P19 and Wood Report, Figure 13, Exhibit P21) Further analysis may be required to determine the proper placement of the southern boundary relative to the proposed well.

5. Third, although the Higgs drawdown model assumes a pumping season of 100 days, he compared his modeled drawdown scenarios to water level measurements from a 77-day interval (and in one case a 35-day interval). There is some doubt as to whether the five largest pumps were even running for the entire 77-day period. Given the flows in the Big Lost River during 2010, it is likely that water users within the area were able to rely more heavily on surface water supplies, reducing the demand on ground water. By comparing 100 days of pumping in the drawdown model to the results of far less actual pumping, the transmissivity value was estimated higher than it should be, resulting in a decreased drawdown estimate.

6. There is a significant difference between the diversion volumes assumed in the Higgs drawdown model and the actual diversion volumes measured in 2010. Mr. Higgs had the actual diversion numbers from 2010, yet he created a model based on theoretical 100-day diversion rates. The 2010 data was even included in Table 2 of the Higgs Report. Taking the five wells used in the model, the "assumed" diversion volume for the wells would have been 5,445 acre-feet (wells pumping at 12,354 gpm for 100 days). By comparison, Table 2 in the Higgs Report shows the 2010 diversion for all of the irrigation wells in the area was only 3,107 acre-feet. Mr. Higgs drawdown model overstated the theoretical drawdown for 2010, which, when compared with the measured drawdown, resulted in a higher transmissivity value and a decreased drawdown estimate.

7. The 1964 Mundorf study, described in the Higgs Report, has limited relevance to the current application. According to the Higgs Report, The Mundorf pump test was conducted in a basalt aquifer 4 miles west of Arco. (Higgs Report, page 3, Exhibit A11) The results of this test could vary significantly from tests performed in a different aquifer material, such as the unconsolidated alluvial material found at the proposed well. Mr. Higgs used a storativity coefficient in his model, 0.024, based on the Mundorf test. Because of the distance to the Mundorf test well and the difference in aquifer material, use of the Mundorf storativity value to model drawdown at the proposed well is questionable.

8. Mr. Wood's method of determining transmissivity, by performing an actual pump test, is more reliable. There is some degree of uncertainty relating to the pump test. The variation in water levels observed in the test well at the end of the test period were so small, it is difficult to know whether changes in barometric pressure may have influenced the results. Mr. Wood stated that data from the two observation wells had to be discarded because they may have been influenced by barometric pressure changes resulting from storms. (Wood Report, page 7, Exhibit

P21) Mr. Wood's estimate of transmissivity was based on the slope of the test data plotted on a logarithmic graph. (See Wood Report, Figure A2-1 and A2-2, Exhibit P21) Even a slight change in the data due to barometric pressure may have influenced the slope of the line and accordingly, the transmissivity estimate.

9. In a preliminary analysis, before employing the Higgs Method, Mr. Higgs estimated a transmissivity for the local aquifer close to that proposed by Mr. Wood. In a letter to Mr. Telford, dated September 8, 2010, Mr. Higgs states: "Based on the data from surrounding wells an estimate of the transmissivity at approximately 100,000 ft²/day is most likely in the area of your proposed well." (Exhibit P26) In the letter, Mr. Higgs acknowledges that he "reviewed all available data from within the area of [the] proposed well location," including "all known hydrologic reports." (Id.) It seems that Mr. Higgs only strayed from this initial estimate of transmissivity because of the results of the Higgs Method, which, as described above, is fundamentally flawed and unreliable.

10. Attached to the Higgs' September 2010 letter is a Well Driller's Report for a municipal well drilled by the City of Moore. (See Exhibit P26) The well is located approximately 0.5 miles to the northeast of the proposed well. At the time the well was completed in November 1969, a pump test was conducted for 6 hours. The drawdown measured at the test well was over 21 feet. Mr. Wood's model, with a transmissivity of 84,000 ft²/day, shows the expected drawdown at the proposed well after 6 hours would be about 7 feet. This is an indication that Mr. Wood's drawdown estimates are not unreasonable, and may actually be somewhat conservative.

11. Given all of the evidence in the record, Mr. Wood's transmissivity estimate is reasonable. It largely agrees with the previous studies cited by both experts in this case and even agrees with Mr. Higgs' initial estimate. Although the transmissivity proposed by Mr. Wood, 84,000 ft²/day, is slightly lower than some of the values found in previous pump tests, it still falls within the reliable range stated in those studies. Mr. Wood's incorporation of aquifer boundaries to the west, east, and south are valid assumptions. His assumption that the proposed well will be pumping for 214 days straight, however, is not reasonable. Using Mr. Wood's model output (represented in Figure A3-1, Exhibit P21) and assuming an irrigation season of 100 days (144,000 minutes), the estimated drawdown in the Carpenter and Babcock wells could be as much as 28 feet.

12. Mr. Telford testified that, if the transfer were approved, the River #2 Well could be removed from the water rights altogether. It is not clear from the transfer application that the River #2 Well would be removed from the rights. The transfer application still listed the River #2 Well as a valid point of diversion. If the River #2 Well had been completed as planned, Telford Lands arguably would be able to divert its full water rights, and this transfer would likely not have been needed. The pending transfer application seems to be the direct result of the River #2 Well not being completed. If the transfer application had been clearer, the proper analysis in this case should have been to determine the difference in drawdown between the River #2 Well pumping at 5.00 cfs and the proposed well pumping at 5.00 cfs.

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. Telford Lands failed to prove that its proposed change, adding a point of diversion to ten existing ground water rights, would not injure other water rights. The Higgs Method of determining the transmissivity of the local aquifer is fundamentally flawed and unreliable. Because the remainder of his analysis was derived from his estimated transmissivity, Mr. Higgs determination of potential drawdown in nearby wells in the area is also unreliable. The figures and graphs included in the Higgs Report cannot even be used to derive a possible drawdown scenario because they do not incorporate known local aquifer boundaries.

4. The protestants provided reliable evidence suggesting the drawdown in nearby wells could be as much as 28 feet. Although there is some uncertainty as to the influence of barometric pressure on the data collected by Mr. Wood, his estimated transmissivity falls within the acceptable ranges established by previous studies in the Big Lost River basin. Ultimately, the protestants do not bear the burden of showing the possible drawdown effects on nearby wells. Mr. Wood's Report raises concerns about possible injury to existing water rights, particularly in drought years. It is the Applicant's burden to show the proposed change will not injure other water rights.

5. Idaho Code § 42-226 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 . . ." No basin-wide reasonable pumping levels have been established in the Big Lost River basin. Therefore, the reasonableness of drawdown impacts to neighboring wells caused by a proposed well must be evaluated on a case-by-case basis. Because the Applicant failed to provide a reliable estimate of the possible drawdown in nearby wells, the Department cannot make a determination of the reasonableness of pumping levels.

6. The potential drawdown derived from the protestants' evidence (28 feet) is significant enough that the Carpenter irrigation well and the Babcock Well could go dry in a drought period similar to the early 2000s. Without the possible drawdown caused by the proposed well, these two wells would likely still be able to pump, even in a drought period similar to the early 2000s. Any evaluation of reasonable pumping levels in the area of the proposed well must account for the high variability of water levels in the Big Lost River aquifer.

7. In a 1982 case, the Idaho Supreme Court determined that the "reasonable pumping levels" standard of Idaho Code § 42-226 does not apply to domestic wells used prior to 1978. (See *Parker v. Wallentine*, 103 Idaho 506 (1982)) Two pre-1978 domestic wells are located within 0.5 miles of the proposed well (the Carpenter domestic well (1896) and the Babcock domestic well (1889)). The difficulty with a *Parker v. Wallentine* analysis in this case is that the protestants' own irrigation wells are contributing to the decline of water levels in their pre-1978 domestic wells. The Babcock Well (irrigation), for example, sits within 800 feet of the Babcock domestic well. Further, the location, size, and depths of the original (replaced) domestic wells are unknown.

8. The protestants did not assert a *Parker v. Wallentine* type protection for the two pre-1978 domestic wells. Nor was there any evidence presented regarding water levels in the wells prior to 1978. Therefore, the Department will not conduct a *Parker v. Wallentine* analysis as part of this Order. However, the protestants are free to pursue such an argument in any future proceeding.

Enlargement of Water Rights

9. There is no evidence suggesting that approval of this transfer would result in an enlargement of the water rights involved.

Conservation of Water Resources

10. The transfer application is consistent with the conservation of water resources within the state of Idaho. The Applicant's method of pumping ground water, discharging it into an open ditch, and conveying the water over five miles to the irrigated place of use is arguably inefficient and wasteful. However, this system of conveyance is how the water rights were developed, licensed, and decreed. There are a number of water users within the Big Lost River basin that operate similar ground water irrigation systems. Although the delivery system is inherently wasteful, this transfer application does not increase the inefficiency of the existing system in any measureable way. It is beyond the scope of the transfer review process to determine the wisdom of having issued water rights that allow groundwater to be conveyed such long distances in open ditches.

Local Public Interest

11. The protestants, including Mr. Jensen, argued that the proposed well, if approved and constructed, would place Telford Lands in an advantageous position for obtaining water over down-gradient water users. Such an argument seems to be very closely related to the drawdown and injury analysis. 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)) The evidence presented by the protestants did not clearly show how the local public interest in the water resource would be affected beyond potential injury to existing water rights. The Applicant presented evidence that the ground water rights would continue to be used for agricultural purposes, the primary use of ground water in the local community. The Applicant met its burden of proof for this element.

Effect on Local Economy

12. This provision of Section 42-222 does not apply to the current transfer application. This provision only relates to transfers proposing to change the place of use to a new location outside of the watershed or local area where the source of water originates. Telford’s place of use is not changing as part of this transfer.

13. Even assuming the local economy provision does apply, the Applicant met its burden of proof for this element. Telford’s place of use is clearly within the “local area” where the source of water originates. It is possible that Telford’s place of use is also within the Big Lost River “watershed.” (See Said et al. Report, page 33, Figure 1, Exhibit P18) Even if Telford’s place of use is located outside of the “watershed,” the proposed transfer will not adversely affect the local economy of the watershed or local area. No more water would be authorized to leave the “watershed” than was already authorized under existing rights.

Ground Water Moratorium

14. On April 30, 1993, the Department issued an Amended Moratorium Order, which included the Big Lost River basin. The Order established a moratorium on the “processing and approval of presently pending and new applications for permits to appropriate water from all surface and ground water sources . . .” (See 1993 Amended Moratorium Order, page 4) “The moratorium does not apply to applications for drilling permits to replace or deepen existing wells having valid existing water rights nor to applications for transfer of existing water rights.” (Id. at page 5) During the hearing, the protestants stated that they believed the moratorium barred the construction of any new wells in the basin. This is incorrect. The moratorium only pertains to the issuance of new water rights. Valid existing water rights may be changed, including adding points of diversion, provided the changes meet the criteria set forth in Idaho Code § 42-222. The transfer application does not violate any provision of the 1993 Amended Moratorium Order.

Basin-Wide Aquifer Decline

15. Throughout the hearing the protestants argued that the Big Lost River aquifer is in decline. Although that assertion may be true, this contested case is not the proper arena for addressing a basin-wide decline in aquifer levels. The protestants did not challenge the validity of Telford Lands’ water rights. If the local aquifer is in decline, as the protestants suggest, then the remedy is not barring existing water right holders from adding or moving their points of diversion. Rather, the remedy would be increased regulation by the local water district and administration of water rights based on priority dates. These basin-wide issues are much larger in scope than this

single transfer application, would require aquifer analysis much broader than was prepared for this case, and have no bearing on the approval or denial of this transfer application.

ORDER

IT IS HEREBY ORDERED that Application for Transfer No. 76286 in the name of Telford Lands, LLC is DENIED without prejudice. Telford Lands is free to pursue a similar transfer application in the future, provided a reliable analysis of the possible drawdown effects to surrounding wells is supplied with the transfer application. Any future transfer would be advertised to the public and subject to the same administrative review process as Transfer No 76286.

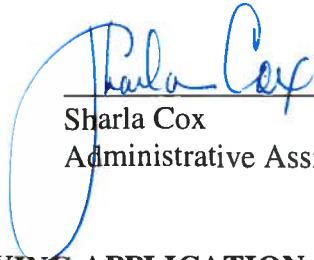
Dated this 1st day of July, 2011.



James Cefalo
Water Resources Program Manager

CERTIFICATE OF MAILING

I hereby certify that on the 1st day of July 2011, I mailed a true and correct copy, postage prepaid, of the foregoing PRELIMINARY ORDER DENYING APPLICATION to the person(s) listed below:


Sharla Cox
Administrative Assistant

US MAIL

RE: PRELIMINARY ORDER DENYING APPLICATION - TRANSFER NO. 76286

**Robert L. Harris
Holden Kidwell Hahn & Crapo
PO Box 50130
Idaho Falls, ID 83405-0130**

**Kirby A. Jensen
2781 North 3375 West
Moore, ID 83255**

**James P. Speck
Speck & Aanestad
PO Box 987
Ketchum, ID 83340**

EXPLANATORY INFORMATION TO ACCOMPANY A PRELIMINARY ORDER

(To be used in connection with actions when a hearing was **not** held)

(Required by Rule of Procedure 730.02)

The accompanying order or approved document is a "**Preliminary Order**" issued by the department pursuant to section 67-5243, Idaho Code. **It can and will become a final order without further action of the Department of Water Resources ("department") unless a party petitions for reconsideration, files an exception and brief, or requests a hearing as further described below:**

PETITION FOR RECONSIDERATION

Any party may file a petition for reconsideration of a preliminary order with the department within fourteen (14) days of the service date of this order. **Note: the petition must be received by the department within this fourteen (14) day period.** The department will act on a petition for reconsideration within twenty-one (21) days of its receipt, or the petition will be considered denied by operation of law. See Section 67-5243(3) Idaho Code.

EXCEPTIONS AND BRIEFS

Within fourteen (14) days after: (a) the service date of a preliminary order, (b) the service date of a denial of a petition for reconsideration from this preliminary order, or (c) the failure within twenty-one (21) days to grant or deny a petition for reconsideration from this preliminary order, any party may in writing support or take exceptions to any part of a preliminary order and may file briefs in support of the party's position on any issue in the proceeding with the Director. Otherwise, this preliminary order will become a final order of the agency.

REQUEST FOR HEARING

Unless a right to a hearing before the Department or the Water Resource Board is otherwise provided by statute, any person aggrieved by any final decision, determination, order or action of the Director of the Department and who has not previously been afforded an opportunity for a hearing on the matter may request a hearing pursuant to section 42-1701A(3), Idaho Code. A written petition contesting the action of the Director and requesting a hearing shall be filed within fifteen (15) days after receipt of the denial or conditional approval.

ORAL ARGUMENT

If the Director grants a petition to review the preliminary order, the Director shall allow all parties an opportunity to file briefs in support of or taking exceptions to the preliminary order and may schedule oral argument in the matter before issuing a final order. If oral arguments are to be heard, the Director will within a reasonable time period notify each party of the place, date and hour for the argument of the case. Unless the Director orders otherwise, all oral arguments will be heard in Boise, Idaho.

CERTIFICATE OF SERVICE

All exceptions, briefs, requests for oral argument and any other matters filed with the Director in connection with the preliminary order shall be served on all other parties to the proceedings in accordance with IDAPA Rules 37.01.01302 and 37.01.01303 (Rules of Procedure 302 and 303).

FINAL ORDER

The Director will issue a final order within fifty-six (56) days of receipt of the written briefs, oral argument or response to briefs, whichever is later, unless waived by the parties or for good cause shown. The Director may remand the matter for further evidentiary hearings if further factual development of the record is necessary before issuing a final order. The department will serve a copy of the final order on all parties of record.

Section 67-5246(5), Idaho Code, provides as follows:

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

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

APPEAL OF FINAL ORDER TO DISTRICT COURT

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

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

The appeal must be filed within twenty-eight (28) days of this preliminary order becoming final. See section 67-5273, Idaho Code. The filing of an appeal to district court does not itself stay the effectiveness or enforcement of the order under appeal.