



State of Idaho

DEPARTMENT OF WATER RESOURCES

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SOUTHERN REGION

DIRK KEMPTHORNE
Governor

KARL J. DREHER
Director

June 23, 2005

Daren Nelson
Brockway Engineering
2016 N Washington St
Suite 4
Twin Falls, ID 83301

Dear Mr. Nelson:

Please find enclosed a water right transfer application in the name of Rick and Sharon Hawker that you recently submitted to our office. Also enclosed is the filing fee (Brockway Engineering check # 5672 for \$250.00) that was included with the application. The application is being returned so that you can address a couple of discrepancies and deficiencies with the application and to offer feedback regarding the analysis of the historical use of the supplemental groundwater right being transferred.

Examination of the application revealed a discrepancy in the proposed place of use description for the feedlot (first page of application) and the map that was included with the application. In addition, the application was not entirely clear as to the purpose of the application in relation to the feedlot operation (is the feedlot expanding, is the application just providing additional water to the existing feedlot with no expansion, etc.).

For transfer applications that propose changing an irrigation right to stock water use, the Department requires that an analysis of the water requirements for the new use be performed and included with the application. Typically, this requirement can be satisfied by including a copy of a spreadsheet analyzing the water requirements at the new place of use.

The narrative included with the application mentions that Mr. Smith, the current owner of the rights proposed to be transferred, sold part of the farm to Pickett Ranch & Sheep Co. in December of 1999, but retained the groundwater rights. The narrative references an attached agreement of sale, but a copy of this agreement of sale was not included with the application. Documents in IDWR files do not currently verify that Mr. Smith retained the groundwater rights when he sold the portion of the farm to Pickett Ranch & Sheep Co. This issue needs to be addressed to show that Mr. Smith indeed currently owns all of the groundwater rights proposed to be transferred.

For applications that propose transferring a supplemental water right the historic extent of beneficial use under the right must not be enlarged. The Department's transfer processing policies and procedures memo further states "*When it is necessary to determine the historic consumptive use under a supplemental right, the average annual historic consumptive use, over an appropriately representative time period that may be greater than five years, will be the basis for the volume available for transfer.*" The application includes an analysis of water use on the original farm from 1995 – 1999 based on allowing credit for groundwater diversion by taking crop water needs and subtracting canal company deliveries (based on copies of canal company delivery records included with the application). Examination of the application reveals that only three years of crop report records (1996, 1997, 1998) were included with the analysis, and that the crop report records do not clearly indicate the locations of the particular fields in question. In addition, it appears that the crop reports may include a few fallow acres on the fields that the analysis may be based on.

Along with the previously mentioned crop records, canal company delivery records, and analysis, two pages of Idaho Power records were included. These records appear to show pumping information for the farm in question for the years 1996 – 1999. Examination of these power records and comparison with the crop requirement analysis raises several questions and points of concern. In particular, the power records indicate rather sporadic power demand (kW) and use (kWh) over the four years. In addition, there are several months where credit was given for groundwater use in the analysis, when the power records show little, if any, demand and use for these same months. After examining this information, Allen Merritt and I researched the Department's power records database, provided by Idaho Power and obtained power use information from years 1995 – 2004 which yielded comparable information (sporadic demand and use). In addition, while in the area earlier this week, Allen and I stopped by the property in question and observed the diversion and power metering system.

Reviewing the Idaho Power records that were included with the application indicates that relatively speaking, very little pumping (canal water &/or well water) was more than likely pumped over the years. For example, by dividing the monthly use (kWh) by the monthly demand (kW) an estimate of the number of hours that power was used can be obtained. If these estimated hours are used as a basis, and one totally ignores the possibility of any canal water even being pumped and just assumes that the authorized diversion rate of 0.60 cfs for the groundwater rights was pumped for the estimated number of hours (**liberal assumption**) the following volumes are obtained....

Year	Total estimated hours	Volume (estimated hours x 0.60 cfs)
1996	275 hours	13.6 ac-ft
1997	1,045 hours	51.9 ac-ft
1998	1,055 hours	52.3 ac-ft
1999	453 hours	22.5 ac-ft

Note that the analysis included with the application estimates the annual groundwater use at 145.4 ac-ft.

It is also interesting to note the listed monthly demand on the power records that were included with the application. For example, the records included for 1996 indicate that the maximum monthly demand for the entire year was only 1.0 kW. IDWR records and our site visit earlier this week indicate the pump on the well is rated at 50 horsepower. If the well was pumping water, one would expect to see monthly demands of at least 35 – 40 kW (1 hp = 0.7457 kW). Examination of the power records that were included with the application, indicate that only four months out of the four years had demands of at least 35 kW. Assuming credit could only be given for pumping the well when the peak demand was greater than 35 kW, and then estimating hours pumped from demand (kW) and use (kWh), and assuming the well was pumped the **entire** estimated hours reveals the following volumes...

Year	Total estimated hours	Volume (estimated hours x 0.60 cfs)
1996	0 hours	0 ac-ft
1997	0 hours	0 ac-ft
1998	962.5 hours	47.7 ac-ft
1999	252.8 hours	12.5 ac-ft

Note that the four-year average volume in the table above is only about 15 ac-ft. In addition, it should be noted that in the power records that were included with the application it appears that the demand is at its maximum values the same months when the canal water is being delivered. Therefore, for the peak demand months, it is probably safe to assume that at least some, if not all, of the time canal water was being pumped, further reducing the average groundwater volume(s).

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Examination of the Department's power records database reveals that for the years 1998 and 1999 a second motor of 60 hp was identified in addition to the 50 hp motor (presumably the well). Examination of the Department's power records database for the years 1995 – 2004 reveals very similar peak demands (9 total months with demands greater than 35 kW out of 10 years of data) as those years identified in the power records submitted with the application.

In summary, it appears that there are a few discrepancies and deficiencies with the application and that additional effort may need to be spent on the groundwater use analysis to justify the average groundwater use of 145.4 ac-ft per year. If you have any questions, or if I can be of any further assistance, feel free to contact me at your convenience.

Sincerely,

A handwritten signature in black ink, appearing to read "Corey Skinner". The signature is fluid and cursive, with a long horizontal stroke at the end.

Corey Skinner, PE
Water Resource Engineer

Enclosures