

TO: Hailey City Council  
FROM: Wendy J. Pabich  
613 North 4<sup>th</sup> Ave.  
Hailey  
DATE: August 3, 2009  
SUBJECT: Quigley Canyon Water

While on a run out Quigley Canyon road on July 30<sup>th</sup> I noted that merely the bottom 1/4 to 1/3 of the Quigley field was being irrigated from less than a dozen wheel lines. The water pressure in the system was so low that the first couple lines furthest out the canyon had the equivalent of a leaky household faucet's worth of water dripping from the joints along the line. Moving towards town, it appeared that the water pressure in the lines increased so the western-most several wheel lines were spraying water as designed, but still clearly at very low pressure. The water level in Quigley Pond appeared to be down 2-3 ft. from the high water mark.

Data from SPF Engineering shows that flows in Quigley Creek for 2007 and 2008 averaged 1.96 cfs for July and 2.1 cfs for August. As of today, year-to-date precipitation in the Big Wood River basin is at 102% of normal (Idaho Southern SNOTEL report), compared to 89% of average on August 3, 2008 and 73% of average on August 3, 2007. Thus, water in Quigley Creek is likely higher now than it was when Quigley Creek flows were measured in 2007 and 2008. Therefore, when Quigley Creek is flowing at more than 2.1 cfs (i.e., higher than both 2007 and 2008), it provides only enough water pressure to meagerly irrigate the bottom 1/4 to 1/3 of the Quigley field.

Regardless of the paper water rights to flows from Quigley Creek, the actual water volume available for irrigation appears to be insufficient to irrigate the existing field at Quigley and will clearly be insufficient to support the proposed Quigley golf course and development. Any future attempt to increase the volume of water used during July and August or to increase the length of the irrigation season would constitute an illegal expansion over historic use of these water rights. To assume that new water rights or an increase in Hailey's municipal water use can be used to supply the additional water that will be necessary to support this development will only unfairly place the burden on other water users or the Big Wood River. It may be in the City's best interest to inspect the Quigley irrigation system during this coming month to better understand the water deficit that the City Council may be taking on for the residents of Hailey.



TO: Hailey City Council  
FROM: Wendy J. Pabich, Ph.D.  
613 N. 4<sup>th</sup> Ave.  
Hailey, ID  
DATE: June 9, 2009  
SUBJECT: Quigley Canyon water debate

I appreciate that the City has taken the opportunity to hire SPF Engineers to review the memo I submitted on May 18, 2009 detailing my concerns about the lack of water rights currently available to the developers of Quigley Canyon to support the proposed development and golfcourse on the property.

Please consider the following responses to the comments provided by SPF:

Quigley Canyon's Available Water

2. I agree that the Drake decision likely represents an ambiguous estimate of flows out of Quigley Creek. Yet, the Drake estimate of Quigley Creek (2.28 cfs) suggests that there is much less water actually flowing in Quigley Creek than the developer has in water rights off Quigley Creek (which total 7.55 cfs). A water right without the flows to support it is meaningless. SPF provided additional data documenting flows in Quigley Creek during 2007 and 2008, which ranged between 1.8 and 3.5 cfs. Note that the flows during the majority of the irrigation season are below 2.6 cfs, and as low as 1.8 cfs in August. These measurements support my contention – based on the SPF analysis, any rights above 3.65 cfs can never be filled. Further, given the lower flows during the irrigation season, any part of these water rights greater than about 2.2 cfs should not be counted on for irrigation for the proposed development or golfcourse. This is a very real physical constraint.

In addition, all of these flows are subject to curtailment. If the rights are subject to a call or administration by the Watermaster in conjunction with the Big Wood watershed, the rights have little value. How Quigley Creek is to be administered will be determined in the SRBA. The USGS study shows a significant hydrologic connection between Quigley Creek and the Big Wood River, making conjunctive management likely.

4. Quigley does, in fact, have an enlargement claim for 52.5 AFA to irrigate an additional 15 acres. However, the right has a priority date of 1985, representing the time of enlargement. Given its junior status, this right is entirely unreliable. During the 2007 irrigation season, this right would have been cut by June 22.

5. It is true that junior groundwater rights may be used, but as SPF recognizes, those rights may be subject to curtailment, and no one, not even SPF, can assure the City that the rights will be available in the event of conjunctive management.

6. The idea of applying 37-19376 (2.28 cfs) to a greater number of acres than is appropriate given the duty of water (.02 cfs) appears to advocate water spreading. 37-

19376 has an allowable place of use of 253.8 acres only because it is used in conjunction with three other water rights (37-2784A, 37-7693, and 37-20902) providing an additional 7.28 cfs. Used alone, 37-19376 could be applied only to the appropriate number of acres (or about 114 acres). Water spreading on a greater number of acres with less water per acre will increase total consumption and harm recharge and downstream water users. Further, it is not clear that one can successfully irrigate the entire 253.8 acres with only ½" per acre. A consumptive model would need to be developed to prove to IDWR that this is possible. Notably, SPF has not developed or not been asked to develop such a model.

#### Development Water Demand

SPF notes that an estimated 1,523 gal/home for domestic use is highly excessive. I couldn't agree more! The water use in the Wood River Valley relative to that in other parts of Idaho and the nation as a whole is off the charts. The USGS report shows we use 767 gal/person/day compared to a state average of 263 gal/person/day and a national average of 179 gal/person/day. It may be that this disparity is a function of economics (people here are less constrained by cost). SPF calculates projected water use for the development using Boise and national water use statistics. The City will put itself and its residents at risk if it chooses to use water use statistics from somewhere else, rather than actual Wood River Valley water use numbers provided by the recent USGS study.

Thank you for your consideration.

**TO:** City of Hailey  
**FROM:** Wendy J. Pabich  
613 N. 4<sup>th</sup> Avenue  
Hailey, ID  
**DATE:** May 20, 2009  
**SUBJECT:** Water Issues in Quigley Canyon

I appreciate the City's willingness to provide an open public forum for discussion of some very important issues related to the Quigley Canyon development proposal. I'd like to follow up on several comments made by the public at the May 19th City Council hearing about the water use requirements of golfcourses.

A study by Dr. Peter Gleick et al. at The Pacific Institute, entitled *Waste Not, Want Not: The Potential for Urban Water Conservation in California* ([http://www.pacinst.org/reports/urban\\_usage/waste\\_not\\_want\\_not\\_full\\_report.pdf](http://www.pacinst.org/reports/urban_usage/waste_not_want_not_full_report.pdf)) compiles water use data for residential indoor, outdoor and commercial sector use for the state of California. For the purposes of this discussion, I'll focus on golf course water use, but I highly recommend this study as a source of information and roadmap for how we, as a community, can begin to better conserve our water resources.

The report concludes that California's nearly 900 golf courses account for about 89,000 irrigated acres and use approximately 342,000 AF (acre-feet) of water (see attached). Thus, mean golf course water use (or delivered water) is 3.8 AF per acre. Measured evapotranspiration (i.e., consumptive use) at the Hailey Ranger Station for irrigated turf (i.e., golf course) as reported by University of Idaho (<http://www.kimberly.uidaho.edu/ETIdaho/>), is 778 mm per year (2.55 ft or 2.55 AF per acre), while cut alfalfa requires 880 mm per year (2.89 ft or 2.89 AF per acre). Thus, golf course turf has a slightly smaller *consumptive* water requirement than does alfalfa (2.55 AFA versus 2.89 AFA or 88% of alfalfa requirements). Generally, water is delivered at a rate of approximately 3.5 AF per acre to satisfy a consumptive water requirement of 2.5 AF per acre<sup>1</sup>; we might assume alfalfa requires delivered volume of approximately 3.9 AFA and turf requires 3.5 AFA.

However, the California data and our own experience in the valley suggest that *delivered* water to golf courses is higher than the consumptive requirements of golfcourse turf -- more like 3.8 AF per acre -- due to poor water management. In contrast, irrigation of agricultural fields often occurs in rotation resulting in lower delivered water volumes. For example, if alfalfa fields at Quigley historically have been irrigated so only half the acreage is irrigated at a time, delivered water would be only half the total alfalfa requirement (i.e., say 3.9 AFA \* ½ \* 300 acres = 585 AFA). A golfcourse of the same size irrigated without rotation would have a larger total water use (e.g. 3.8 AFA \* 300 acres = 1140 AFA). In this example, delivered water to the golfcourse would be almost two times that delivered to the alfalfa field.

---

<sup>1</sup> Consumptive use is that part of delivered water that it evapotranspired through the plant, recharged into the groundwater or otherwise lost from the system; total water use (or delivered water) is larger than consumptive use.

To understand how proposed changes in land and water use will impact total water demand, historic irrigation patterns and water use must be evaluated, realistic water use estimates for new uses (golf course irrigation) must be considered, and the two should be compared.

Thank you for your consideration.

## Golf Courses (SIC code 7992)

SIC code 79 includes various recreational establishments such as theaters, amusement parks, movie studios, and golf courses. Because water use in these industries varies tremendously, we included only golf courses (SIC code 7992), which comprise a very water intensive sub-industry, in our analysis. Indeed, in 2000, there were nearly 900 golf courses in the state, covering close to 89,000 acres (Horton, 2002), and using 342 TAF of water annually.

**Table E-7**  
**Employment and Water Use at Golf Courses (2000)**

Industry	SIC	GED	Employees	Annual Use (TAF)
Golf Courses	7992	7,718	34,100	341.8 <sup>1</sup>

<sup>1</sup> Freshwater comprised 229 AF of 2000 use and the remaining water was reclaimed water (California State Water Resources Control Board 2002).

Although we do not know the exact breakdown of water use at golf courses, we do know that water is used primarily for landscaping. Without published data, we assumed that 95 percent of golf course water use is used for irrigating turf while the remaining 5 percent is used in restrooms, kitchens, and cooling, which we consolidated as "other." Golf courses tend to use high amounts of reclaimed water in addition to self-supplied and agency-supplied water.<sup>1</sup>

### Comparison of GED-derived Estimate to Modeled Water Use

Since landscaping comprises nearly all of a golf course's water use and little or no information was available on restroom, kitchen, or cooling uses, we modeled only the irrigation component to crosscheck our GED-derived estimate. First, we totaled the number and acreage of golf courses by hydrological region and then applied what we know about turf water use in different regions to these acreages to determine total water use in 2000.<sup>2</sup>

<sup>1</sup> According to the National Golf Foundation, in 1998, about 33% of the water supply to golf courses in Region 8 (which includes So Cal, W.AZ and So NV) was supplied from reclaimed water. This percentage was assumed to apply to California. The rest of the water supply to golf courses was from freshwater sources: lakes and streams (22%), wells (32%), public supply(9%), and other (5%). (Thompson, 2002).

**Table E-8**  
**Modeled Irrigation Water Use at Golf Courses**

Hydrologic Region	Percentage Golf Acreage <sup>1</sup>	Acreage 2000 <sup>2</sup>	EV Ratio w.r.t Central Coast <sup>3</sup>	Annual Water Use (AF/Acre)	Modeled Total Irrig. Use (TAF)	GED-derived Estimate of Total Use (TAF)
North Coast	3%	2,945	1.01	2.02	5.9	
San Francisco	15%	13,394	1.26	2.52	33.8	
Central Coast	7%	6,126	1.00	2.00	12.3	
South Coast	46%	41,012	1.37	2.74	112.4	
Tulare Lake	5%	4,082	1.80	3.60	14.7	
San Joaquin	6%	5,687	1.80	3.60	20.5	
Sacramento River	13%	11,211	1.80	3.60	40.4	
North Lahontan	1%	544	1.56	3.12	1.7	
South Lahontan	4%	3,412	2.08	4.16	14.2	
Colorado River	0%	360	2.53	5.06	1.8	
<b>Total Irrigation</b>		<b>88,773</b>			<b>258</b>	<b>324.6</b>
<b>Total All End Uses</b>						<b>341.8</b>

<sup>1</sup> The number of golf courses was reported by county and we translated this into hydrologic region (California Golf Owners Association 2002). We then converted the number of golf courses in each region into a percentage of the state's total golf course acreage.

<sup>2</sup> The total acreage of golf courses was reported by the California Golf Owners Association (2002) and then distributed among regions based on the percentage of golf courses in each region.

<sup>3</sup> see Appendix D.

### Estimate of Potential Savings

By applying the conservation potential calculated in the end use studies (see Appendix D) to our GED-derived estimates of water use, we estimated potential water savings (shown in Table E-9).

**Table E-9**  
**Potential Water Savings at Golf Courses (2000)**

End Use	Water Use (TAF)	Conservation Potential (percent)			Conservation Potential (TAF)		
		Low	High	Best	Low	High	Best
Irrigation (Freshwater)	211.9 <sup>1</sup>	26%	100%	39%	60.1	211.9 <sup>2</sup>	88.7
Irrigation (Reclaimed)	112.8 <sup>1</sup>	0%	0%	0%	0	0	0
Other	17.1	0%	0%	0%	0	0	0
<b>Total</b>	<b>341.8</b>	<b>26%</b>	<b>100%</b>	<b>39%</b>	<b>55.6</b>	<b>82.1xx</b>	<b>211.9xx</b>

<sup>1</sup> According to the National Golf Foundation, in 1998, about 33% of the water supply to golf courses in Region 8 (which includes So Cal, W.AZ and So NV) was supplied from reclaimed water. (Thompson, 2002)

<sup>2</sup> The low and best estimates coincide with the findings in Appendix D while the high estimate includes potential freshwater savings if all freshwater currently used in golf course irrigation (229 AF/year) was replaced with reclaimed water.

**TO:** City of Hailey  
**FROM:** Wendy J. Pabich  
613 N. 4<sup>th</sup> Avenue  
Hailey, ID  
**DATE:** May 18, 2009  
**SUBJECT:** Water Issues in Quigley Canyon

Please accept this memo as part of the public record in the hearings before the Hailey City Council on the annexation and residential and golfcourse development proposal for Quigley Canyon. It is highly unlikely that the volume of water available to the Quigley Canyon development via their water rights is even close to covering the water demands that will be created by this development. Regardless of the outcome of negotiations between the applicant and the City over disposition of water rights, water and wastewater fees, and who is responsible for providing water, the ultimate question is whether or not this development will result in a net increase in water use. My calculations suggest it will. Given that the recent USGS study shows we have a declining aquifer, it is not in the public interest for the City of Hailey to agree to annexation of a project that will result in a net increase in water use, and therefore a net decrease in our water resources. Please consider the following:

**Quigley Canyon's available water:**

- 1) The 1889 Drake decree, which provided that the owner of the Quigley water right (now 37-19736) is entitled to the entire flow of Quigley Creek, also determined that the *total flow of Quigley Creek was 2.28 cfs* (ERO report, p. 10). IDWR has subsequently allocated an additional 5.27 cfs off Quigley Creek and 81 AF of storage (as rights 37-2784A, 37-7693 and 37-8283; now owned by Quigley Canyon). Regardless of what these rights are on paper, if Quigley Creek only flows at approximately 2.3 cfs, this is a very real constraint and these additional water rights are essentially meaningless.
- 2) Objections have been filed to Quigley Canyon's water rights and the outcome of the SRBA may or may not leave Quigley Canyon with the water right volumes and administration system it claims. It may behoove the City to await the outcome of court proceedings before making any decisions on this proposal.
- 3) Combined use remarks on Quigley's water right limit total use to 888.3 AF/yr, not the volume arrived at by summing the total of all claimed rights (940.8 AF/yr) as shown in the ERO report (p. 16, bottom of Table 2).
- 4) With the exception of one senior right (37-19736, 1889 for 2.28 cfs), these rights are all very junior and under priority management would be shut off in June. In fact, by the end of June, all surface water rights on the property are likely to have been cut. This one senior right is enough to irrigate 114 acres, which at 3.5 AF per year, would total 399 AF annually.

**Development water demand:**

- 1) The USGS study shows that average water consumption in the cities of the Wood River Valley (Ketchum, Sun Valley, Hailey and Bellevue) is 767 gal/person/day *as reported by the cities*. This number includes both in-house use and irrigation.

Water use for Sun Valley skews this distribution, likely due to the number of second homes. If we remove Sun Valley water use from these calculations, the mean daily water use, on an annual basis, for the remaining three cities is 639 gal/person/day (Table 1). Evaluating the source municipal data shows that mean use during the non-irrigation season (Nov.-Mar.) is 482 gal/person/day. This is taken to represent domestic in-house use in the absence of irrigation (Table 1).

Table 2 shows in-house domestic use and irrigation use calculated using these USGS estimates. Average household water use (at 2.4 people per house) is 1,523 gal/house/day (including both irrigation and in-house use) and 1,157 gal/house/day during the non-irrigating season (representing only in-house use). In-house domestic use is almost *six times* higher than the developer's estimate of 200 gal per household. Total use for the development is 655 AF annually, or 300 AF higher than the developer's estimates.

**Table 1. Water Use by Municipality**

	<u>Water Use</u> <u>(gal/per/day)</u>	<u>Water Use (non-irrigating)</u> <u>(gal/per/day)*</u>
Sun Valley	1857.33	1044.13
Ketchum	712.86	484.17
Hailey	363.33	216.07
Bellvue	841.75	745.17
<b>Mean (K, H, B)</b>	<b>639.31</b>	<b>481.80</b>

\* Note: Denotes average use Nov.-Mar.

Table 2. Estimated Residential Water Use

Residential Water Use	USGS <sup>1</sup>	Quigley's Estimate	Difference (AF)
In-house Domestic Use (gal/house/day)	1157	200	
Development In-house Domestic Use (gals/day) <sup>2</sup>	444288	76800	
Annual Development In-house Domestic Use (AF/yr) <sup>4</sup>	498	86	412
Residential Irrigation Use (gal/house/day) <sup>3</sup>	366		
Development Residential Irrigation Use (gals/day)	140544		
Annual Development Residential Irrigation Use (AF/yr) <sup>4</sup>	157	269.4	-112
Total Residential Use (gal/house/day)	1523		
Development Total Residential Use (gals/day)	584832		
Annual Development Total Residential Use (AF/yr) <sup>4</sup>	655	355	300

**Notes:**

1. Calculations assume USGS mean water use for Ketchum, Hailey and Bellevue and 2.4 people per house
2. Assumes 382 units
3. Irrigation calculated by difference (Total water use - In-house domestic use)
4. 1 AF (acre-foot) = 325,850 gal.

Further, Quigley's estimates of irrigated acreage within the residential portion of the development are questionable. The ERO water budget (p. 15) shows 18.7 acres of irrigated common area and 58.3 acres of irrigated lots. At 3.5 AF per acre, this requires 269 AF/yr, as shown in Table 2. Yet, it is unclear how Quigley arrives at this estimate. Assuming a ½ acre irrigation limit per lot, and the lot breakdowns from the City staff report, it appears that 143 acres of residential lot area are likely to be irrigated (Table 3). If we add to this the common areas (18.7 acres), irrigated acreage in the residential area is likely to total 161.7 acres, requiring 566 AF/yr – not far from the estimate for total water use derived using the USGS numbers. Note that without an irrigation acre limit, it's possible that irrigated acreage on these properties could total as much as 485 acres.

Table 3. Estimated Residential Irrigated Acreage

Number of Units	Acreage	Irrigated Acreage w/ 1/2 Acre Limit	Total Irrigated Acreage	Potential Irrigated Acreage with No Limit
203	0.27	0.27	54.81	54.81
41	0.45	0.45	18.45	18.45
41	0.47	0.47	19.27	19.27
32	0.7	0.5	16	22.4
22	11.1	0.5	11	244.2
26	2.7	0.5	13	70.2
20	2.8	0.5	10	56
<b>TOTAL</b>			<b>142.53</b>	<b>485.33</b>

The applicant claims that property taxes to the City of Hailey from this development will total \$2.1 million on approximately 384 new homes; compare this to 2008 City of Hailey tax revenue of \$1.7 million on 2389 houses (2000). At a tax rate of \$7.88 per 1000, this means Hailey's real estate is valued at \$215 million. Is it possible that the 384 houses in Quigley Canyon will be worth \$270 million -- more than all of the 2300 existing homes in Hailey? If this is the case, how can any argument be made that irrigation patterns will not mimic those we see in Ketchum and Sun Valley?

Quigley's analysis shows that total demand for the project -- including golfcourse and residential irrigation plus in-house domestic use is 690 AF/yr, yet calculations using measurements of actual water use in this valley suggest that total water demand for the residential irrigation and in-house components of this project alone will total 655 AF/yr; the golfcourse will add another 420 AF/yr. Not included in the developer's analysis is water use in the ponds, which they cite at 46 AF. Thus, the total demand is likely to be 1121 AF/yr. With one senior water right capable of providing 399 AF per year, this project will require almost three times the water available to the developer, leaving a deficit in water worth as much as \$2.5 million.

Given the concerns about future water limitations, this seems to be an undue and unfair risk to current Hailey taxpayers. The City's water and sewer fund balances operated at a deficit in 2008, and it doesn't appear that any expenditures were made on water rights. Do we really want to be taking on water rights liabilities that may stretch into the millions of dollars? Who will suffer when water rights are cut? Who will pay when the City is forced to acquire additional water rights? I certainly don't want to be forced to shut down my vegetable garden or pay for the cost of acquiring additional water rights for the City. I hope the City will consider the risk to its current taxpaying residents in taking on such a burden.

Thank you very much for your consideration.

RECEIVED

TO: City of Hailey Planning & Zoning  
FROM: Wendy J. Pabich, Ph.D.  
612 N. 4<sup>th</sup> Avenue, Hailey  
DATE: July 21, 2008  
SUBJECT: Quigley Canyon Water

JUL 21 2008

.....

As a citizen of Old Hailey and a hydrologist, I have significant concerns about the proposed annexation into the City of Hailey of the Quigley Canyon property and the resultant increased density and water use that will follow. It is critically important that the City conduct the appropriate analysis to understand 1) the water demands that will accompany this City expansion, 2) the City's current water rights situation, and 3) the impact of potential increased water demand on City taxpayers, in order to make an informed decision regarding annexation. It is not sufficient to assume that this project has "plenty of water rights".

My own analysis suggests that while the owners of Quigley Canyon show seven water rights totaling about 12 cfs appurtenant to their property (Table 1), only one of these is a senior water right (37-19736, priority date 10/11/1889 for 2.28 cfs). The other rights all have priority dates of 1966 and later. The Big Wood basin is already overallocated and junior water rights are in priority only during the early spring when the Big Wood River is running high. To lend perspective, in 2007 (Table 2), on June 22, all water rights in the basin with priorities of May 15, 1892 and later were cut and by July 17, all right with priority dates March 24, 1883 or later were cut entirely. Under this management structure, this one senior Quigley Canyon water right would have been cut by June 25<sup>th</sup>. This means that after June 25<sup>th</sup>, the project would have been looking to the City to provide for all its water demand.

An estimate of likely irrigated acreage in Quigley Canyon under the proposed plan seems to be about 363 acres. Based on available project maps, my best guess is that of the smaller parcels (Parcels 1-4), most of "developable land" will be irrigated, or about 115.5 acres. The plat suggests that for each lot greater than ½ acre, 26,000 ft<sup>2</sup> (minus the house footprint) -- or about 0.6 acres, will be allowably irrigated. Thus, the 68 units planned for Parcels 5-7 would add another 40.8 acres of irrigated land, for a total of 156 acres of residential development. The golfcourse and clubhouse account for 206.2 acres (minus building footprints). All told, this is about 363 acres of irrigated land (minus building envelopes), 43% of which is part of the residential areas, 57% of which is part of the golfcourse. IDWR allows .02 cfs (or 1") of water to the acre. Thus, this property would require 7.26 cfs of water (.02 cfs per acre \* 363 acres). The development proposal includes plans for reuse of treated wastewater. Studies show that approximately 70% of residential water use in western states goes to outside uses; thus, perhaps 30% of the residential water will be recycled. (In reality, water is lost during treatment, so less than 30% of residential water use could be recycled and reused.) However, if we assume that 30% of residential deliveries are recycled, this would reduce the total water demand by .94 cfs (= .43\*7.26\*.3). Thus, the property would require 6.32 cfs.

Assuming that all water rights are administered conjunctively (side canyons with Big Wood rights as well as surface and groundwaters), with only one senior water right totaling 2.28 cfs (or, at .02 cfs per acre, enough for 114 acres), at best, the development will be looking to the City of Hailey to provide the balance of about 4 cfs to irrigate the remaining 249 acres. At worst, the City will be called to provide all 6.32 cfs once the one senior right is cut. To put this in perspective, the City of Hailey currently owns municipal water rights totaling 15.39 cfs (5.35 cfs from Indian Springs; 7.18 cfs from groundwater; and 2.86 cfs from Big Wood River), and one power water right totaling 3.38 cfs. Indian Creek Homeowners Association is disputing the City's right to take any more than 2.28 cfs from Indian Spring; if they were to prevail in the Snake River Basin Adjudication (SRBA), the City would have 12.32 cfs of municipal water. Thus, depending upon the outcome of the SRBA, Quigley Canyon has the potential to demand water in volumes that amount to up to 51% of the City's existing water rights. Senior water rights are currently selling at anywhere from \$20,000 to \$50,000 per inch (or per .02 cfs). At these rates, the value of 4 cfs ranges from \$4 to \$10 million, and 6.32 cfs is worth between \$6.3 and \$15.8 million.

My question, then, is whether the City is prepared to take on the burden of providing water to Quigley Canyon in volumes that may amount to up to 51% of the City's current water rights? What will be the implications for the City's taxpayers and those already on the city water system? In my mind, it is imperative that these questions be thoroughly evaluated and answered appropriately before any annexation decision is made. It also seems quite important that any of the promises made in the development proposal be made part of the final plat (i.e., that all surface water rights are to stay with the property; allowable irrigated acreages are stated; xero-scaping is required, etc.). We all know the water issue is not going away. Please feel free to contact me if you have questions or would like clarification. Thank you very much for your consideration.

Table 1.

## WATER RIGHTS APPURTENANT TO QUIGLEY GREEN OWNER LLC

Right No.	Source	Priority <sup>1</sup>	Purpose	Amount <sup>2</sup>	Status	Remarks
37-2784A	Quigley Ck	1/3/1967	Irrigation Storage	16 afa	Rec. in SRBA	Obj. pending
37-7693	Quigley Ck	12/16/1977	Irrigation Inrig. Stor.	5.27 cfs 30 afa	Rec. in SRBA	Obj. pending
37-8283	Quigley Ck	9/23/1986	Stock water Rec. & Aesth. Stor.	0.12 cfs 35 afa	License	No SRBA claim required
37-19736	Quigley Ck	10/11/1889	Irrigation	2.28 cfs	Rec. in SRBA	Obj. pending
37-20902	Ground Water	7/21/1966	Irrigation Stock water	2.01 cfs 0.12 cfs	Rec. in SRBA	Obj. pending
37-21348	Ground Water	4/15/1985	Irrigation	0.27 cfs	Rec. in SRBA	Obj. pending
37-21349	Ground Water	10/28/1979	Irrigation <sup>3</sup>	2.01 cfs 56.7 afa	Rec. for disallowal	Obj. pending

1. Priority as claimed and recommended in SRBA except for License 37-8283 (no claim in SRBA) and Claim 37-21349 (not recommended for decree). An objection to Claim 37-19736 is that the priority should be 1879.
2. The amount listed is as recommended in the SRBA except for License 37-8283 and 37-21349 (the claimed amounts). Limitations on diversion rate, diversion volume and number of acres irrigated apply for combined use of the rights.
3. Claim no. 37-21349 asserts an enlarged irrigation season and annual volume from that licensed under 37-20902.

**Table 2.****2007 PRIORITY CUTS**

BIG WOOD RIVER ABOVE MAGIC RESERVOIR WATER DISTRICT 37		
Date Priority Cut Made	Date of Priority	Remarks
June 22, 2007	May 15, 1892	
June 25, 2007	June 12, 1886	
June 26, 2007	May 15, 1885	
June 28, 2007	October 15, 1884	
July 2, 2007	August 1, 1884	
July 3, 2007	July 10, 1884	
July 9, 2007	May 2, 1884	
July 10, 2007	March 24, 1883	75% cut of 3/24/1883
July 17, 2007	March 24, 1883	100% cut of 3/24/1883
August 17, 2007	August 1, 1882	
BIG WOOD RIVER BELOW MAGIC RESERVOIR WATER DISTRICT 37M		
Date Priority Cut Made	Date of Priority	Remarks
May 31, 2007	May 1, 1887	
June 26, 2007	August 15, 1886	
August 14, 2007	April 15, 1883	
SILVER CREEK & LITTLE WOOD RIVER WATER DISTRICT 37M		
Date Priority Cut Made	Date of Priority	Remarks
June 25, 2007	May 27, 1899	Cottonwood Rights
June 26, 2007	May 15, 1904	

July 13, 2007  
August 14, 2007  
August 21, 2007  
August 24, 2007  
August 30, 2007  
September 25, 2007

November 1, 1889  
September 1, 1887  
April 1, 1886  
April 1, 1884  
September 1, 1883  
September 1, 1883

75% Cut

