

MEMO

TO: File 11-7436

FROM: CPadilla

DATE: February 13, 2012

RE: Licensing Review Memo and 4 Attachments (Well Agreement, Transfer #5134 Memo, DEQ Sanitary Survey, Overlap Analysis)

Time Line:

Application for Permit Received: 11/25/96

Permit Approved: 6/15/98

Proof of Beneficial Use Received: 5/1/08

Field Exam Conducted: 5/20/08

POU Overlap Analysis: Aspen Creek Water Co. owns 64 shares in Upper Fish Haven Canal Co. and right 11-7021 fully overlaps this right.

<i>Right</i>	<i>Use</i>	<i>Diversion Rate</i>	<i>Volume</i>	<i>Source</i>	<i>Priority</i>
11-7021	<i>Irrigation of 21 acres</i>	<i>0.42</i>	<i>73.5</i>	<i>GW</i>	<i>6/21/71</i>

PD Summary:

Tag #	Location	Rights that Use PD	Uses
A0015882 (No Well Log)	SWSE Sec 15 T16SR43E	11-7436 and *11-7021	Municipal Irrigation
D0043948	NENW Sec 22 T16SR43E	None (this well never connected to the system)	NA

***note 11-7021 has the QQ mistakenly listed in the SESW**

WELL #1 (Loveland well)

The Loveland well was drilled in 1978 with a 7.5 hp pump but was upgraded in 1998 to a 40 hp pump. This well is the primary well for the subdivision and is piped to a 115,000 gallon storage tank to serve 105 homes (only 35 homes are connected but the other lots are stubbed-in to the system). According to the field examiner this well and pump are capable of producing 0.50 cfs based on the following figures:

hp=40

efficiency=0.7

lift=170

psi=140

$$\frac{8.8 \times 0.7 \times 40}{(2.31 \times 140) + 170} = 0.50 \text{ cfs}$$

The lift figure is problematic because a test pump conducted 8/1998 revealed a static water level of 261' not 170'. Well #2's test reflected a static water level of 170' so I would recommend that the capacity of this well be figured using a lift of 261' as follows:

$$\frac{8.8 \times 0.7 \times 40}{(2.31 \times 140) + 261} = 0.42 \text{ cfs}$$

The storage tank that the PD discharges into sits around 6500' and the PD is around 6200'. The pressure that the field examiner found seems consistent with the head the pump is pumping against. $(300' \times 0.4333) = \sim 130 \text{ psi}$ By the time you account for any friction losses I think that the rate of 0.42 cfs is justifiable.

WELL #2 (Ben Gentle well)

The field examiner recommended a diversion rate of 0.8 cfs from this well. The photos of well 2 in the field exam does not show the well connected to the system. In addition, photos from a 2010 DEQ's Survey Report (attached) do not show that the well is connected to the system either (see photo #28 of the report). My recommendation is to issue this license without the 2nd well since it was not connected to the system during the development period and remained un-connected as late as 2010 per DEQ's report. Note: I spoke with Ray Elliot September 2011 on the phone to figure out the status of Well #2. He told me that it is the back-up well and is not "called on" at this time but can be "called on" at once to fill the tank. I also spoke with Barbara Jones of DEQ in Pocatello and she told me that the 2nd well was not fully developed and not connected per their records. Evidence supports the decision to leave the well off this license; a transfer can be filled to add the second well to this right.

Diversion Rate: The field examiner recommended the licensure of two wells (Loveland well #1 and Gentle Ben well #2) for a total of 1.30 cfs based on hp equations. However, I am recommended the diversion rate of 0.42 cfs and well #1 as the only PD for this right. In addition there will be a combined limit between 11-7021 and 11-7436 that limits the diversion rate to 0.42 cfs total when they are used together. I have confirmed that the rights share the same well despite the field examiner not finding the overlap. I pulled the backfile for 11-7021 and found the attached documents that substantiate my findings.

Volume: The field examiner's volume recommendation took the standard headgate requirement for the irrigated portion of this right so it is higher than what I calculated. The irrigated area for this right is limited to 1/10 acre per lot or 10.5 acres total. The standard volume for irrigation that is associated with a domestic right is 1.2 af/acre. I recommend a volume of:

$$\begin{array}{rcl} 105 \text{ homes} \times 0.6 & = & 63 \text{ af} \\ 10.5 \text{ acres} \times 1.2 & = & 12.6 \text{ af} \\ \hline \text{Total} & & 75.6 \text{ afa} \end{array}$$

Amendment Needed? Yes, the beneficial use will be changed to municipal, the PD will be updated to reflect the well that is within the SWSE

Attachment 1
original in 11-7021

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WELL AGREEMENT

Agreement entered into by and between R. Dayle Brown and Virginia Brown, husband and wife, hereinafter collectively called "Grantor" and Lake Vista Properties, L.L.C., a Utah Limited Liability Company, hereinafter referred to as "Grantee",

WHEREAS, Grantor are conveying property to Grantee whereon is situated an existing water well, and

WHEREAS, the parties entered into a real estate sale agreement on the 10th day of June, 1997, wherein Grantor agreed to grant and convey to Grantee a 50 foot circular parcel of property at the center of which is located said existing well, and

WHEREAS, as consideration for conveying said parcel and well to Grantee, Grantor shall have certain perpetual rights and privileges to the water from said well as hereinafter specified, and

WHEREAS, said well is currently intended for agricultural purposes and the license therefore issued by the State of Idaho, to-wit: License No. 11-07021 describes an agricultural use only, and

WHEREAS, Grantee intends to apply to the State to change the license to a culinary and domestic use and to use said well to service the culinary and domestic needs of residents in a planned residential subdivision,

NOW THEREFORE, in consideration of said real estate sale agreement and the mutual covenants and agreements contained herein it is agreed as follows:

MICROFILMED
JAN 16 2010

1. Grantor shall convey to Grantee a 50 foot circular parcel together with an existing well located in the center thereof, said parcel being particularly described in Exhibit "A" which has been initiated by the parties and attached hereto and incorporated herein by reference.
2. Grantee accepts the existing well in its "AS IS" condition.
3. Grantee shall apply to the Department of Water Resources, State of Idaho, to change the well water license to culinary and domestic use from its existing agricultural use.
4. Grantee shall further improve and develop said well as a domestic and culinary well capable of providing the reasonable culinary and domestic needs of up to but not more than ten (10) residences to be situated upon the following described real estate of Grantor located in Bear Lake County, Idaho and more particularly described in Exhibit "B" which has been initialed by the parties and is attached hereto and is incorporated herein by reference.
5. Said improvement and development of said well shall include installation of a lateral or trunk line from the 50 foot well site to the closest boundary of the said property described in Exhibit "B". Any further extension of the lateral or trunk line for the improvement and development of Grantor's said property shall be at Grantor's sole expense.
6. Grantors and their successors shall have sufficient water from said well to provide the full culinary and domestic needs of up to 10 residences to be developed on the Grantor's property described in Exhibit "B". Said water usage shall be subject to all the terms, conditions and restrictions applicable to all other users under the water company or homeowners association to be established which will own the well and control the transporation and use of the water therefrom.

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7. The initial development, improvement and repair of said well shall be at the sole expense of Grantees. Thereafter, Grantor's use of water from said well shall be subject to the same restrictions, terms, conditions, and user fees and assessments as any other user on the system, provided, however, Grantor and his successors in interest shall not, at any time, be assessed fees for the costs of improving, developing, maintaining or repairing said well or well site or for the use of water from said well relative to one, and only one, residential connection to the system.

"GRANTOR"

R. Dayle Brown
R. Dayle Brown

Virginia Brown
Virginia Brown

"GRANTEE"

Lake Vista Properties, L.L.C.

A. Ray Elliott *AY* *JE*
By: A. Ray Elliott, Manager

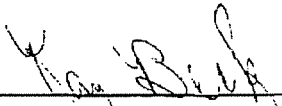
Gary C. McKee
By: Gary C. McKee, Member

Norman Mecham
By: Norman Mecham, Member

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STATE OF IDAHO)
 : ss.
County of Bear Lake)

On this 10th day of June, 1997, before me, the undersigned Notary Public,
personally appeared R. Dayle Brown and Virginia Brown, husband and wife, known or identified
to me to be the persons whose names are subscribed to the within instrument and acknowledged
to me that they executed the same.

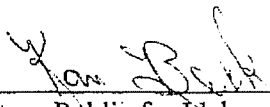


Notary Public for Idaho

Commission expires: 12-31-2000

STATE OF IDAHO)
 : ss.
County of Bear Lake)

On this 10th day of June, 1997, before me a Notary Public, personally appeared
Norman Mecham, Gary C. McKee and ~~A. Ray Elliott~~ ^{KB}, known or identified to me to be
the manager/members of the limited liability company of Lake Vista Properties, L.L.C., and the
managers who subscribed said limited liability company name to the foregoing instrument, and
acknowledged to me that they executed the same in said limited liability company name.



Notary Public for Idaho

Commission Expires: 12-31-2000

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JAN 06 1998

MEMORANDUM

Attachment 2

TO: FILE 11-07021

FROM: PAM SKAGGS/STATE OFFICE

SUBJECT: TRANSFER 5134

DATE: November 20, 1997

=====

Transfer 5134 changes the place of use under Right No. 11-07021, reducing the place of use by 12 acres, the rate of diversion to 0.02 cfs per acre or 0.42 cfs, and the diversion volume to 3.5 afa per acre or 73.5 afa, on the remaining 21 irrigated acres.

The applicant wants to use this same irrigation well for two new domestic use developments described under protested applications 11-07435 and 11-07436. This transfer is an effort to provide mitigation for the new domestic uses.

Overlap review found statutory claim 11-04022 from Fish Haven Creek for irrigation of the same land. Right 11-07021 was originally proposed for acres covered by shares under the claim. During development of the groundwater right additional acres were acquired and the shares were shifted to this new ground. When licensed, the examiner clearly identified the separate surface and groundwater acres and found no overlaps.

Diversion volume was adjusted to current standards. Recommended conditions include reduction of acres, rate & vol, right-of-way, measuring device, irrigation overlap and standard transfer conditions.

- Different PDs developed for 11-7435

RECEIVED

JAN 05 1998



STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

444 Hospital Way, #300 • Pocatello, Idaho 83201 • (208) 236-6160

C.L. "Butch" Otter, Governor
Toni Hardesty, Director

Certified Mail

August 18, 2010

Ray Elliot
Aspen Creek Estates
10 South Bear Lake Blvd.
Garden City, UT 84028

RE: Aspen Creek Estates Water Company – Sanitary Survey PWS # 6040042

Dear Mr. Elliot,

On August 10, 2010 the Idaho Department of Environmental Quality (DEQ) conducted a sanitary survey of the Aspen Creek Estates Water Company water system. We appreciate your cooperation and support in accompanying us during the survey. The purpose of the survey was to identify any areas where the system does not meet the requirements of Idaho Department of Environmental Quality Rules, IDAPA 58.01.08, "Idaho Rules for Public Drinking Water Systems" and to identify potential sources of contamination. The following summary describes the physical features of the system, and identifies any significant deficiencies, deficiencies, or recommendations noted during the survey.

General Description

The Aspen Creek Estates water system is located just west of the town of Fish Haven, in Bear Lake County. Aspen Creek Water Company is a privately owned utility that began operations in January of 2001. The system serves approximately 50 to 75 individuals depending on seasonality through 35 metered connections. The system consists of two wells, while only the Loveland Well is active and supplying water to the system. Currently, there is a single well house and a 115,000 gallon finished water storage reservoir. Plans on file with DEQ show additional pump houses to be constructed at build-out for the second well house and a booster pump station, but these were not in place at the time of the survey. The Loveland well pumps to the storage reservoir and is controlled by level indicators. The water then flows from the reservoir eastward to Forest Circle and into the main distribution system. The Loveland well pumphouse has been modified so the below ground piping and equipment is accessible via stairs and a new doorway rather than through the single manhole. There is no auxiliary power on the system.

Sources

Well #1-Loveland Well

Well #1 is located to the south of the wellhouse building on the south side of Loveland Road. The well was originally constructed in 1978 with a 12-inch diameter casing and was drilled to a depth of 350 feet. The grout depth is 100 feet, and the depth to water is 270 feet. The well casing is vented and the well cap appears to be water-tight. The well was originally equipped with a 7.5-hp submersible pump but has been upgraded to a 40-hp pump motor set at 310 feet that produces up to 300 gpm of water. The 6 inch discharge line is equipped with an air relief valve, a check valve, an isolation valve, a pressure gauge, a smooth-nosed sample tap, a totalizing flow meter, and pump-to-waste capability through a 3 inch galvanized line north of the wellhouse. The modified well house built atop the concrete vault was modified to include new stairs and a second door. The wellhouse has lockable doors, lights, a floor drain, and an electric heater. The well house does not have a fan or means to vent the below ground compartment, but there were no signs of excess moisture build-up. Although there is a trailer and garage on a lot near the wellhouse, there is a sufficient 50 foot area around the well and wellhouse to prevent contamination of the area around the well. The well can be operated manually to fill the tank.

Well #2

Well #2 is nicknamed the Gentle Ben well, and is located on the north side of the road at 2518 E 800 S. The well was drilled in 2007 to a depth of 350 feet with a 10-inch diameter casing extending to 280 feet. The well is grouted with bentonite to a depth of 100 feet. Static water level is reported at 140 feet below ground surface. The well casing is vented and the cap appears to be water-tight. The well is equipped with a 40-hp submersible pump that produces 300 gpm of water. Well #2 is the primary backup well, but is not yet in service.

Storage

The concrete circular storage reservoir is mostly above-ground, built in 1998 with storage capacity of 115,000 gallons at the 16 foot level. It is located 3000 feet west-northwest of the pumphouse, and about 100 yards west of the end of Forest Circle. The reservoir is fed directly by well #1. Access to the interior of the reservoir is through a single access hatch. The 4X4 foot water tight hatch is hinged on one side and has a lockable cover. The reservoir is properly vented. The overflow pipe drains water to an adjacent drainage ditch to the south. The reservoir drain discharges through the same pipe as the overflow. The discharge is screened with an appropriate air gap over a rocky drain area to prevent erosion and/or backflow into the tank. Tank level is maintained via the water level monitoring telemetry system. The well pump is activated when the tank level drops to 11 feet and shuts off the pump at a tank level of 14 feet. The tank overflow is located approximately 15 feet above the tank floor. The operator removes any film on the tank

water surface by operating the well manually to fill the tank to the overflow level, which removes any film from the top water layer in the tank by letting water flow out through the overflow. The pressure created by the sustained water level in the tank, generally at 100,000 gallons, is sufficient to supply adequate pressure to many of the lots. Pressure reducing valves are used to lower the pressure to the lowest lots.

Distribution System

The main PVC distribution piping ranges from 6 inch main lines to 8 inch diameter lines for some of the fire hydrants. Residences are connected to the distribution piping by 1 inch poly pipe service lines. The system has 1 inch water meters installed on all service connections.

Three pressure reducing valves (PRV's) are located on the main lines; one just before Lake Vista road on the north side of the road, the second just after the Elk Horn Road connection to Lake Vista Drive on the south side of the road, and the third is just prior to the Beaver Circle cul-de-sac on the west side of the road. The PRV's are located to separate the three pressure zones on the system. Two air relief valves are also located in the system at the extreme low points of the system piping.

Treatment

The system does not utilize treatment or disinfection.

Pumps/Pumping Facilities and Controls

The system has two 40 hp submersible pumps, one located in each well. The pump in well #1 is controlled by the level in the storage reservoir. There are no booster pumps currently on the system.

Management/ Operator Compliance with State Regulations

Aspen Creek Estates is under the direction of the Public Utilities Commission. Ray Elliot conducts daily operations and is the properly licensed system operator, license number DWDVSW-15535. He is responsible for collecting and monitoring routine bacteria and chemical samples, reporting lab analyses to DEQ and investigating customer complaints and concerns. Ken Hansen is the back-up operator. Both operators maintain their primary license in the State of Utah.

The current water fee is \$350 per year with an option for additional overage charge. This fee supports operation and maintenance. Sewer charges are separate from the water system billing.

Currently, the water system is in compliance with all bacteria and chemical monitoring and reporting requirements. The water system has filed a consumer confidence report.

Ground Water Under the Direct Influence of Surface Water (GWUDI)

At this time, the wells are considered to be groundwater that is not under the direct influence of surface water.

You will find a list of the significant deficiencies, deficiencies, and recommended improvements for your system summarized below.

A **Significant Deficiency** is defined in IDAPA 58.01.08.003.88, that states: As identified during a sanitary survey, any defect in a system's design, operation, maintenance, or administration, as well as any failure or malfunction of any system component, that the Department determines to cause, of have the potential to cause, risk to health and safety, or that could affect the reliable delivery of safe drinking water.

A **Deficiency** states: As identified during a sanitary survey, the systems design, operation, maintenance, or administration, as well as any failure or malfunction of any system component, that the Department determines are not in compliance with the drinking water rules and do not cause or do not have the potential to cause, risk to health or safety, or that could not affect the reliable delivery of safe drinking water.

Recommendations are made as an item to consider in order to improve the overall operation of the water system.

Significant Deficiencies: No significant deficiencies were identified during the survey.

Deficiencies:

General

1. There is no auxiliary power on-site for any well pump, as required by IDAPA 58.01.08.501.07. According to the operator, the power outages experienced by the system are of minimal frequency and duration that auxiliary power will not be required. The need for auxiliary power on-site will be reevaluated every time an ESS is conducted.
(No action required at this time)

(Because the system has a storage reservoir, auxiliary power is not a mandatory requirement at this time.)

Recommendations:

1. DEQ recommends that all storage tanks be inspected for integrity and silt build-up annually.
2. DEQ recommends that all storage tanks be cleaned every five (5) years. The cleaning of any storage tank should be coordinated with the DEQ regional office. Be advised that AWWA standards do not allow a tank to be cleaned while in service unless a Boil Water Advisory is administered.

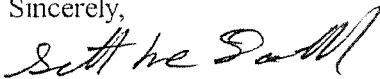
For all modifications to existing water systems, an engineering report shall be submitted to the Department of Environmental Quality's (DEQ) review and approval prior to or concurrent with the submittal of plans and specifications as required in Subsection 504.03, pursuant to IDAPA 58.01.08.503.

Prior to modifications of existing public water supply systems, plans and specifications must be submitted to the DEQ for review, and approved, pursuant to IDAPA 58.01.08.504.03. Please contact this office at 236-6160 prior to making any system modifications.

DEQ recommends the significant deficiencies be addressed as soon as possible, however, pursuant to IDAPA 58.01.08.302.03, the water system must respond in writing not later than forty-five (45) days after receipt of the sanitary survey report, describing how and on what schedule the system will address significant deficiencies identified in the survey.

If you have any questions regarding this letter please contact Barbara Jones or me at (208) 236-6160. Thank you for your cooperation in this matter.

Sincerely,



Scott MacDonald, EIT, MBA
Associate Engineer

Enclosures: Photo Log

cc: Tom Hepworth, Engineering Manager, DEQ-PRO (e-mail)



Photo#1 Loveland Well House Well #1



Photo #2 Loveland Well House



Photo #3 Former Access Hatch to Well #1 Piping & Equipment



Photo #4 New Clavalue for Well #2 stored in Wellhouse #1



Photo #5 Well #1 & Vent



Photo #6 well #1 Tag



Photo #7 Example of a System Fire Hydrant



Photo #8 Pump to Waste Valves & Connection

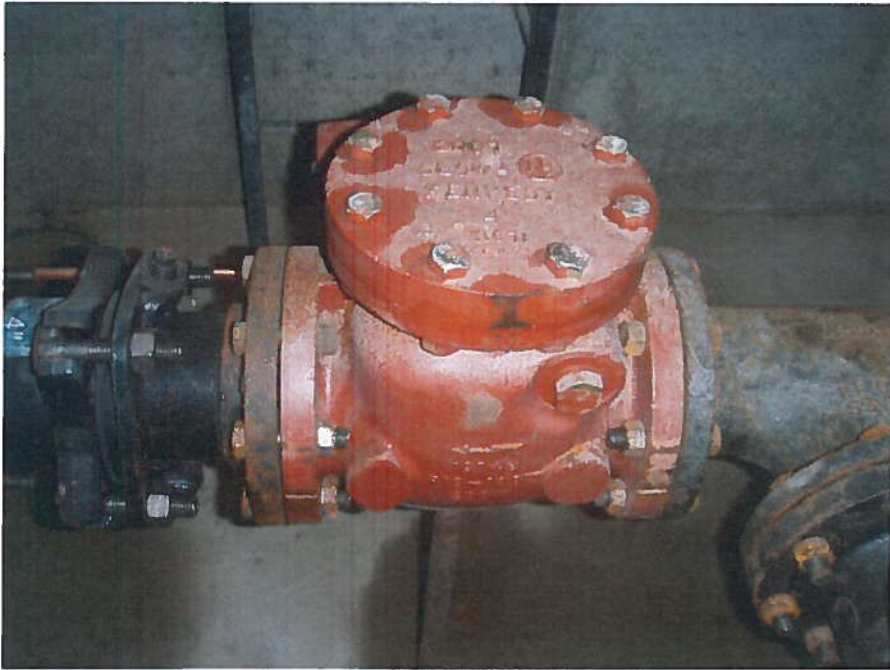


Photo #12 Clavall Swing Check Valve



Photo #14 Distribution Piping Connections Well #1



Photo #13 Isolation Valve, Pressure Gauge, Sample Tap, Flow Meter



Photo #15 Well #1 With The Vent



Photo #16 Distribution System Valves

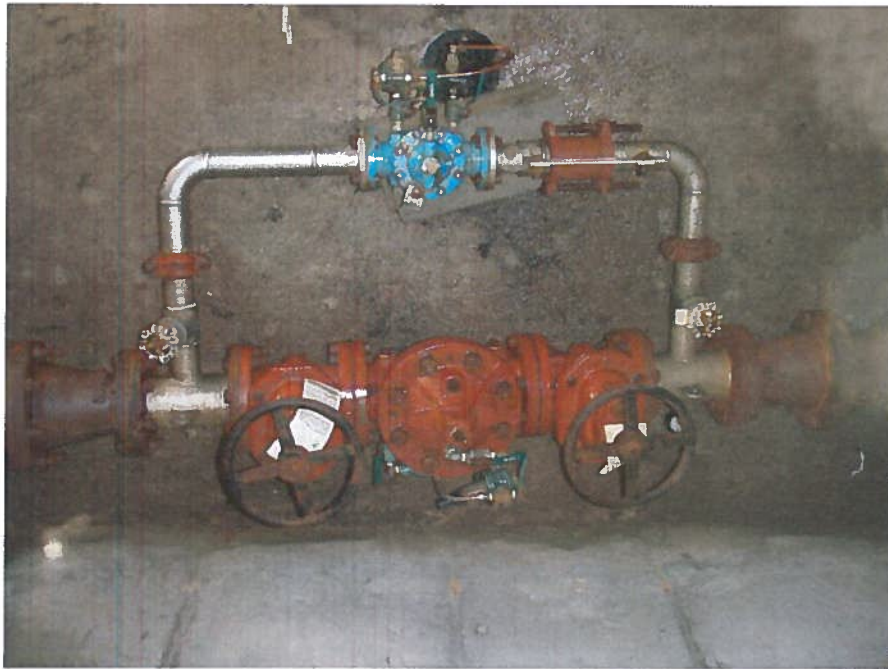


Photo #17 Interior of One of the PRV Vaults

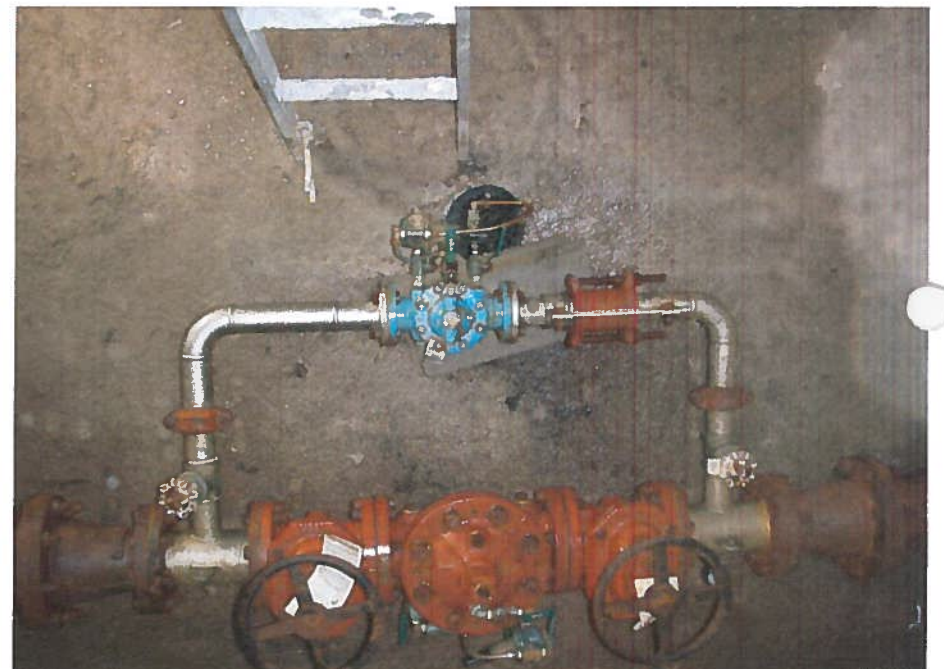


Photo #18 PRV Vault 2nd Picture with Access Ladder

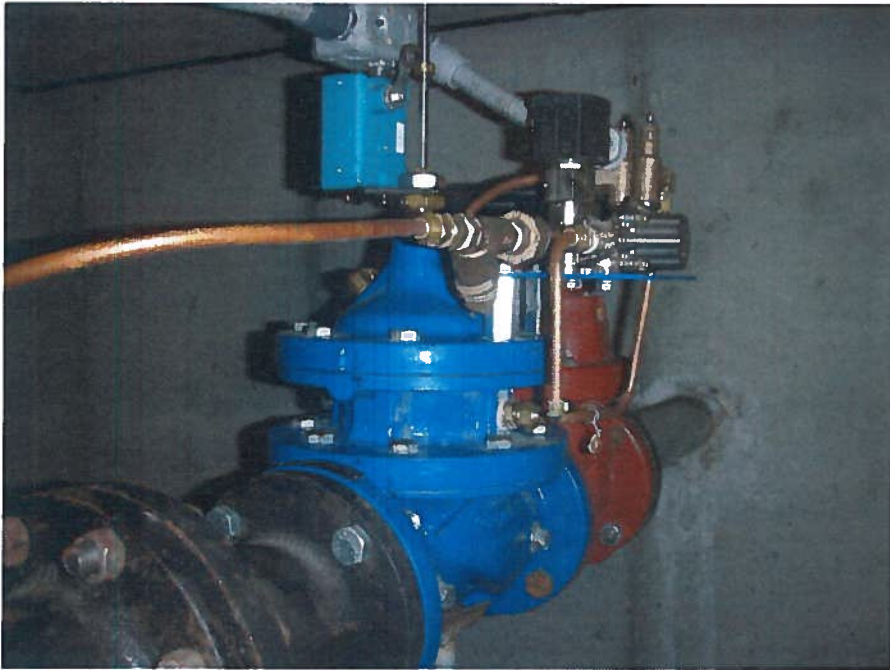


Photo #9 Pump to Waste Pressure Valve



Photo #10 Piping In From Well #1



Photo #11 Piping Out to Distribution, & Sample Tap

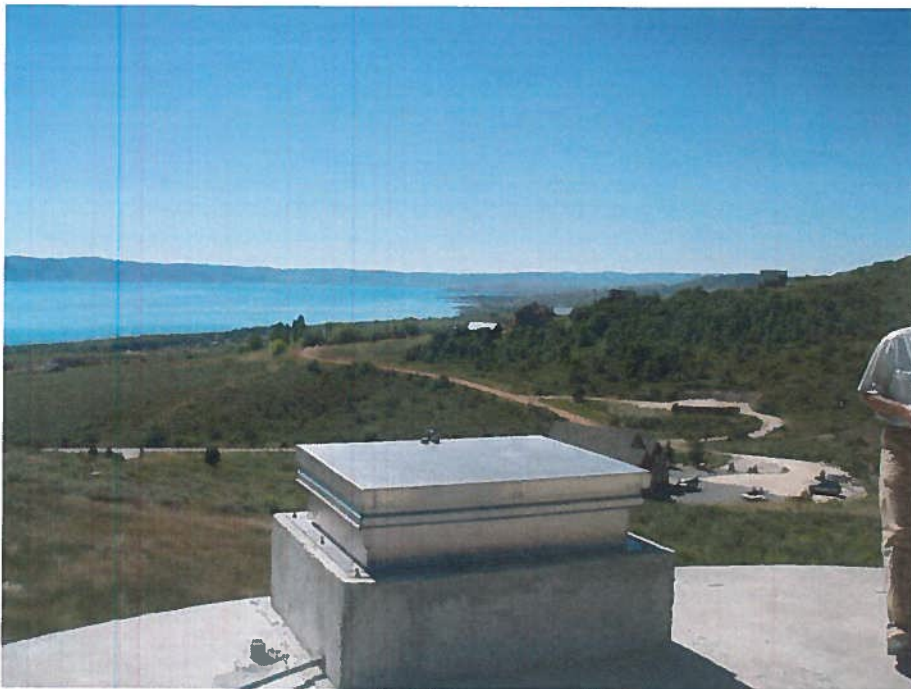


Photo #19 Storage Reservoir Raised Waterproof Access Hatch

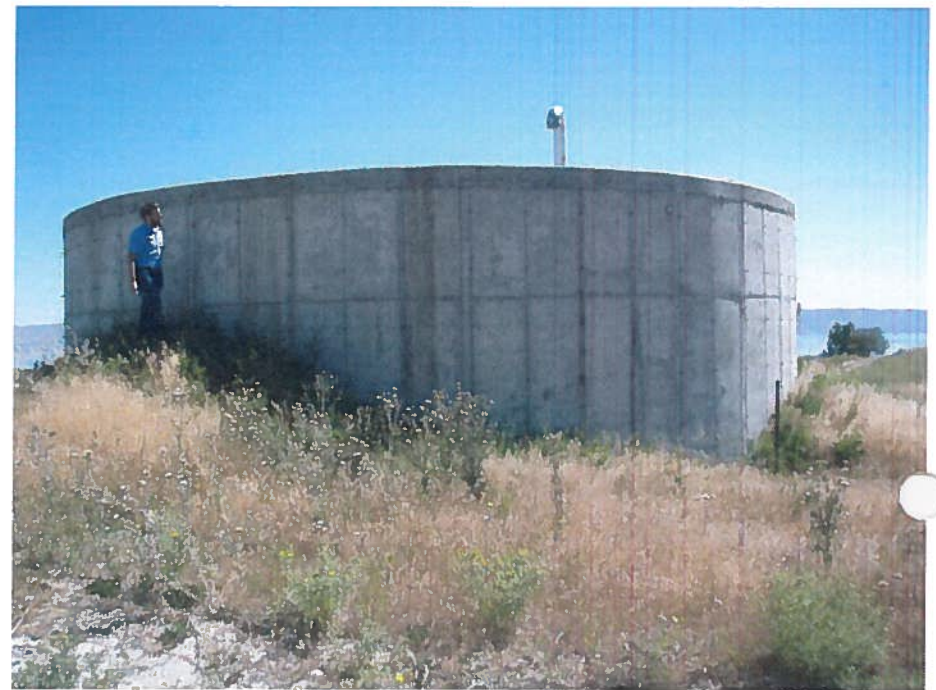


Photo #20 115,000 Gallon Storage Reservoir



Photo #21 Interior of the Storage Reservoir



Photo #22 View From the Top of the Reservoir Toward Drainage Area



Photo #23 Storage Tank Drainage Area to the South



Photo #24 View From the Access Hatch



Photo #25 Screened Tank Vent and Access Ladder



Photo #26 Well #2 Gentle Ben Well - Inactive



Photo #27 Electrical Connection area & Pitless Adapter



Photo #28 Trench to connect Well #2 in the Future



Photo #29 Well Overflow

Overlap Review

Type	WR #	Owner	Source	TRS	NENE	NWNE	SWNE	NENW
Right	11 7021	LAKE VISTA PROPERTIES LLC,	GROUND WATER	16S43E22			3	
Right	11 4022	FISH HAVEN WATER USERS CO,	FISH HAVEN CREEK, SPRING	16S43E22	40	40	40	40
Right	11 7436	ASPEN CREEK WATER CO INC,	GROUND WATER	16S43E22	X	X	X	X

Attachment 4