

Narrative in Support of Water Right Permit, Transfer and Mitigation Plan for Irrigation

Valley Club Home Owners Association Inc.
Hailey, Idaho (Dry Lot LLC)

Charles E. Brockway, P.E.
Brockway Engineering, PLLC.

Revised
July 16, 2009

Dry Lot LLC was formed by certain members of the Valley Club Homeowners Association to purchase water rights and file the necessary applications subject of this narrative for their benefit.

The Valley Club Home Owners Association represents owners of the 99 lots in the Valley Club Subdivision in Blaine County Idaho. The subdivision was established in early 1990's and currently has residences on 40 lots (Figure 1). The Association holds two ground water right permits 37-8613A and 37- 8810 which provide in-house, irrigation, and fire protection water to all lots. The permit components are shown on Table 1.

Table 1 Water Right Permits-The Valley Club Home Owners Association Inc.

Right No.	Priority Date	Proof Date	Use	Diversion Rate cfs	Irrig Acres	Diversion
37-8613A	4/4/1990	5/2/1996	Irrigation & Domestic	0.98 Irrig. 0.50 Domestic	49.5 acres-limit 0.5 acres/residence	2 wells
37-8810	5/3/1993	8/18/1998	Domestic & Fire Protection	0.4 Domestic 3.4 Fire Protection	Domestic is for 99 units, clubhouse/restaurant and recreation center	2 wells

The two wells are located at the north end of the subdivision in the SWNWNW Sec 28 T3N R18E and pump into a looped distribution system. Drillers' logs for both wells are shown in Appendix A. Combined capacities of the two wells are adequate to provide the additional irrigation requirements contemplated under

this plan. Based on the two existing water right permits, the allowable irrigated acreage from the system is 49.5 acres with each residential lot limited to 0.5 acres irrigated. The Owners Association (through Dry Lot, LLC) proposes to provide irrigation water wherever possible to each lot owner up to an average of 0.78 acres or a total irrigated acreage associated with the residential lots of 77 acres. Since the current permits allow irrigation of 49.5 acres, the Valley Club Owners Association is desirous of securing water rights to allow an additional 27.5 acres of irrigation within the place of use of the domestic system but not limited to any certain acreage per lot. An application for permit for additional irrigation of 27.5 acres within the subdivision is being submitted with a ground water recharge mitigation plan utilizing surface water rights from the Big Wood River.

Dry Lot LLC has entered into an agreement with Old Cutters to purchase 27.5 acres of water rights 37-21130, 37-21137, and 37-21139 from the Big Wood River all with priority dates of 3/24/1883 and with a permissible place of use of 66 acres. The water right numbers for the above purchased water rights have been changed by IDWR to 37-22313, 37-22318 and 37-22323. Analyses of records of the Watermaster District 37 indicate that this priority right has been cut 16 times in the period 1948 through 2004 or 28 percent of years with the right in priority on average until September 15, average of about 153 days. The earliest it has been cut is July 1, as seen in Appendix B.

These water rights are decreed in the Snake River Basin Adjudication and water under these rights is diverted from the Big Wood River and conveyed through the Hiawatha Canal. The Hiawatha Canal conveys some 30 cfs of Big Wood River water rights to users adjacent to and south of the Valley Club property. A pumping plant located on the Hiawatha Canal is owned and operated by the Valley Club and used to divert Big Wood River water rights to the Valley Club Golf Course and amenities. It is proposed to utilize this pumping plant and pipeline to divert and convey the newly acquired Big Wood River water rights acquired by Dry Lot LLC, currently conveyed in the Hiawatha Canal, to infiltration areas near the north end of the Valley Club Subdivision to mitigate for additional ground water extraction for irrigation of the additional 27.5 acres. All irrigation of the lots on the Valley Club Subdivision will be served from the two existing wells owned by the Valley Club Owners Association. Locations of the Hiawatha Canal, pump diversion, pipeline and proposed infiltration basins are shown on the aerial photograph, Figure 2.

Driller's logs for the two Valley Club Home Owners Association wells indicate sand gravel and clay media to a depth of 140 feet with static water levels of 64 to 71 feet below ground surface. Pumping tests indicate pumping levels of 79 to 84 feet for a discharge of 507 to 657 gpm. An irrigation well owned by the Valley Club Inc (golf course) adjacent to the two municipal wells is 180 feet deep with sand, gravel and clay throughout the profile. The discharge for this well (locally

called the Mizer well) was reported by the driller to be 1800 gpm with a pumping level of 88 feet, as seen in Appendix A.

The Theis equation was used to quantify the additional aquifer drawdown resulting from pumping a maximum of 0.52 cfs from a single well to satisfy the additional peak daily consumptive irrigation requirements. Evaluation of the Theis equation resulted in aquifer drawdown equal to 0.75 feet at a distance of 1000 feet from the well after continuous pumping for 40 days. This analysis is shown in Appendix A.

Alternate infiltration basin locations are proposed for the project. Field infiltration tests have been performed on the northern basin sites which indicate that the design infiltration rates are suitable for the native soils. Final location for the infiltration basins is pending final arrangements with Valley Club on use of facilities. Dual infiltration basins near the north end of the project and near the middle of the project as shown on Figure 2 are proposed. Water supplied from the pumping plant on the Hiawatha Canal through the pipeline will be delivered either to the northernmost basins on the Valley Club Homeowners property (Figure 2) or to the southern infiltration site directly from the pipeline (Figure 2). The infiltration basins will be subsurface galleries with perforated pipe distribution systems and not open ponds. Water will be pumped from the pipeline or the northern Valley Club pond to two or four infiltration basins. The sustainable infiltration rate for the infiltration basins is estimated at a minimum of 1.5 ft/day through a substrate of at least 18 inches of select filter sand. Based on an annual calculated infiltration requirement of 96.3 acre feet, and an infiltration period of 153 days, the average infiltration of the basins would be 0.63 acre feet per day or an average discharge of 0.32 cfs (144 gpm). With an infiltration rate of 1.5 ft/day, the basin wetted area required would be 0.42 acres or 18,300 square feet. The two sets of two proposed basins would be approximately 80 x115 feet each in size and located at least 500 feet from any existing wells.

If the northern site is utilized as the primary site, a pump from the Valley Club upper pond to the northern infiltration basins would be designed for a maximum discharge of 200 gpm. The lower (southern) set of basins would be served directly from the Valley Club pipeline. A totalizing flow meter is required on the Valley Club Inc. pumping system from the Hiawatha Canal and a meter with instantaneous readout and totalizer would be installed on the pipeline to the infiltration basins with monthly reporting to ascertain the volume infiltrated. Flow meters are currently installed on Valley Club Owners Association two existing domestic wells and total volumes pumped are documented to assure compliance with water rights.

The goal of the water right acquisition is to assure that an additional 27.5 acres can be irrigated anywhere on the subdivision and that each lot owner has the opportunity to irrigate, if he or she desires, a total of 0.78 acres. Each lot owner may irrigate up to 0.5 acres from the original two water rights. The additional

27.5 acres of irrigation allowed by the proposed permit and transfer can be allocated by the Owners Association any place within the authorized place of use which includes all lots and common area in the subdivision. In addition, the Association would like to assure that the full additional 27.5 acres could be irrigated for the full irrigation season even though the 3/24/1883 priority water right is not available for the full irrigation season. This mitigation plan proposes to assure that an adequate volume of water is replaced in the aquifer from the 3/24/1883 water right to mitigate the additional use on the 27.5 acres after the cutoff date to the end of the irrigation season. This plan is based on the seasonal consumptive irrigation requirement on the new acres for the latter part of the irrigation season with no expansion of the water right discharge or volume.

At total buildout of the subdivision, there will be 99 residences with a maximum irrigated turf area within the place of use of an average of 0.78 acres per lot or 77 acres. Current ground water rights allow the irrigation of 99 lots at 0.5 irrigation acres or 49.5 acres. The additional irrigated acreage is therefore 27.5 acres at full buildout.

The full season consumptive irrigation requirement (Pdef) for the 27.5 additional irrigated acres on the Valley Club Subdivision is estimated at $27.5 \text{ acres} \times 1.96 \text{ ac ft/acre}$ or 53.9 acre feet for the full 183 day season. The seasonal irrigation diversion requirement from ground water assuming a flood irrigation efficiency for turf of 56% is 96.3 af/ year for the 27.5 acres. Since the average length of time the 3/24/1883 right is in priority is 153 days out of the 183 days in the established irrigation season, the additional consumptive irrigation requirement to extend the season from 153 days to 183 days is 0.162 ac ft/acre or $0.162 \times 27.5 = 4.5$ acre feet and the additional diversion requirement, assuming an irrigation efficiency of 56%, to extend the season is $4.5 / 0.56 = 8.0$ acre feet. Total required diversion of ground water including extension of irrigation for the full 183 day extended season is 96.3 acre feet. By operating the infiltration system at the minimum design discharge of 0.32 cfs for 153 days, from April 15 through September 15, approximately 96.3 acre feet will be added to the aquifer. Since the 96.3 acre feet of irrigation diversion assumes a low (56%) irrigation efficiency, the 96.3 acre feet recharged to the aquifer will be equal to or less than the required diversion. If a more efficient method of irrigation such as sprinkler irrigation is employed, which is probable, and then the irrigation efficiency would be raised to 75%, lowering the irrigation diversion requirement to 71.9 acre feet. This is a reasonable factor of safety to assure that the irrigation season consumptive irrigation requirement of 53.9 acre feet and the total ground water diversion of up to 96.3 acre feet for the extended season are adequately mitigated. The maximum groundwater diversion value for flood irrigation through the season of 96.3 acre feet is equal to the infiltration volume of 96.3 acre feet; there is no net temporal impact on the aquifer. The infiltration volume exceeds the diversion requirement throughout the irrigation season. Since the ground water diversion points and infiltration basins for the north set of basins are approximately 700 feet apart the local effect on the aquifer will be minimal. Recharge using the

lower (southern) set of infiltration basins will not impact the late season aquifer levels significantly since the volume expected for late season extension is only 8.0 acre feet. Pumping of the extended season volume of 8.0 acre feet is not expected to significantly impact any local ground water diversions. The proposed place of use for the recharge water made available by the recently purchased water rights 37-21130, 37-21137, and 37-21139 will consist of the entire subdivision as shown in Appendix E. This place of use consists of 219.2 acres and the total allowed irrigation including existing and new water rights is 77 acres.

The annual volume of recharge through the mitigation project will be phased to match the buildout rate of the residences within the subdivision and a mitigation schedule for each year of the planned phases would be prepared and submitted to IDWR as required. Any portion of the water right diverted for mitigation but not utilized in the recharge project can be returned to the Hiawatha Canal through the Valley Club golf course stream system to mitigate seepage losses in the Hiawatha which may impact existing down stream canal water users.

A maintenance program for the infiltration basins will be developed after final design and followed to assure that infiltration rates are maintained. This program will include maintenance of perforated pipe infiltration capacity and media renovation.

The place of use of the water rights purchased for ground water mitigation is located on the Old Cutters property approximately three (3) miles south of the new proposed place of use on the Valley Club Subdivision, Figure 2.

The water rights purchased by Dry Lot LLC for mitigation of aquifer pumping require moving the diversion upstream in the Hiawatha Canal approximately 3.4 miles. The historical loss in this reach of the Hiawatha has been shared by water right holders with deliveries throughout the length of the canal. Recently (2006) a 4350 foot length of the Hiawatha Canal was rehabilitated by the Valley Club Inc. and lined with a membrane to reduce seepage. An analysis of seepage losses in the Hiawatha was performed by the IDWR Twin Falls Regional Office in conjunction with a previous transfer. This analysis shows that, with the recent lining of part of the canal, moving a total diversion of 1.66 cfs allowed under the Old Cutter's water rights upstream to the Valley Club Inc diversion will require 0.09 cfs (rounded to 0.1 cfs) to remain in the canal to make up the additional impact to down-canal water users. The spreadsheets showing the IDWR analysis are included in Appendix D.

A ground water model of the Big Wood River Valley aquifer from the East Fork downstream to the City of Bellevue was developed by Brockway Engineering PLLC to evaluate the changes in ground water levels and Big Wood River reach gain as a result of the proposed aquifer recharge and extraction mitigation plan. This model is a MODFLOW aquifer flow model and is fully described in the Final

Report :” Development of a Ground Water Flow Model for the Big Wood River Aquifer: East Fork to Bellevue”. The report is appended to this application. Simulation of the ground water system changes effected by the proposed project are fully described in the report. “Evaluation of the Impact of the Proposed Dry Lot, LLC Water Right Applications Using a Big Wood River Aquifer Groundwater Model”. This report shows that the proposed ground water recharge and extraction project impact on aquifer water levels and river reach gains is minimal or zero.

Dry Lot LLC also entered into a *Water Rights Use Agreement* with the Big Wood Canal Company (BWCC) to resolve BWCC’s protest. Pursuant to the agreement, Dry Lot voluntarily agreed to reduce its rate of diversion from the Big Wood River under the purchased water rights by 0.5 cfs. Therefore, 0.5 cfs will remain in the river to increase flows past the Hiawatha Canal headgate. The increased flows in the river will provide additional mitigation to surface water rights on the Big Wood River.

The proposed transfer includes 1.66 cfs of irrigation water rights. Subtracting 0.10 cfs to be left in the Hiawatha Canal and 0.50 cfs to be left in the Big Wood River, results in 1.06 cfs available for recharge by the using the Valley Club Owners Association. The average flow rate necessary for full mitigation by recharge is 0.32 cfs, well below the 1.06 cfs available.

Appendix A

Well Drillers Logs and Well Interface

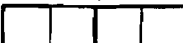
56087

1. DRILLING PERMIT NO. 37-94-S-0089 - 000
Other IDWR No. 37-08810

2. OWNER: Valley Ranch Partners
Name
Address % EHM Engineers 621 N College
City Twin Falls State ID Zip 83301

3. LOCATION OF WELL by legal description:

Sketch map location must agree with written location.



Twp. 3 North ☒ or South ☐
 Rge. 18 East ☒ or West ☐
 Sec. 20 SW ☐ NE ☐ 1/4 1/4 1/4
 Gov't Lot _____ County Blaine

Address of Well Site Valley Club Drive

(Give at least name of road + Distance to Road or Landmark)

LI. _____ Blk. _____ Sub. Name The Valley Club
Parcel B

4. PROPOSED USE:

☒ Domestic ☐ Municipal ☐ Monitor ☐ Irrigation
☐ Thermal ☐ Injection ☐ Other _____

5. TYPE OF WORK

☒ New Well ☐ Modify or Repair ☐ Replacement ☐ Abandonment

6. DRILL METHOD

☐ Mud Rotary ☒ Air Rotary ☐ Cable ☐ Other _____

7. SEALING PROCEDURES

SEAL/FILTER PACK			AMOUNT	METHOD
Material	From	To	Sacks or Pounds	
Cement grout	0	20	60 sk	Overbore

Was drive shoe used? Y ☒ N ☐

Was drive shoe seal tested? Y ☐ N ☒ How? _____

8. CASING/LINER:

Diameter	From	To	Gauge	Material	Casing	Liner	Welded	Threaded
10.75	+3	140	365	Steel	☒	☐	☐	☒
					☐	☐	☐	☒
					☐	☐	☐	☐

Length of Headpipe _____ Length of Tailpipe _____

9. PERFORATIONS/SCREENS

Perforations	Method	Knife
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Screen#	Screen Type
1	Blank
2	Blank
3	Blank
4	Blank
5	Blank
6	Blank
7	Blank
8	Blank
9	Blank
10	Blank
11	Blank
12	Blank
13	Blank
14	Blank
15	Blank
16	Blank
17	Blank
18	Blank
19	Blank
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87	Blank
88	Blank
89	Blank
90	Blank
91	Blank
92	Blank
93	Blank
94	Blank
95	Blank
96	Blank
97	Blank
98	Blank
99	Blank
100	Blank

From	To	Slot Size	Number	Diameter	Material	Casing	Lines
64	136	$\frac{1}{8} \times \frac{1}{2} \pm$	750			30	☐
						☐	☐
						☐	☐

10. STATIC WATER LEVEL OR ARTESIAN PRESSURE:

6.4 ft. below ground Artesian pressure _____ lb.

Depth flow encountered _____ ft. Describe access port or control devices:

11. WELL TESTS:

☒ Pump ☐ Bailer ☐ Air ☐ Flowing Artesian

Yield gal./min.	Drawdown	Pumping Level	Time
657	31 ft.	79 feet	7½ hr.

Water Temp. 48 Bottom hole temp.

Water Quality test or comments: _____

12. LITHOLOGIC LOG: (Describe repairs or abandonment)

[illegible]

T3-DRILLER'S CERTIFICATION

We certify that all minimum well construction standards were complied with at the time the rig was removed.

Walker Water Systems, Inc.
Firm Name 624 Pierce Street Firm No. 15

Twin Falls, Idaho 83301

Firm Official _____ Date 7/28/94

and
Supervisor or Operator W. J. Walsh Date 11/1/54

(Sign once if Firm Official & Operator)

FORWARD WHITE COPY TO WATER RESOURCES

**Use Typewriter
or
Ball Point Pen**

RECEIVED
OCT 28 1959
Department of Agriculture

WELL LOG AND REPORT OF THE STATE RECLAMATION ENGINEER OF IDAHO

034429

Permit No. _____ Well No. _____ County Belt
Owner Maria Bess
Address Staley Idaho
Driller Ernest H. Walker
Address Twin Falls
Well location SE 1/4 NW 1/4 Sec 10, T. 2 N, R. 18 E, W.
Size of drilled hole 20 in

Locate well in section

NW 1/4	NE 1/4
SW 1/4	SE 1/4

Total depth of well 180
Give depth to standing water from the ground 41 1/2" Water temp. 46 °Fahr.

On "Pumping Test" delivery was 1800 g.p.m. or _____ c.f.s. Drawdown was 88 feet.

Size of pump and motor used to make test 12 in Boral 300 HP Diesel

Length of time of test 5 hours _____ minutes.

If flowing well, give flow _____ c.f.s. or _____ g.p.m. and of shut off pressure _____

If flowing well, described control works _____

(TYPE AND SIZE OF VALVE, ETC.)

Water will be used for Irrigation Weight of casing per lineal foot 65 lb

Thickness of casing 5/16 Casing material Steel
(STEEL, CONCRETE, WOOD, ETC.)

Diameter, length and location of casing 20" 174 Surface to 174
(CASING 12" IN DIAMETER OR LESS, GIVE INSIDE DIAMETER;
CASING OVER 12" IN DIAMETER, GIVE OUTSIDE DIAMETER)

CASING RECORD

Diam. Casing	From Foot	To Foot	Length	Remarks—seals, grouting, etc.
<u>20</u>	<u>0</u>	<u>174</u>	<u>174</u>	

Number and size of perforations 2285 located 41 feet to 170 feet from ground

Mills Knife 1/2" x 3"

Date of commencement of well 24 July Date of completion of well 3 Sept

SE NW 5.20 3N18E

WELL LOG

From Foot	To Foot	Type of Material	Water-bearing Formation Abn. Yes or No	Casing Penetrating Abn. Yes or No
0	3	Surface	No	No
3	45	Coarse gravel, sand & Boulders	No	No
45	55	Gravel, thin layers of clay	Yes	Yes
55	70	Gravel & clay	No	Yes
70	81	Gravel	Yes	Yes
81	92	Gravel & clay	Yes	Yes
92	105	Cemented gravel & clay with large Boulders	No	Yes
105	112	Boulders, gravel & clay	No	Yes
112	130	Gravel, some clay	Yes	Yes
130	143	Gravel, Pink clay	?	Yes
143	145	Pink clay	No	Yes
145	161	Gravel - Pink clay	?	Yes
161	163	Pink clay	No	Yes
163	170	Red shale, gravel & Pink clay	?	Yes
170	180	1 1	?	No
If more space is required use Sheet No. 2				

WELL DRILLER'S STATEMENT

This well was drilled under my supervision and the above information is true and correct to the best of my knowledge and belief.

Signed Eugene W. Heller
By _____

Dated 1 Oct, 1957

License No. 15

IDAHO DEPARTMENT OF WATER RESOURCES
WELL DRILLER'S REPORT

Official Use Only
Inspected by _____
Twp _____ Rge _____ Sec _____
_____ 1/4 _____ 1/4 _____ 1/4
Lat : : : Long: : : :

1. WELL TAG NO. D - 0037012

DRILLING PERMIT NO. 836697

Other IDWR No. 37-21435

2. OWNER

Name SEA BOARD PROPERTIES INC.

Address P.O. BOX 3510

City Ketchum State ID Zip 83340

3. LOCATION OF WELL by legal description:

Sketch map location must agree with written location

N
W E
S
Twp. 3 ☒ North or ☐ South
Rge. 18 ☒ East or ☐ West
Sec. 20 SW 1/4 NE 1/4 NE 1/4
Gov't Lot _____ County BLAINE
Lat: : : Long: : : :

Address of Well Site 3/4 E IF HWY 75 ON OHIO GULCH ROAD
City HAILEY

(Give at least name of road + Distance to Road or Landmark)

Lt. _____ Blk. _____ Sub. Name BLUE GROUSE

Well Lot #A

4. USE:

☐ Domestic ☒ Municipal ☐ Monitor ☐ Irrigation

☐ Thermal ☐ Injection ☐ Other

5. TYPE OF WORK check all that apply (replacement ect.)

☒ New Well ☐ Modify ☐ Abandonment ☐ Other

6. DRILL METHOD

☒ Air Rotary ☐ Cable ☐ Mud Rotary ☐ Other

7. SEALING PROCEDURES

Seal/Filter Pack			Amount	Method
Material	From	To	Sacks or Pounds	
BENT	0	60	6350 LBS	OVERBORE

Was drive shoe used? ☒ Y ☐ N Shoe depth(s) _____

Was drive shoe seal tested? ☐ Y ☒ N How? _____

8. CASING/LINER

Dia.	From	To	Gauge	Material	Casing	Liner	Welded	Threaded
8	± 3	120	322	STEEL	☒	☐	☒	☐
					☐	☐	☐	☐
					☐	☐	☐	☐

Length of Headpipe _____

Length of Tailpipe _____

9. PERFORATIONS/SCREENS

Perforations Methods AIR KNIFE

Screens Screen Type _____

From	To	Slot Size	Number	Diameter	Material	Casing	Liner
70	100	1/4	± 400	8	STEEL	☒	☐
						☐	☐
						☐	☐

10. STATIC WATER LEVEL OR ARTESIAN PRESSURE:

59 ft below ground

Artesian pressure _____

depth flow encountered _____ ft.

Describe access port _____

or control devices WELL CAP

11. WELL TESTS:

☐ Pump ☐ Bailer ☒ Air ☐ Flowing Artesian

Yield gpm	Drawdown	Pumping Level	Time
± 200			

Water Temp. 48°

Bottom hole temp. _____

Water Quality test or comments: _____

Depth first water encounter _____

12. LITHOLOGIC LOG: (Describe repairs or abandonment)

Dia.	From	To	Remarks: Lithology, Water Quality & Temperature	Water
12	0	6	SOIL & GRAVEL	Y N
	6	35	HARD CLAY BROWN	
	35	40	GRAVEL/ COARSE CLAY	
	40	45	GRAVEL/ SAND /CLAY	
	45	56	BOULDERS & GRAVEL	
	56	60	COARSE GRAVEL	
8	60	63	GRAVEL & CLAY	
	63	65	CLAY & GRAVEL	
	65	68	CLAY SILT & GRAVEL	X
	68	72	COARSE GRAVEL & SAND	T
	72	77	SMALL GRAVEL	X
	77	82	MEDIUM GRAVEL & CLAY	
	82	87	COARSE GRAVEL	X
	87	88	COARSE GRAVEL	
	88	92	COARSE GRAVEL	
	92	97	COARSE GRAVEL W/ LOTS OF FINES	X
	97	101	SMALLER GRAVEL & FINES LITTLE CLAY	X
	101	107	MED GRAVEL & LOTS OF CLAY & SILT	
	107	109	FINE GRAVEL & LOTS OF CLAY & SILT	X
	109	120	STICKY CLAY & SILT	

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DEC 09 2005

Department of Water Resources
Southern Region

Completed depth 120 ft. (measurable)

Date: Started November 13, 2005

Completed November 21, 2005

13. DRILLERS CERTIFICATION

I/We certify that all minimum well construction standards were complied with at the time the rig was removed.

Company Name WALKER WATER SYSTEMS Firm No. 15
624 PIERCE ST. TWIN FALLS, ID 83301

Firm Official _____ Date 11/28/05
and _____
Driller or Operator _____ Date 11/28/05
(Sign once in Firm Official & Operator)

USE ADDITIONAL SHEETS IF NECESSARY - FORWARD THE WHITE COPY TO THE DEPARTMENT

270 3413409

IDAHO DEPARTMENT OF WATER RESOURCES
WELL DRILLER'S REPORT

Office Use Only

Inspected by _____

Twp _____ Rge _____ Sec _____

_____ 1/4 _____ 1/4 _____ 1/4

Lat: : : Long: : :

1. WELL TAG NO. 0016666
 DRILLING PERMIT NO. _____
 Other IDWR No. _____

2. OWNER:
Name CAMPBELL, JOHN
Address P.O. BOX 3290
City HATLEY State ID Zip 83333

3. LOCATION OF WELL by legal description:

Sketch map location must agree with written location.

N
 Twp. 3 North ☒ or South ☐
 Rge. 18 East ☒ or West ☐
 Sec. 20 1/4 SE 1/4 NW 1/4
 Gov't Lot _____ 10 acres 40 acres 160 acres
 County BLAINE
 Lat: _____ Long: _____
 Address of Well Site 106 STARWEATHER DR
 City HAILEY

(Give at least name of road • Distance to Road or Landmark)

LT. 60A Bk. Sub. Name STARWEATHER

4. USE:

☐ Domestic ☐ Municipal ☐ Monitor ☐ Irrigation
☐ Thermal ☐ Injection ☐ Other

5. TYPE OF WORK check all that apply (Replacement etc.)

☒ New Well ☐ Modify ☐ Abandonment ☐ Other _____

6. DRILL METHOD

☒ Air Rotary ☐ Cable ☐ Mud Rotary ☐ Other

7. SEALING PROCEDURES

SEAL/FILTER PACK			AMOUNT	METHOD
Material	From	To	Sacks or Pounds	
BENTONITE	0	20	200 LBS	OVERBORE

Was drive shoe used? ☒ Y ☐ N Shoe Depth(s) _____

Was drive shoe seal tested? ☐ Y ☒ N How?

8. CASING/LINER:

Diameter	From	To	Gauge	Material	Casing	Liner	Welded	Threaded
6.625	+1	45	250	STEEL	☒	☐	☒	☐
					☐	☐	☐	☐
					☐	☐	☐	☐

Length of Headpipe _____ Length of Tailpipe _____

9. PERFORATIONS/SCREENS

Perforations	Method
--------------	--------

Screens	Screen Type
---------	-------------

From	To	Slot Size	Number	Diameter	Material	Casing	Liner
						☐	☐
						☐	☐
						☐	☐

10. STATIC WATER LEVEL OR ARTESIAN PRESSURE:

15 ft. below ground Artesian pressure ____ lb.
Depth flow encountered ____ ft. Describe access port or
control devices: CAP

11. WELL TESTS:

☐ Pump ☐ Baller ☒ Air ☐ Flowing Artesian

Yield gal./min.	Drawdown	Pumping Level	Time
+40			

Water Temp. 46 Bottom hole temp.

Water Quality test or comments: _____

Depth first Water Encounter

12. LITHOLOGIC LOG: (Describe repairs or abandonment) Water

[illegible]

Completed Depth 45 (Measurable)

Date: Started 11/12/01 Completed 11/13/01

13. DRILLER'S CERTIFICATION

I/We certify that all minimum well construction standards were complied with at the time the rig was removed.

Company Name WALKER WATER SYSTEMS INC. Firm No. 15

Firm Official  Date 11/26/01

Driller or Operator John B. Hall Date 11/26/01

(Sign once if Firm Officer or Operator)

REPORT OF WELL DRILLER
State of Idaho

RECEIVED

MAY 29 1969

State law requires that this report shall be filed with the State Reclamation Engineer within 30 days after completion or abandonment of the well.

WELL OWNER:

Name RALPH THORNTON

Address KETCHUM, IDAHO (GIMLET)

Owner's Permit No. _____

NATURE OF WORK (check): Replacement well ☐

New well ☒ Deepened ☐ Abandoned ☐

Water is to be used for: DOMESTIC

METHOD OF CONSTRUCTION: Rotary ☐ Cable ☒

Dug ☐ Other _____ (explain)

CASING SCHEDULE: Threaded ☐ Welded ☒

6 "Diam. from 0 ft. to 63 ft.

"Diam. from _____ ft. to _____ ft.

"Diam. from _____ ft. to _____ ft.

"Diam. from _____ ft. to _____ ft.

Thickness of casing: .250 Material:

Steel ☒ concrete ☐ wood ☐ other ☐

(explain)

PERFORATED? Yes ☐ No ☒ Type of perforator used: _____

Size of perforations: _____ " by _____ "

perforations from _____ ft. to _____ ft.

perforations from _____ ft. to _____ ft.

perforations from _____ ft. to _____ ft.

perforations from _____ ft. to _____ ft.

WAS SCREEN INSTALLED? Yes ☐ No ☒

Manufacturer's name _____

Type _____ Model No. _____

Diam. _____ Slot size _____ Set from _____ ft. to _____ ft.

Diam. _____ Slot size _____ Set from _____ ft. to _____ ft.

CONSTRUCTION: Well gravel packed? Yes ☐

No. ☒ size of gravel _____ Gravel

placed from _____ ft. to _____ ft. Surface seal

provided? Yes ☒ No ☐ To what depth?

_____ ft. Material used in seal: CLAY GROUTED

WHILE PUTTING CASING DOWN

Did any strata contain unusable water? Yes ☐

No. ☒ Type of water: _____

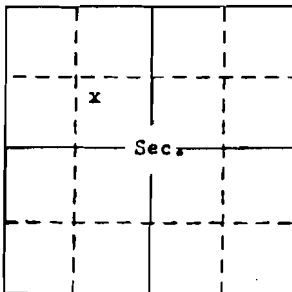
Depth of strata _____ ft. Method of sealing

strata off: _____

Surface casing used? Yes ☐ No. ☐

Cemented in place? Yes ☐ No ☐

Locate well in section



LOCATION OF WELL: County BLAINE

SE NW Sec. 20 T. 3N R. 18E E/8

Size of drilled hole: 6" Total

depth of well: 63ft Standing water

level below ground: 38ft Temp. _____

Fahr. _____ Test delivery: OVER 25 gpm

or _____ cfs Pump? ☒ Bail ☒

Size of pump and motor used to make test: _____

Length of time of test: _____ Hrs. _____ Min.

Drawdown: _____ ft. Artesian pressure: ft. _____

above land surface _____ Give flow _____ cfs

or _____ gpm. Shutoff pressure: _____

Controlled by: Valve ☐ Cap ☐ Plug ☐

No control ☐ Does well leak around casing?

Yes ☐ No ☒

DEPTH _____ MATERIAL 39883 WATER

FROM TO _____ YES OR NO

FEET FEET

0 12 GRAVEL & BOULDERS SOME CLAY NO

12 43 GRAVEL SET IN CLAY NO

43 58 SAND WITH SMALL PEA GRAVEL YES

58 63 COURSE GRAVEL WITH WATER YES

Work started: 30 APRIL 1969

Work finished: 5 MAY 1969

Well Driller's Statement: This well was drilled under my supervision and this report is true to the best of my knowledge.

Name: CLAUDE NICHOLSON

Address: BOX 322 SHOSHONE, IDAHO

Signed by: Claude Nicholson

License No. 159 Date: 27 MAY 1969

Use other side for additional remarks

USGS

CORRECTED COPY

Form 238-7
11/97IDAHO DEPARTMENT OF WATER RESOURCES
WELL DRILLER'S REPORT
RECEIVED

Office Use Only			
Inspected by _____			
Twp _____	Rge _____	Sec _____	
1/4 NE 1/4 NW 1/4			
Lat: _____	Long: _____		

1. WELL TAG NO. D 0030113

DRILLING PERMIT NO. _____

Other IDWR No. _____

JAN 21 2004

11. WELL TESTS:

☐ Pump ☐ Bailor☐ Air ☐ Flowing Artesian

Yield gal./min.	Drawdown	Pumping Level	Time
1/4			1 Hour

Water Temp. _____

Bottom hole temp. _____

Water Quality test or comments: _____

Depth first Water Encounter _____

2. OWNER:

Department of Water Resources
Southern Region

Name Seaboard Corporation

Address P.O. BOX 3510

City Ketchum

State ID Zip 83340

3. LOCATION OF WELL by legal description:

Sketch map location must agree with written location.

N			
	X		
W			E
S			

Twp. 03 North ☒ or South ☐
Rge. 18 East ☒ or West ☐
Sec. 20 1/4 NW 1/4 NE 1/4
Gov't Lot _____ County Blaine
Lat: _____ Long: _____

Address of Well Site Old Dump Site

Between Hailey & Ketchum City Hailey

L1. _____ Blk. _____ Sub. Name Blue Grouse

4. USE:

☐ Domestic ☐ Municipal ☒ Monitor ☐ Irrigation
☐ Thermal ☐ Injection ☐ Other

5. TYPE OF WORK check all that apply

(Replacement etc.)

☒ New Well ☐ Modify ☐ Abandonment ☐ Other

6. DRILL METHOD

☒ Air Rotary ☐ Cable ☐ Mud Rotary ☐ Other

7. SEALING PROCEDURES

SEAL/FILTER PACK		AMOUNT		METHOD
Material	From	To	Sacks or Pounds	
Bentonite	0	20	18Sks	Overbore
Bentonite	103	143	13Sks	Backfill

Was drive shoe used? ☒ Y ☐ N Shoe Depth(s) 143'Was drive shoe seal tested? ☐ Y ☒ N How? _____

8. CASING/LINER:

Diameter	From	To	Gauge	Material	Casing	Liner	Welded	Threaded
6"	+1 1/2	143	.250	Steel	☒	☐	☒	☐
					☐	☐	☐	☐
					☐	☐	☐	☐

Length of Headpipe _____ Length of Tailpipe _____

9. PERFORATIONS/SCREENS

Perforations Method Torch

Screens Screen Type _____

From	To	Slot Size	Number	Diameter	Material	Casing	Liner
70'	100'	1/8	110	6"	Steel	☒	☐
						☐	☐
						☐	☐

10. STATIC WATER LEVEL OR ARTESIAN PRESSURE:

74 ft. below ground Artesian pressure _____ lb.

Depth flow encountered _____ ft. Describe access port or control devices: _____

12. LITHOLOGIC LOG: (Describe repairs or abandonment) Water

Bore Dia.	From	To	Remarks: Lithology, Water Quality & Temperature	V	H
10	0	20	Sand-Gravel-Clay		X
6	20	40	Sand		X
6	40	51	Gravel & Boulders		X
6	51	57	Sand		X
6	57	59	Boulders		X
6	59	80	Sand & Clay	X	
6	80	83	Sand & Clay		X
6	83	94	Clay		X
6	94	108	Sand & Boulders	X	
6	103	148	Clay		X

SCANNED

JAN 22 2004

 Completed Depth 143' (Measurable)
 Date: Started 12-30-03 Completed 12-31-03

13. DRILLER'S CERTIFICATION

We certify that all minimum well construction standards were complied with at the time the rig was removed.

Company Name Wood River Drilling Firm No. 265

& Pump, Inc.

Firm Official Ken Smith Date 01-12-04

and

Driller or Operator [Signature] Date _____

(Sign once if Firm Official & Operator)

FORWARD WHITE COPY TO WATER RESOURCES

547 1953

WELL DRILLER'S REPORT

State law requires that this report be filed with the Director, Department of Water Resources within 30 days after the completion or abandonment of the well.

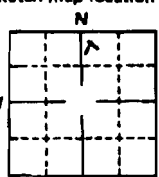
1. WELL OWNER Name <u>Stephen D. Pruitt</u> Address <u>P. O. Box 479 Sun Valley, ID 83353</u> Owner's Permit No. _____	7. WATER LEVEL Static water level _____ feet below land surface. Flowing? ☐ Yes ☒ No G.P.M. flow _____ Artesian closed-in pressure _____ p.s.i. Controlled by: ☐ Valve ☐ Cap ☐ Plug Temperature <u>48</u> °F. Quality _____ <i>Describe artesian or temperature zones below.</i>																																																						
2. NATURE OF WORK ☒ New well ☐ Deepened ☐ Replacement ☐ Abandoned (describe abandonment procedures such as materials, plug depths, etc. in lithologic log)	8. WELL TEST DATA ☐ Pump ☐ Bailor ☒ Air ☐ Other _____																																																						
3. PROPOSED USE ☒ Domestic ☐ Irrigation ☐ Test ☐ Municipal ☐ Industrial ☐ Stock ☐ Waste Disposal or Injection ☐ Other _____ (specify type)	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Discharge G.P.M.</th> <th>Pumping Level</th> <th>Hours Pumped</th> </tr> </thead> <tbody> <tr> <td align="center"><u>30</u></td> <td></td> <td align="center"><u>1</u></td> </tr> <tr><td> </td><td></td><td></td></tr> <tr><td> </td><td></td><td></td></tr> <tr><td> </td><td></td><td></td></tr> </tbody> </table>	Discharge G.P.M.	Pumping Level	Hours Pumped	<u>30</u>		<u>1</u>																																																
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4. METHOD DRILLED ☒ Rotary ☒ Air ☐ Hydraulic ☐ Reverse rotary ☐ Cable ☐ Dug ☐ Other _____	9. LITHOLOGIC LOG 83139 <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Bore Diam.</th> <th colspan="2">Depth</th> <th>Material</th> <th colspan="2">Water</th> </tr> <tr> <th></th> <th>From</th> <th>To</th> <th></th> <th>Yes</th> <th>No</th> </tr> </thead> <tbody> <tr> <td align="center"><u>6</u></td> <td align="center"><u>0</u></td> <td align="center"><u>3</u></td> <td>Surface dirt</td> <td></td> <td></td> </tr> <tr> <td></td> <td align="center"><u>3</u></td> <td align="center"><u>14</u></td> <td>Gravel & sand & clay</td> <td align="center"><u>T</u></td> <td></td> </tr> <tr> <td></td> <td align="center"><u>14</u></td> <td align="center"><u>18</u></td> <td>Boulders</td> <td></td> <td></td> </tr> <tr> <td></td> <td align="center"><u>18</u></td> <td align="center"><u>24</u></td> <td>Gravel & sand & clay</td> <td></td> <td></td> </tr> <tr> <td></td> <td align="center"><u>24</u></td> <td align="center"><u>26</u></td> <td>Gravel</td> <td align="center"><u>X</u></td> <td></td> </tr> <tr> <td></td> <td align="center"><u>26</u></td> <td align="center"><u>39</u></td> <td>Gravel & clay</td> <td></td> <td></td> </tr> <tr> <td></td> <td align="center"><u>39</u></td> <td align="center"><u>45</u></td> <td>Gravel</td> <td align="center"><u>X</u></td> <td></td> </tr> <!-- Empty rows omitted for brevity --> </tbody> </table>	Bore Diam.	Depth		Material	Water			From	To		Yes	No	<u>6</u>	<u>0</u>	<u>3</u>	Surface dirt				<u>3</u>	<u>14</u>	Gravel & sand & clay	<u>T</u>			<u>14</u>	<u>18</u>	Boulders				<u>18</u>	<u>24</u>	Gravel & sand & clay				<u>24</u>	<u>26</u>	Gravel	<u>X</u>			<u>26</u>	<u>39</u>	Gravel & clay				<u>39</u>	<u>45</u>	Gravel	<u>X</u>	
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5. WELL CONSTRUCTION Casing schedule: ☒ Steel ☐ Concrete ☐ Other _____ <table style="width: 100%;"> <tr> <th>Thickness</th> <th>Diameter</th> <th>From</th> <th>To</th> </tr> <tr> <td><u>.250</u> inches</td> <td><u>6 5/8</u> inches +</td> <td><u>3</u> feet</td> <td><u>45</u> feet</td> </tr> <tr> <td>_____ inches</td> <td>_____ inches</td> <td>_____ feet</td> <td>_____ feet</td> </tr> <tr> <td>_____ inches</td> <td>_____ inches</td> <td>_____ feet</td> <td>_____ feet</td> </tr> <tr> <td>_____ inches</td> <td>_____ inches</td> <td>_____ feet</td> <td>_____ feet</td> </tr> </table> Was casing drive shoe used? ☒ Yes ☐ No Was a packer or seal used? ☐ Yes ☒ No Perforated? ☐ Yes ☒ No How perforated? ☐ Factory ☐ Knife ☐ Torch Size of perforation _____ inches by _____ inches <table style="width: 100%;"> <tr> <th>Number</th> <th>From</th> <th>To</th> </tr> <tr> <td>_____ perforations</td> <td>_____ feet</td> <td>_____ feet</td> </tr> <tr> <td>_____ perforations</td> <td>_____ feet</td> <td>_____ feet</td> </tr> <tr> <td>_____ perforations</td> <td>_____ feet</td> <td>_____ feet</td> </tr> </table> Well screen installed? ☐ Yes ☒ No Manufacturer's name _____ Model No. _____ Type _____ Diameter _____ Slot size _____ Set from _____ feet to _____ feet Gravel packed? ☐ Yes ☒ No Size of gravel _____ Placed from _____ feet to _____ feet Surface seal depth <u>18</u> Material used in seal: ☐ Cement grout ☒ Bentonite ☐ Puddling clay ☐ Sealing procedure used: ☐ Slurry pit ☐ Temp. surface casing ☒ Overbore to seal depth Method of joining casing: ☐ Threaded ☒ Welded ☐ Solvent Weld ☐ Cemented between strata Describe access port _____ well cap	Thickness	Diameter	From	To	<u>.250</u> inches	<u>6 5/8</u> inches +	<u>3</u> feet	<u>45</u> feet	_____ inches	_____ inches	_____ feet	_____ feet	_____ inches	_____ inches	_____ feet	_____ feet	_____ inches	_____ inches	_____ feet	_____ feet	Number	From	To	_____ perforations	_____ feet	_____ feet	_____ perforations	_____ feet	_____ feet	_____ perforations	_____ feet	_____ feet	10. Work started <u>7/11/83</u> finished <u>7/11/83</u>																						
Thickness	Diameter	From	To																																																				
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6. LOCATION OF WELL Sketch map location must agree with written location.  Subdivision Name <u>Zinc Spur</u> <u>Blaine</u> Lot No. _____ County <u>Blaine</u> <u>NW</u> % <u>NE</u> % Sec. <u>20</u> T. <u>S</u> R. <u>18</u> E/W.	11. DRILLERS CERTIFICATION <u>de</u> I/we certify that all minimum well construction standards were compiled with at the time the rig was removed. Firm Name <u>Walker Water Systems, Inc.</u> Firm No. <u>15</u> Address <u>624 Pierce Street</u> Twin Falls, Idaho 83301 Date <u>7/18/83</u> Signed by (Firm Official) <u>Leland B. Welch</u> and (Operator) <u>Leland B. Welch</u>																																																						

TABLE C1: WELL INTERFERENCE ANALYSIS (K=57)

Valley Club HOA

Constant pumping rate

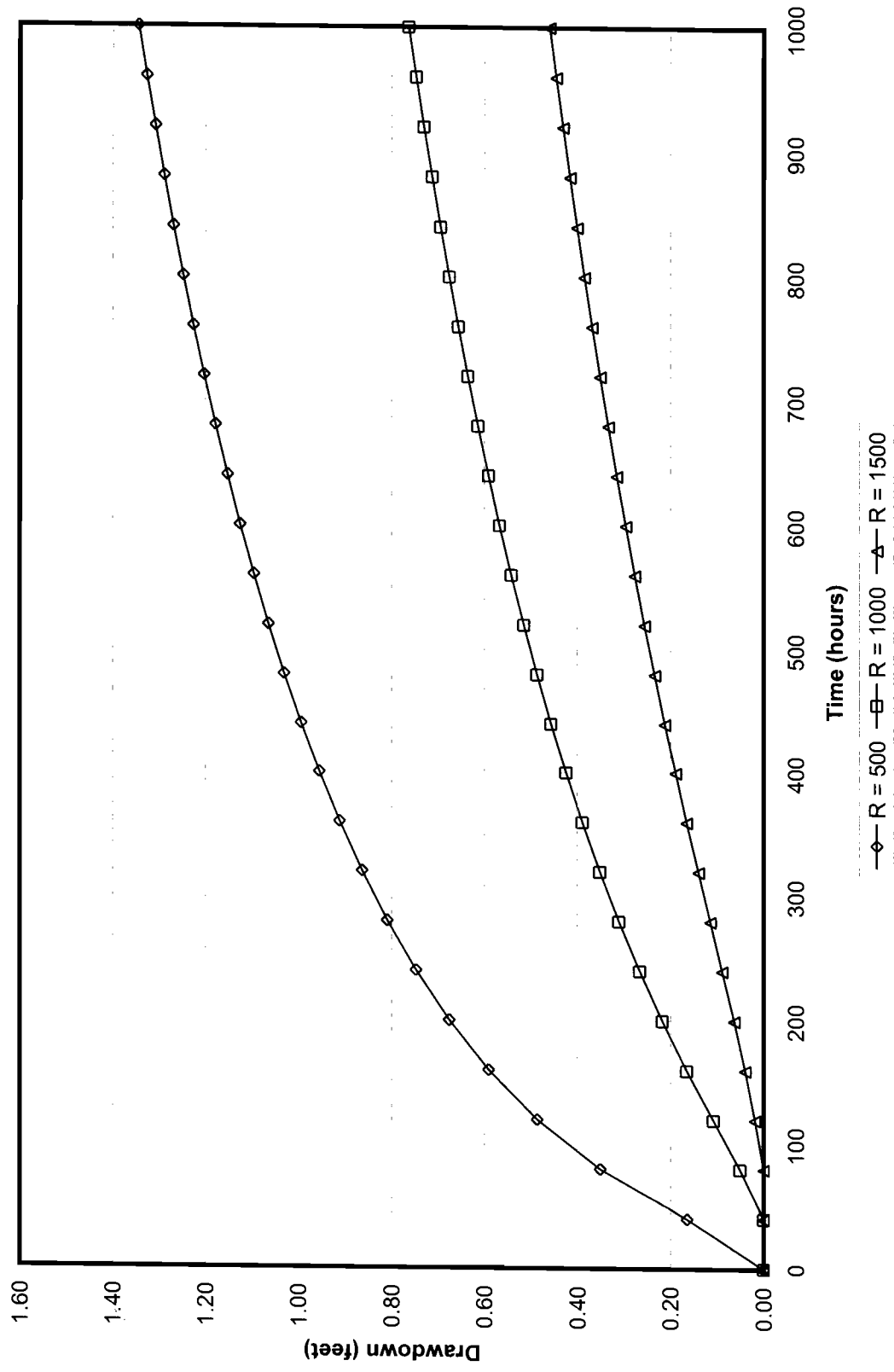
Brockway Engineering, PLLC 3/25/2009

Cone of depression estimated using Theis approach

Hydraulic conductivity	57 ft/day	Pumping rate	232 gpm =	0.52 cfs
Saturated thickness	140 feet	Pumping time	960 hrs	
Transmissivity	59690 gpd/ft	Storage coefficient	0.15	

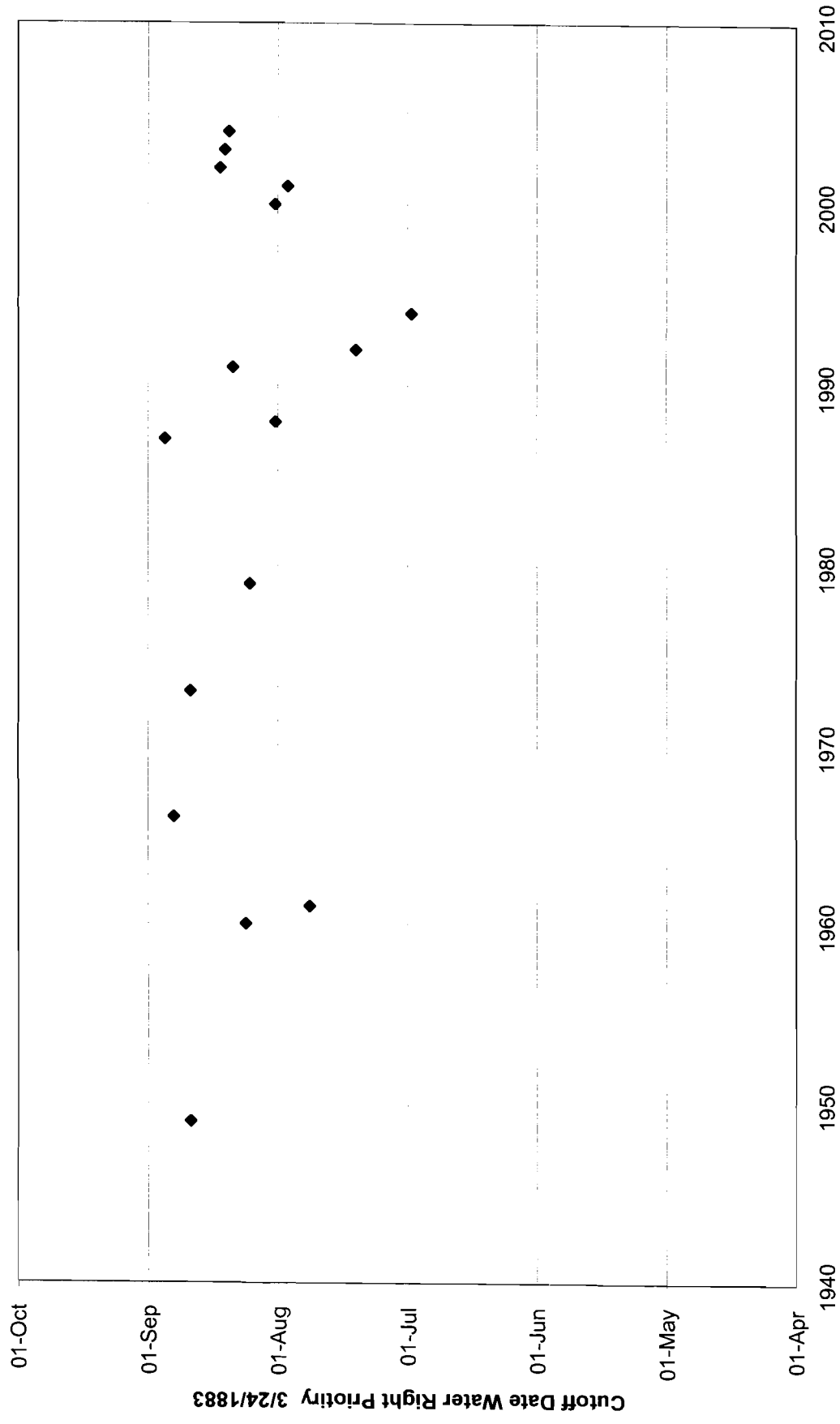
Time (hrs)	R = 500 feet			R = 1000 feet			R = 1500 feet		
	u	W(u)	z (feet)	u	W(u)	z (feet)	u	W(u)	z (feet)
0	--	--	0.00	--	--	0.00	--	--	0.00
40	7.0E-01	0.370	0.16	2.8E+00	0.000	0.00	6.3E+00	0.000	0.00
80	3.5E-01	0.789	0.35	1.4E+00	0.115	0.05	3.2E+00	0.011	0.00
120	2.3E-01	1.093	0.49	9.4E-01	0.243	0.11	2.1E+00	0.042	0.02
160	1.8E-01	1.328	0.59	7.0E-01	0.370	0.16	1.6E+00	0.088	0.04
200	1.4E-01	1.518	0.68	5.6E-01	0.489	0.22	1.3E+00	0.142	0.06
240	1.2E-01	1.678	0.75	4.7E-01	0.598	0.27	1.1E+00	0.199	0.09
280	1.0E-01	1.817	0.81	4.0E-01	0.698	0.31	9.1E-01	0.257	0.11
320	8.8E-02	1.938	0.86	3.5E-01	0.789	0.35	7.9E-01	0.315	0.14
360	7.8E-02	2.047	0.91	3.1E-01	0.874	0.39	7.0E-01	0.370	0.16
400	7.0E-02	2.144	0.96	2.8E-01	0.952	0.42	6.3E-01	0.424	0.19
440	6.4E-02	2.233	0.99	2.6E-01	1.025	0.46	5.8E-01	0.476	0.21
480	5.9E-02	2.315	1.03	2.3E-01	1.093	0.49	5.3E-01	0.526	0.23
520	5.4E-02	2.391	1.06	2.2E-01	1.157	0.52	4.9E-01	0.575	0.26
560	5.0E-02	2.461	1.10	2.0E-01	1.217	0.54	4.5E-01	0.621	0.28
600	4.7E-02	2.527	1.13	1.9E-01	1.274	0.57	4.2E-01	0.665	0.30
640	4.4E-02	2.589	1.15	1.8E-01	1.328	0.59	4.0E-01	0.708	0.32
680	4.1E-02	2.647	1.18	1.7E-01	1.379	0.61	3.7E-01	0.750	0.33
720	3.9E-02	2.702	1.20	1.6E-01	1.427	0.64	3.5E-01	0.789	0.35
760	3.7E-02	2.754	1.23	1.5E-01	1.474	0.66	3.3E-01	0.828	0.37
800	3.5E-02	2.803	1.25	1.4E-01	1.518	0.68	3.2E-01	0.865	0.39
840	3.4E-02	2.850	1.27	1.3E-01	1.561	0.70	3.0E-01	0.901	0.40
880	3.2E-02	2.895	1.29	1.3E-01	1.601	0.71	2.9E-01	0.935	0.42
920	3.1E-02	2.938	1.31	1.2E-01	1.641	0.73	2.8E-01	0.969	0.43
960	2.9E-02	2.980	1.33	1.2E-01	1.678	0.75	2.6E-01	1.001	0.45
1000	2.8E-02	3.019	1.34	1.1E-01	1.715	0.76	2.5E-01	1.033	0.46

Figure C1: Drawdown versus time and radial distance from the pumping well ($K=57$ ft/day)
 $Q = 283$ gpm, $T = 59,690$ gpd/ft, $S_c = 0.15$



Appendix B
Water Rights Purchased

Water Right Cutoff Dates Big Wood River
Water Right Priority 3/24/1883



Big Wood River Water Right 3/24/1883 Days in Priority

<i>Point</i>	<i>Row1</i>	<i>Rank</i>	<i>Percent</i>		
1	182	1	28.50%	0.715	
3	182	1	28.50%	0.715	
4	182	1	28.50%	0.715	
5	182	1	28.50%	0.715	
6	182	1	28.50%	0.715	
7	182	1	28.50%	0.715	
8	182	1	28.50%	0.715	
9	182	1	28.50%	0.715	
10	182	1	28.50%	0.715	
11	182	1	28.50%	0.715	
12	182	1	28.50%	0.715	
15	182	1	28.50%	0.715	
16	182	1	28.50%	0.715	
17	182	1	28.50%	0.715	
18	182	1	28.50%	0.715	
20	182	1	28.50%	0.715	
21	182	1	28.50%	0.715	
22	182	1	28.50%	0.715	
23	182	1	28.50%	0.715	
24	182	1	28.50%	0.715	
25	182	1	28.50%	0.715	
27	182	1	28.50%	0.715	
28	182	1	28.50%	0.715	
29	182	1	28.50%	0.715	
30	182	1	28.50%	0.715	
31	182	1	28.50%	0.715	
33	182	1	28.50%	0.715	
34	182	1	28.50%	0.715	
35	182	1	28.50%	0.715	
36	182	1	28.50%	0.715	
37	182	1	28.50%	0.715	
38	182	1	28.50%	0.715	
39	182	1	28.50%	0.715	
42	182	1	28.50%	0.715	
43	182	1	28.50%	0.715	
46	182	1	28.50%	0.715	
48	182	1	28.50%	0.715	
49	182	1	28.50%	0.715	
50	182	1	28.50%	0.715	
51	182	1	28.50%	0.715	
52	182	1	28.50%	0.715	
40	149	42	26.70%	0.733	
19	147	43	25.00%	0.75	
2	143	44	21.40%	0.786	
26	143	44	21.40%	0.786	
55	136	46	19.60%	0.804	136 days=20%
56	135	47	17.80%	0.822	or 80% of years
57	134	48	16.00%	0.84	water is on 136 days 15-Aug
44	133	49	14.20%	0.858	
13	130	50	12.50%	0.875	
32	129	51	10.70%	0.893	128 days =10%
41	123	52	7.10%	0.929	or 90% of years
53	123	52	7.10%	0.929	water is on 128 days 8-Aug
54	120	54	5.30%	0.947	120 days =5%
14	115	55	3.50%	0.965	or 95% of years
45	104	56	1.70%	0.983	water is on 120 days 30-Jul
47	91	57	0.00%	1	
mean	166.965				

Big Wood River above Magic Reservoir - Water Rights Cutoff Date																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						</
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MO	DAY	YR		1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
3	24	1883	24-Mar				22-Aug						08-Aug								28-Aug	02-Aug			12-Aug

MO	DAY	YR		1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008					
3	24	1883	24-Mar	14-Jul		1-Jul						2-Aug	30-Jul	15-Aug	14-Aug	13-Aug	22-Aug		10-Jul						

Appendix C

Water Requirements and Aquifer Water Balance

ETIdaho --- Evapotranspiration and Consumptive Irrigation Water Requirements for Idaho

Please send suggestions for improving this site to robison@kimberly.uidaho.edu Copyright 2007, University of Idaho.

Hailey Ranger Stn (NWS NOAA--103942)

Statistics based on 30 years between 1947 to 1981

For a different land cover or crop click on the above link.

You can highlight this table and copy via the clipboard to a Microsoft Excel or OpenOffice spreadsheet to plot or otherwise work with this data.

Open water - shallow systems (ponds, streams)													
Potential Evapotranspiration													
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Growing Season ^a
Mean	mm/day												mm
Monthly ^b	0.41	0.72	1.20	2.32	3.28	3.77	4.26	3.80	2.78	1.71	0.65	0.33	770 770
15-Day Moving Average ^c	0.40	0.71	1.19	2.35	3.27	3.75	4.29	3.81	2.75	1.70	0.62	0.33	
7-Day Moving Average ^d	0.41	0.72	1.20	2.32	3.28	3.75	4.28	3.80	2.77	1.71	0.63	0.33	
3-Day Moving Average ^e	0.41	0.72	1.20	2.32	3.28	3.76	4.27	3.80	2.78	1.71	0.64	0.33	
Standard Deviation	mm/day												mm
Monthly	0.10	0.07	0.16	0.28	0.47	0.32	0.28	0.28	0.23	0.30	0.11	0.08	26 26
15-Day Moving Average	0.09	0.08	0.16	0.39	0.45	0.45	0.23	0.31	0.34	0.29	0.15	0.07	
7-Day Moving Average	0.11	0.13	0.22	0.48	0.61	0.58	0.29	0.39	0.45	0.40	0.20	0.09	
3-Day Moving Average	0.14	0.17	0.29	0.59	0.74	0.71	0.40	0.48	0.54	0.50	0.24	0.11	
20% Exceedance	mm/day												mm
Monthly	0.44	0.78	1.29	2.50	3.48	3.99	4.41	3.95	2.96	1.88	0.73	0.38	799 799
15-Day Moving Average	0.53	0.86	1.45	2.96	3.95	4.30	4.59	4.21	3.21	2.15	0.92	0.41	
7-Day Moving Average	0.65	1.00	1.64	3.18	4.23	4.64	4.75	4.39	3.59	2.51	1.06	0.52	
3-Day Moving Average	0.76	1.13	2.03	3.60	4.64	4.98	4.98	4.56	3.74	2.70	1.16	0.59	
80% Exceedance	mm/day												mm
Monthly	0.36	0.66	1.12	2.15	2.95	3.48	4.07	3.66	2.55	1.51	0.55	0.28	744 744
15-Day Moving Average	0.27	0.56	0.95	1.79	2.58	2.98	3.93	3.24	2.05	1.14	0.42	0.24	
7-Day Moving Average	0.22	0.48	0.81	1.55	2.04	2.53	3.61	2.86	1.74	0.91	0.35	0.19	
3-Day Moving Average	0.11	0.37	0.62	1.28	1.67	2.26	3.22	2.50	1.57	0.78	0.24	0.09	
Ave Highest ET	mm/day												--
15-Day Moving Average ^f	0.47	0.80	1.38	2.62	3.63	4.11	4.44	4.09	3.08	2.01	0.76	0.38	
7-Day Moving Average ^g	0.56	0.91	1.54	2.92	4.02	4.44	4.61	4.27	3.39	2.27	0.92	0.44	
3-Day Moving Average ^h	0.67	1.01	1.79	3.23	4.33	4.76	4.85	4.47	3.62	2.51	1.06	0.51	
Ave Lowest ET	mm/day												--
15-Day Moving Average ^f	0.34	0.64	1.03	2.05	2.88	3.39	4.13	3.52	2.46	1.41	0.51	0.28	
7-Day Moving Average ^g	0.28	0.55	0.91	1.74	2.43	2.98	3.90	3.24	2.25	1.19	0.44	0.23	
3-Day Moving Average ^h	0.19	0.44	0.75	1.44	2.05	2.60	3.51	2.88	1.91	0.95	0.33	0.15	
Special normal distribution parameters for monthly, seasonal, and annual intervals													--
Skew	0.04	-0.23	0.36	-0.49	0.04	0.76	-0.07	-0.46	-0.57	0.07	0.21	0.18	-0.15 -0.15
Kurtosis	0.81	2.71	0.86	3.61	0.64	3.55	0.61	1.26	3.17	0.66	2.68	0.58	2.34 2.34

^a Growing Season: This is usually the time from green up or planting in the spring to a killing frost or harvest in the fall. It is not applicable for entries without a growing season and will be blank.

^b Mean of the average daily value for month

^c Mean of the fourteen 15-day period averages contained in the month

^d Mean of the twenty three 7-day period averages contained in the month

^e Mean of the twenty seven 3-day period averages contained in the month

^f Mean of the highest/lowest 15-day period average in month

^g Mean of the highest/lowest 7-day period average in month

^h Mean of the highest/lowest 3-day period average in month

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The citation for the evapotranspiration data used from this site should be: *Allen, Richard G. and Clarence W. Robison, 2006 (Revised 2007). **Evapotranspiration and Consumptive Irrigation Water Requirements for Idaho**. Research Technical Completion Report, Kimberly Research and Extension Center, University of Idaho, Moscow, ID.*

Questions regarding the data should be addressed to Clarence W. Robison or Richard G. Allen, University of Idaho, Kimberly Research and Extension Center, 3793 North 3600 East, Kimberly, ID 83341. Telephone (208)-423-6610

WATER REQUIREMENTS AND WATER BALANCE ANALYSIS FOR VALLEY CLUB HOA

G. Erick Powell, P.E.

Brockway Engineering, PLLC

3/24/2009

IRRIGATION - Valley Club HOA Single Family Homes w/ 27.5 acres

Irrigation water delivered by Well

Turf ET data from Allen and Robinson (2007) - Hailey Ranger Station

Total irrigated area	27.5	acres		
Crop consumptive use - Irrigated	26.97	inches	(Allen and Robinson, 2007)	
Irrigation efficiency - typical dome:	70%			
Annual consumptive volume	61.8	ac-ft		
Annual diversion volume	88.3	ac-ft		
Peak month average daily ET	0.226378	inches	} Allen and Robinson (2007)	
Standard deviation of monthly ET	0.015748	inches		
Peak day factor	1			
Exceedance level	80%			
Maximum daily design ET	0.240	inches		
Max Consumptive Discharge	0.29	cfs		
Maximum design discharge	0.41	cfs or	184	gpm
	0.0149		6.7	gpm / ac
			0.75	"/ac

Historical Water Use
Brockway Engineering, PLLC
GEP - 3/24/2009

Old Cutter Irrigation Area (acres)	27.5 acres
------------------------------------	------------

[illegible]

Valley Club Owners Association

Water Requirements

Brockway Engineering, PLLC

GEP - 3/24/2009

Water Right Numbers 37-21130, 37-21137, and 37-21139

Period of Active Priority Based on WD 37 Records

Exceedance 80% Number of Days on: 153 days or until 14-Sep

Estimated Irrigation Efficiency (Flood Irrigation): 0.56

Valley Club OA area (acres): 27.5 acres

Irrigated Turf - Actual ET (Allen and Robison, 2007) - Hailey Ranger Station

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	GS	Annual
ET (mm/day)	0.18	0.29	0.44	0.74	2.98	5.11	5.75	4.96	3.14	0.89	0.25	0.16	685	778
ET (mm/mo)	0	0	0	15	31	30	31	31	30	31	0	0	199	365
ET (ft/mo)	0	0	0	11.1	92.38	153.3	178.25	153.76	94.2	27.59	0	0	710.58	
ET Vol (ac-ft)	0	0	0	0.036417	0.303084	0.502953	0.58481	0.504462	0.309055	0.090518	0	0	2.331299	
ET Vol (ac-in)	0	0	0	1.001476	8.33481	13.8312	16.08227	13.8727	8.499016	2.489255	0	0	64.11073	
													114.4834	

Irrigated Turf - Precipitation Deficit (Allen and Robison, 2007) - Hailey Ranger Station

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	GS	Annual
Pdef (mm/day)	0.02	0.13	0.21	0.47	2.02	4.04	5.42	4.49	2.69	0.6	-0.26	-0.05	574	620
Pdef (mm/mo)	0	0	0	15	31	30	31	31	30	15	0	0	183	365
Pdef (ft/mo)	0	0	0	7.05	62.62	121.2	168.02	139.19	80.7	9	0	0	587.78	
Pdef Vol (ac-ft)	0	0	0	0.02313	0.205446	0.397638	0.551247	0.45666	0.264764	0.029528	0	0	1.928412	
Pdef Vol (ac-in)	0	0	0	0.636073	5.64977	10.93504	15.15928	12.55815	7.281004	0.812008	0	0	53.03133	
													94.69881	

	Sep	Oct
Pdef (mm/day)	2.69	0.6
Pdef (mm/mo)	15	15
Pdef (ft/mo)	40.35	9
Pdef Vol (ac-ft)	0.132382	0.029528
Pdef Vol (ac-in)	3.640502	0.812008
		0.161909

Valley Club Homeowners Association

Weather Station Hailey Data from ET Idaho Allen and Robison, 2007
Number of lots 68.8 Infiltration System
Acres/lot irrigated 0.4 acres No of subsurface basin 2
Total irrigated acres 27.5 acres Pond size I L 115

Site 1
Recharge Node =
Extraction Node=

W 80
Area 0.21 acres
Total area 0.42 acres

Site 2
Recharge Node =
Extraction Node=

Infiltration rate 1.50 ft/day Subsurface infiltration-no pond evaporation

	Turf(lawns)				Pot Et	Potential Evapotranspiration									
Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Growing	Annual	
mm/day	0.22	0.38	0.59	1.07	3.06	5.11	5.75	5	3.24	1.15	0.32	0.19	685	813	
in/day	0.01	0.02	0.02	0.04	0.12	0.20	0.23	0.20	0.13	0.05	0.01	0.01	27.29	32.39	
Pot ET in/mo	0.27	0.42	0.73	1.28	3.78	6.11	7.10	6.18	3.87	1.42	0.38	0.23	27.29	32.39	
Pot ET ft/mo	0.02	0.04	0.06	0.11	0.31	0.51	0.59	0.51	0.32	0.12	0.03	0.02	2.27	2.70	
Pot ET ac-ft	0.62	0.97	1.67	2.93	8.66	14.00	16.27	14.15	8.87	3.25	0.88	0.54	62.54	74.23	

	Turf(lawns)				Pdef	Net irrigation water requirement (CIR)									
Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Growing	Annual	
mm/day	0.02	0.13	0.21	0.47	2.02	4.04	5.42	4.49	2.69	0.6	-0.26	-0.05	574	620	
in/day	0.00	0.01	0.01	0.02	0.08	0.16	0.22	0.18	0.11	0.02	-0.01	0.00	22.87	24.70	
Pdef in/mo	0.02	0.15	0.26	0.56	2.49	4.83	6.69	5.55	3.22	0.74	-0.31	-0.06	22.87	24.70	
Pdef ft/mo	0.00	0.01	0.02	0.05	0.21	0.40	0.56	0.46	0.27	0.06	-0.03	-0.01	1.91	2.06	
Pdef ac-ft	0.06	0.33	0.59	1.29	5.72	11.07	15.34	12.71	7.37	1.70	-0.71	-0.14	52.41	56.61	

Average year

Month	Apr	May	Jun	Jul	Aug	Sep	Oct	Season	
Days	15	31	30	31	31	30	15	183	Full season
Aquifer Pumping									
Pdef (CIR)ac ft/period	0.6	5.7	11.1	15.3	12.7	7.4	0.8	53.7 af	
Irrig. Efficiency	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.7	
Req'd Div ac ft	1.1	10.2	19.8	27.4	22.7	13.2	1.5	95.9 af or	3.5 af/acre diversion
Accum. Diversion	1.1	11.4	31.1	58.5	81.2	94.4	95.9	af	
Avg daily cfs	0.04	0.17	0.33	0.45	0.37	0.22	0.05	0.26 cfs or	

Infiltration

Volume infiltrated*	9.50	19.64	19.01	19.64	19.64	9.50		96.9 af*	* Water right in priority until Sept 15=153 days
Daily avg cfs	0.320	0.320	0.320	0.320	0.320	0.160			143.6 gpm max diversion
Accumulated infilt.	9.5	29.1	48.2	67.8	87.4	96.9	96.9		

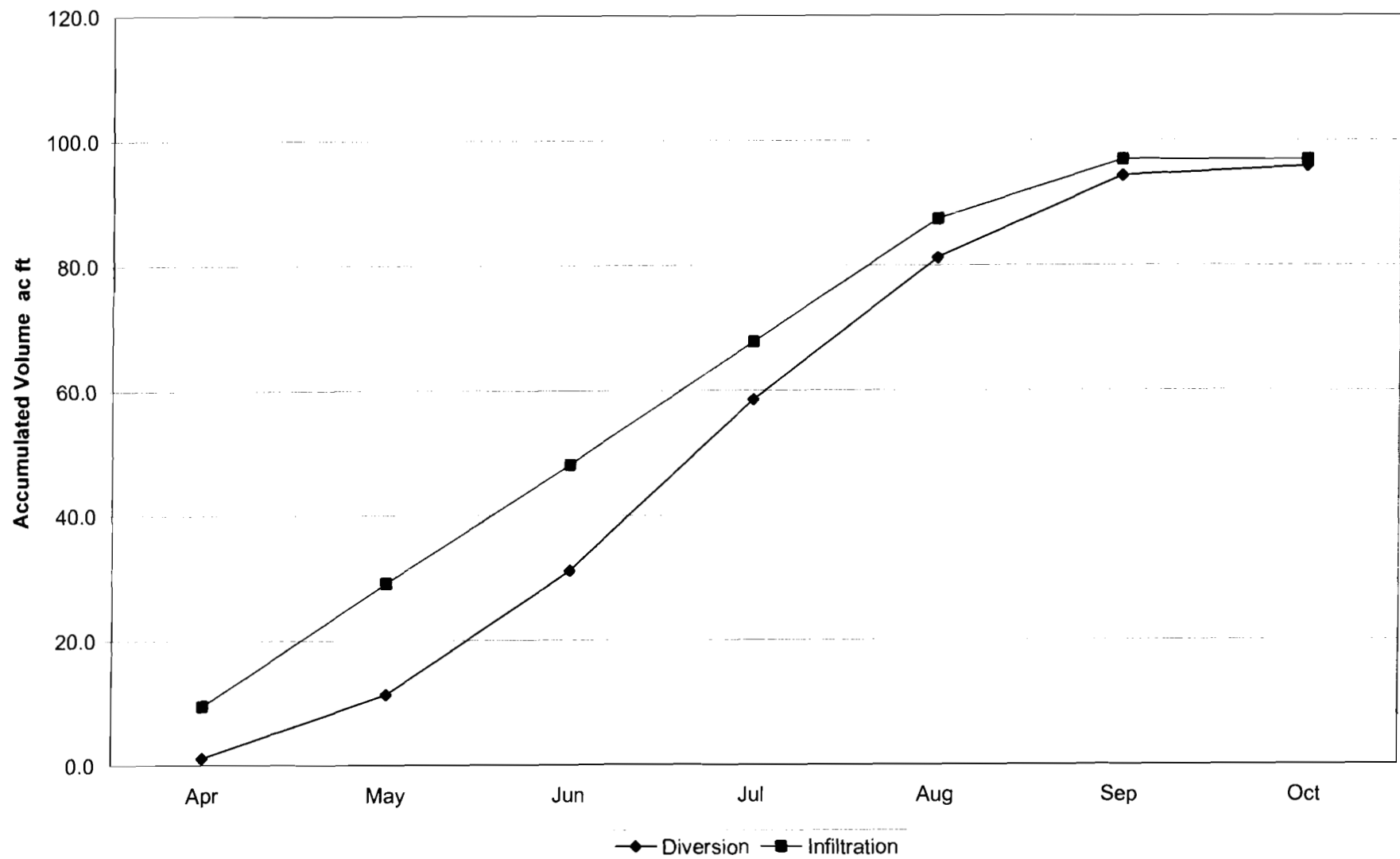
Pond Evap

Pond Evap mm/day	0	0	0	0	0	0	0		
Pond Evap in/day	0.000	0.000	0.000	0.000	0.000	0.000	0.000		Open water evap- Allen 2007
Pond Evap ac ft/period	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00 ac ft	
Pond Evap cfs	0.000	0.000	0.000	0.000	0.000	0.000	0.000	96.9 ac ft	Total infiltration +pond evap

Infiltration +Pond Evap

Avg total daily cfs	0.32	0.32	0.32	0.32	0.32	0.16	0.00	0.32 cfs or	143.6 gpm
Volume total af	9.50	19.64	19.01	19.64	19.64	9.50	0.00	96.94	
Accumulated vol	9.50	29.15	48.15	67.80	87.44	96.94	96.94		
Excess(infil-div)	8.35	9.43	-0.75	-7.75	-3.05	-3.65	-1.52	1.06 af	
Excess accumulated	8.35	17.79	17.04	9.28	6.23	2.58	1.06		

Valley Club Homeowners Aquifer Balance
Irrigation of 27.5 acres from Ground water Scenarios 1&2



Valley Club Homeowners Mitigation Plan
Irrigation and Extended Season 27.5 Acres Purchased and 27.5 New Acres Irrigated
Subsurface Infiltration, No Ponds. Scenarios 1&2

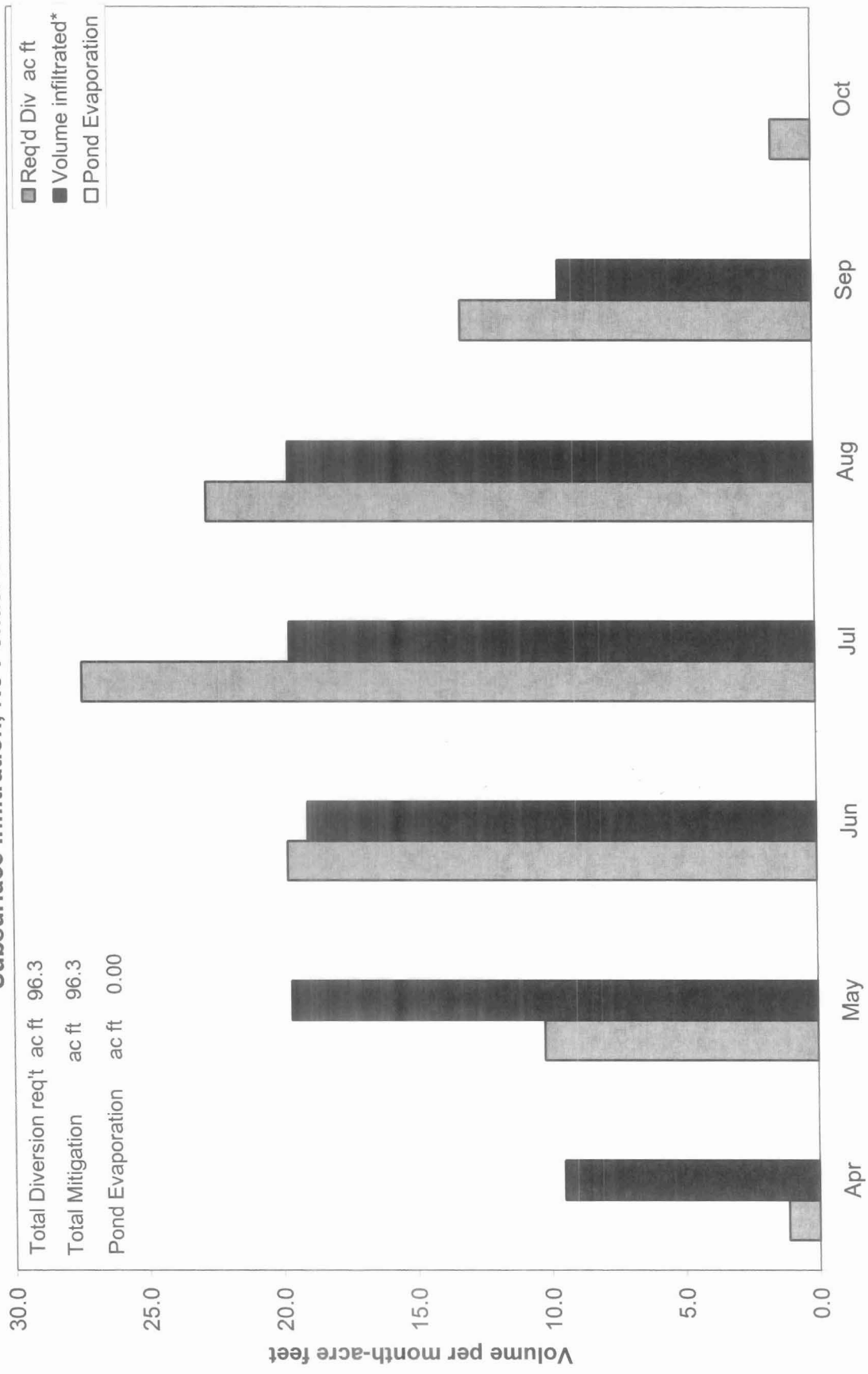


Figure 1: Data for Dry Lot, LLC, Irrigation and Mitigation.

Appendix D
Hiawatha Canal Data

CONVEYANCE LOSS - WORSTELL

NAME OF DITCH: Hiawatha Ditch with liner BY: A. Merritt DATE: 04/18/08
 Before moving Cutter to Dry Lot Rev BY: GEP DATE: 07/16/09
 FLOW TO BE MOVED: 1.66 CFS

REACH	LENGTH (FT)	AVE WIDTH (FT)	SEEPAGE (FT/DAY)	WORSTELL LOSS (CFS)	DELIVER (CFS)	DELIVE LEFT (CFS)	LOSS FACTOR	DELIVERY LOSS (CFS)	FLOW (CFS)	DELIVERY LOSS MINUS HIAWATHA RIGHTS FOR LOSS
Decree	900	24.0	10.00	2.73	0.00	22.72	0.1201	0.00	30.27	0.00
1	1910	18.0	3.00	1.30	2.88	22.72	0.0574	0.51	27.54	0.13
2	450	18.0	3.00	0.31	0.04	19.84	0.0155	0.01	23.36	0.00
3	480	18.0	3.00	0.33	0.02	19.80	0.0165	0.00	23.01	0.00
4	430	18.0	3.00	0.29	0.02	19.78	0.0148	0.00	22.66	0.00
5	1770	15.0	0.00	0.00	2.02	19.76	0.0000	0.45	22.35	0.12
6	730	15.0	0.00	0.00	1.45	17.74	0.0000	0.33	20.33	0.08
7	490	15.0	0.00	0.00	0.05	16.29	0.0000	0.01	18.88	0.00
8	1820	15.0	0.00	0.00	0.00	16.24	0.0000	0.00	18.83	0.00
9	1470	15.0	1.50	0.42	0.62	16.24	0.0257	0.15	18.83	0.04
10	4500	14.0	1.28	1.02	0.24	15.62	0.0652	0.08	17.79	0.02
11	680	12.0	1.00	0.10	2.17	15.38	0.0067	0.70	16.54	0.18
12	970	12.0	1.00	0.15	0.04	13.21	0.0111	0.01	14.26	0.00
13	350	12.0	1.00	0.05	0.13	13.17	0.0040	0.05	14.08	0.01
14	440	12.0	1.00	0.07	0.66	13.04	0.0051	0.23	13.89	0.06
15	1860	12.0	1.00	0.28	1.44	12.37	0.0228	0.53	13.16	0.14
16	530	12.0	1.00	0.08	0.82	10.93	0.0073	0.31	11.44	0.08
17	490	12.0	1.00	0.07	0.68	10.11	0.0073	0.26	10.54	0.07
18	460	12.0	1.00	0.07	4.00	9.43	0.0074	1.55	9.78	0.40
19	820	10.0	1.00	0.10	0.82	5.43	0.0191	0.33	5.71	0.09
20	650	7.0	0.66	0.04	1.55	4.61	0.0082	0.64	4.78	0.17
21	1260	4.0	0.66	0.04	0.20	3.06	0.0137	0.09	3.20	0.02
22	2900	4.0	0.66	0.10	2.86	2.86	0.0338	1.32	2.95	0.34
TOTALS	26360			7.55	22.72		0.3419	7.55		1.95

Reach moving to

BEFORE THE DRY LOT LLC MOVE
 SHARE OF LOSS =

$1.66 * (0.40)$
 4.00

0.166 CFS

Reach moving from

METHOD OF DETERMINATION FROM A. MERRITT, IDWR

REACH = SECTION OF CHANNEL
 LENGTH = LENGTH OF REACH, THE CHANNEL CAN BE DIVIDED INTO EQUAL LENGTH REACHES
 OR ACTUAL LENGTHS BETWEEN DELIVERY POINTS
 AVE WIDTH = AVERAGE TOP WIDTH OF WATER SURFACE IN REACH
 SEEPAGE = SOIL SEEPAGE RATE OF REACH
 WORSTELL LOSS = CONVEYANCE LOSS IN REACH BASED ON WORSTELL METHOD
 DELIVERY = TOTAL DELIVERIES IN REACH
 DELIVERY LEFT = SUM(DELIVERIES OF CURRENT AND REMAINING REACHES)
 LOSS FACTOR = WORSTELL LOSS/DELIVERY LEFT
 DELIVERY LOSS = SUM(LOSS FACTORS OF CURRENT AND PREVIOUS REACHES) X DELIVERY;
 REPRESENTS THE LOSSES ASSIGNED TO THE DELIVERIES IN THE REACH;
 IF MULTIPLE RIGHTS WITHIN REACH, DELIVERY LOSSES SHOULD BE
 PRORATED BASED ON SIZE OF DELIVERY FOR EACH RIGHT WITHIN REACH
 FLOW = TOTAL FLOW AT BEGINNING OF EACH REACH

CONVEYANCE LOSS - WORSTELL

NAME OF DITCH: Hiawatha Ditch with liner BY: A. Merritt DATE: 04/18/08
 After moving Cutter to Dry Lot Rev BY: GEP DATE: 07/16/09
 FLOW TO BE MOVED: 1.66 CFS

REACH	LENGTH (FT)	AVE WIDTH (FT)	SEEPAGE (FT/DAY)	WORSTELL LOSS (CFS)	DELIVER (CFS)	DELIVER LEFT (CFS)	LOSS FACTOR	DELIVERY LOSS (CFS)	FLOW (CFS)	DELIVERY LOSS MINUS HIAWATHA RIGHTS FOR LOSS
Decree	900	24.0	10.00	2.73	0.00	22.72	0.1201	0.00	30.27	0.00
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2	450	18.0	3.00	0.31	0.04	18.18	0.0169	0.01	21.70	0.00
3	480	18.0	3.00	0.33	0.02	18.14	0.0181	0.00	21.35	0.00
4	430	18.0	3.00	0.29	0.02	18.12	0.0162	0.00	21.00	0.00
5	1770	15.0	0.00	0.00	2.02	18.10	0.0000	0.46	20.69	0.12
6	730	15.0	0.00	0.00	1.45	16.08	0.0000	0.33	18.67	0.09
7	490	15.0	0.00	0.00	0.05	14.63	0.0000	0.01	17.22	0.00
8	1820	15.0	0.00	0.00	0.00	14.58	0.0000	0.00	17.17	0.00
9	1470	15.0	1.50	0.42	0.62	14.58	0.0287	0.16	17.17	0.04
10	4500	14.0	1.28	1.02	0.24	13.96	0.0730	0.08	16.13	0.02
11	680	12.0	1.00	0.10	2.17	13.72	0.0075	0.73	14.88	0.19
12	970	12.0	1.00	0.15	0.04	11.55	0.0127	0.01	12.60	0.00
13	350	12.0	1.00	0.05	0.13	11.51	0.0046	0.05	12.42	0.01
14	440	12.0	1.00	0.07	0.66	11.38	0.0059	0.24	12.23	0.06
15	1860	12.0	1.00	0.28	1.44	10.71	0.0263	0.56	11.50	0.14
16	530	12.0	1.00	0.08	0.82	9.27	0.0087	0.32	9.78	0.08
17	490	12.0	1.00	0.07	0.68	8.45	0.0088	0.28	8.88	0.07
18	460	12.0	1.00	0.07	2.34	7.77	0.0090	0.97	8.12	0.25
19	820	10.0	1.00	0.10	0.82	5.43	0.0191	0.36	5.71	0.09
20	650	7.0	0.66	0.04	1.55	4.61	0.0082	0.68	4.78	0.18
21	1260	4.0	0.66	0.04	0.20	3.06	0.0137	0.09	3.20	0.02
22	2900	4.0	0.66	0.10	2.86	2.86	0.0338	1.40	2.95	0.36
TOTALS	26360			7.55	22.72		0.3685	7.55		1.95

Reach moving to

BEFORE THE DRY LOT LLC MOVE

SHARE OF LOSS =

 $1.66 * (0.40)$ **0.076 CFS**

4.54

IMPACT DUE TO CHANGE:

0.166 CFS

- 0.076 CFS

0.090 CFS

Reach moving from

METHOD OF DETERMINATION FROM A. MERRITT, IDWR

REACH = SECTION OF CHANNEL

LENGTH = LENGTH OF REACH, THE CHANNEL CAN BE DIVIDED INTO EQUAL LENGTH REACHES

OR ACTUAL LENGTHS BETWEEN DELIVERY POINTS

AVE WIDTH = AVERAGE TOP WIDTH OF WATER SURFACE IN REACH

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WORSTELL LOSS = CONVEYANCE LOSS IN REACH BASED ON WORSTELL METHOD

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LOSS FACTOR = WORSTELL LOSS/DELIVERY LEFT

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REPRESENTS THE LOSSES ASSIGNED TO THE DELIVERIES IN THE REACH;

IF MULTIPLE RIGHTS WITHIN REACH, DELIVERY LOSSES SHOULD BE

PRORATED BASED ON SIZE OF DELIVERY FOR EACH RIGHT WITHIN REACH

FLOW = TOTAL FLOW AT BEGINNING OF EACH REACH

Appendix E
Permissible Place Of Use



VALLEY CLUB HOME OWNERS ASSOCIATION-

FIGURE 1

T.03N R.18E. BLAINE COUNTY, ID
2006 AERIAL PHOTOGRAPHS

1 inch = 700 FT

0 345 690 1,380 Feet

BROCKWAY ENGINEERING, PLLC.
ZL - 3/21/08

Legend

- Valley Club H.O.A. PPU QQ = 221.7
- Section_Lines
- t03n18e



Appendix F
Water Right Purchase Agreement

**AGREEMENT FOR PURCHASE AND SALE
OF
WATER RIGHTS**

THIS AGREEMENT is made this 11th day of MAY, 2007, by and between OLD CUTTERS, INC., an Idaho corporation, whose address is P.O. Box 4944, Ketchum, Idaho, 83340 (hereinafter "Seller") and DRY LOT, LLC., an Idaho limited liability company, whose address is c/o Woody Friedlander, 116 Valley Club Dr., Hailey, Idaho 83333 (hereinafter "Buyer").

RECITALS

A. Seller is the owner and holder of Water Rights Nos. 37-21130, 37-21137 and 37-21139 as currently recommended in the Director's Report for Basin 37 Part 3 filed in *In Re the General Adjudication of Rights to the Use of Water from the Snake River Basin Water System*, Twin Falls County District Court Civil No. 39576 (the "SRBA"), which entitle Seller to irrigate sixty-six (66) acres of land on Seller's property within the City of Hailey described in **Exhibit A** attached hereto (the "Seller's Property") with 4.0 cubic feet per second ("cfs") of water from the Big Wood River via the Hiawatha Canal, with a priority date of March 24, 1883 (the "Seller Water Rights").

B. Buyer is an Idaho limited liability company whose members own real property situated in Blaine County, Idaho, located in the following subdivision ("Subdivision"):

Lots 1 through 99 of The Valley Club, a planned unit development created by the Official Plat filed as Instrument No. 36515 in the records of Blaine County, Idaho on May 5, 1994.

(hereinafter referred to as the "Buyer's Property").

C. Buyer desires to purchase from Seller a portion of the Seller's Water Rights used to irrigate sixty (60) acres of the Seller's Property (the "Water Rights"), and Sellers are willing to sell the Water Rights to Buyer, subject to approval by the Idaho Department of Water Resources (hereinafter referred to as the "Department") of: 1) the Buyer's application for permit to divert ground water from the two (2) wells which are part of its public water supply system and to irrigate sixty (60) acres of the Buyer's Property and other land located in the Subdivision, using the Water Rights for mitigation; and 2) any other applications for permit or transfer required by the Department to fulfill the purpose and use identified in C.1 (the "Applications"); and to all other terms and conditions hereinafter set forth.

TERMS AND CONDITIONS

1. **INCORPORATION OF RECITALS.** The Recitals set forth above are an integral part of this Agreement and are fully incorporated herein by this reference.

2. **SALE.** The Seller, for and in consideration of the payments to be made and the covenants and conditions to be kept and performed by the Buyer, as hereinafter set forth, does hereby contract and agree to sell and convey to Buyer, and the Buyer does hereby agree to buy from the Seller, the Water Rights.

3. **PURCHASE PRICE AND TERMS OF PAYMENT.** The total purchase price of the

Water Rights shall be One Million Eight Hundred Thousand Dollars (\$1,800,000). The purchase price shall be paid as follows:

a. Earnest Money. Within three (3) business days of the mutual execution of this Agreement by Seller and Buyer, Buyer shall deposit into escrow with Sun Valley Title Company (the "Closing Agent") the sum of One Hundred Thousand Dollars (\$100,000) to be held as earnest money and applied to the purchase price at the Closing.

b. Cash Payment. The balance of the purchase price shall be delivered to the Closing Agent in immediately available funds not less than one (1) business day prior to the Closing.

4. TITLE; QUITCLAIM DEED. Seller shall transfer all of its right, title and interest in and to the Water Rights to Buyer by quitclaim deed (the "Quitclaim Deed"). Buyer may submit to the Department as a part of its Application a copy of this Agreement with the purchase price redacted.

5. FILING AND APPROVAL OF APPLICATION. Within twenty (90) days of the date of execution of this Agreement, Buyer shall file the Applications with the Department and thereafter diligently pursue its approval. This Agreement for purchase and sale of the Water Rights is contingent upon and subject to approval by the Department of the Applications within two hundred and seventy (270) days of the date of execution of this Agreement, for the irrigation of not less than fifty (50) acres of the Buyer's Property and other land located in the Subdivision using the Water Rights as mitigation. Upon such approval(s) the earnest money shall become non-refundable. If the Applications are not so approved by the Department within this time period, the Buyer will have the option to tender an additional \$50,000 in earnest money to give the Department an additional ninety (90) days for approval of the Applications. If the Applications are not so approved by the Department after the additional 90 day extension, this Agreement shall become null and void, and the earnest money shall be returned to Buyer, unless the parties hereto agree to extend the time for Buyer to obtain approval of the Applications by the Department. In the event the Department approves the Applications for the irrigation of less than fifty (50) acres of the Buyer's Property and other land located in the Subdivision, Buyer may waive the above contingency and proceed with the Closing at its discretion.

6. COOPERATION WITH APPLICATIONS EFFORTS. Seller hereby grants to Buyer permission to make the Applications and agrees to sign any documentation to that effect required by the Department pertaining to the Applications. At Buyer's request, Seller shall cooperate with Buyer in Buyer's pursuit of the Applications, and shall provide Buyer with any information that Seller has concerning the Water Rights that Buyer may reasonably request in pursuit of the approval of the Applications, including historical water use records.

7. CLOSING. The closing of this transaction and the delivery of the executed Quitclaim Deed to Buyer and the entire purchase price to Sellers shall take place at the offices of the Closing Agent, within ten (10) days of the date the final order(s) by the Department approving the Applications becomes non-appealable (the "Closing Date").

8. POSSESSION; PRORATIONS. The Buyer shall be given possession and use of the Water Rights on the Closing Date. Taxes and assessments, if any, on the Water Rights shall be prorated as of the Closing Date. The Sellers shall pay all such taxes and assessments which have

accrued prior to the Closing Date and the Buyer shall pay for all subsequent taxes and assessments upon the Water Rights.

9. PROTECTION OF WATER RIGHTS / 2007 IRRIGATION SEASON. Until final approval of the Applications by the Department, Seller is authorized to continue to use the Water Rights on the authorized place of use for irrigation purposes during the 2007 irrigation season or any time thereafter. However, in the event the Department approves the Applications during the 2007 irrigation season or at any time thereafter, and Closing takes place, Seller shall transfer possession of the Water Rights to Buyer and cease diverting the Water Rights, unless otherwise agreed to by Buyer. If Seller does not intend to use the Water Rights for the 2007 irrigation season, Seller shall notify Buyer and take any actions necessary to protect the Water Rights from a forfeiture finding due to non-use in 2007, including placing the Water Rights in the State Water Supply Bank if necessary.

10. DUTY TO DEFEND WATER RIGHTS IN SRBA. In the event the Applications are not approved by the Department by January 15, 2008, and an objection(s) is filed to the Water Rights' recommendations in the SRBA, Seller shall provide Buyer (and Buyer's attorney) with copies of all objections and shall file the necessary responses and defend the Water Rights in the SRBA. Seller shall consult with Buyer as to any actions taken with respect to the Water Rights in the SRBA. In the event Closing has not occurred and objections to the Water Rights are unresolved, this Agreement is voidable at Buyer's discretion.

11. NO COMMISSIONS. The parties agree that no real estate broker's or other commission shall be paid to anyone as a result of the transfer and sale of the Water Rights from Seller to Buyer pursuant to this Agreement, other than a consulting fee to be paid by the Seller to Matthew Luck.

12. GENERAL PROVISIONS.

a. Severance and Validity. In the event any provision of this Agreement or any part thereof shall be determined by any court of competent jurisdiction to be invalid, void, or otherwise unenforceable, the remaining provisions hereunder, or party thereof, shall remain in fully force and effect, and shall in no way be affected, impaired, or invalidated thereby, it being agreed that such remaining provision shall be construed in a manner most closely approximately the intention of the parties with respect to the invalid, void, or unenforceable provision or part thereof.

b. Attorney Fees. In the event of any suit or proceeding by either party herein against the other party, in any way arising out of this Agreement, or attempting to enforce any right herein granted, the losing party, in such suit or proceeding shall pay to the prevailing party such sum or sums as the court shall adjudge reasonable, in such suit or proceeding, for attorney's fees, including such fees on appeal, for such prevailing party.

c. Governing Law. The validity, meaning and effect of this Agreement shall be determined in accordance with the laws of the State of Idaho applicable to contracts made and performed in that state.

d. Captions to Paragraphs. The captions to the paragraphs of this Agreement are for convenience only and shall not be deemed to enlarge, diminish, explain or in any manner affect the meaning of such paragraphs.

e. Binding Contract. This Agreement shall be binding upon and inure to the benefit of the heirs, personal representative, administrators, successors, and assigns of the parties hereto.

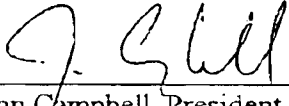
f. Notices. All notices and communications under this Agreement shall be in writing and shall be (i) delivered in person or (ii) mailed, postage prepaid, either by registered or certified mail, return receipt requested, or by overnight express carrier, addressed in each case to the party's address set forth in the introductory paragraph of this Agreement, or (iii) sent by facsimile with the original to follow by mail in the manner described above. It is provided, however, that any party may change its respective address for purposes of receipt of any such communication by giving ten (10) days prior written notice of such change to the other party hereto in the manner provided above. All notices sent pursuant to the terms of this paragraph shall be deemed received (x) if sent by overnight, express carrier, on the next business day immediately following the day sent, (y) if sent by registered or certified mail, on the third business day following the day sent or (z) if sent by facsimile on the date so sent.

IN WITNESS WHEREOF, the parties have caused their names to be subscribed on the dates set forth below.

"SELLER"

OLD CUTTERS, INC.

DATE: 5/9/07

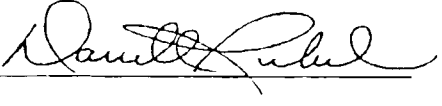
By: 

John Campbell, President

"BUYER"

DRY LOT, LLC

DATE: 5-11-07

By: 

5000

5-11-07

DATE

92-3761241

00

PAY TO THE ORDER OF

Sun Valley Title Trust Account

One Hundred Thousand, 00/100

\$ 100,000.00

DOLLARS

FOR

First Bank of Idaho

1241037600 3 3300 7631

1241037600 3 3300 7631

EXHIBIT A

Lots 1A, 2A, 3 and 4, Block 1 of a REPLAT OF DREXLER RANCH SUBDIVISION, BLAINE COUNTY, IDAHO, as shown on the official plat thereof, recorded February 8, 1999, as Instrument No. 423951, records of Blaine County, Idaho; and

A parcel of land within the SW1/4NE1/4, Section 4, T.2N., R.18E., B.M. and also within Lot 4, Buckhorn Subdivision Second Addition, Blaine County, Idaho, more particularly described as follows:

Commencing at a BLM brass cap marking the Southeast Corner of said SW1/4NE1/4, which corner is also the CE 1/16 corner of said Section 4 and which point is the REAL POINT OF BEGINNING:

thence North 89°42'50" West 291.01 feet to the Northwest corner of the Drexler Ranch;

thence North 23°17'51" West 37.31 feet along the centerline of the Hiawatha Canal and along the Southerly boundary of said Lot 4, Buckhorn Subdivision Second Addition;

thence North 89°50'20" East 306.07 feet along a fence to the East boundary of said SW1/4NE1/4, said Section 4;

thence South 0°27'55" West 36.58 feet along said East boundary of the SW1/4NE1/4, Section 4 to the point of beginning, containing 0.24 acres, more or less, also known as Tax Lot 6804.

**FIRST AMENDMENT TO
AGREEMENT FOR PURCHASE AND SALE
OF
WATER RIGHTS**

THIS FIRST AMENDMENT is made this 3 day of April, 2008, by and between OLD CUTTERS, INC., an Idaho corporation, whose address is P.O. Box 4944, Ketchum, Idaho, 83340 (hereinafter "Seller") and DRY LOT, LLC., an Idaho limited liability company, whose address is c/o Bernard I. Friedlander, 116 Valley Club Dr., Hailey, Idaho 83333 (hereinafter "Buyer").

RECITALS

- A. On May 11, 2007, Buyer and Seller entered into an *Agreement for Purchase and Sale of Water Rights* (the "Agreement") and on February 14, 2008 Buyer and Seller entered into an *Addendum to Agreement for Purchase and Sale of Water Rights* (the "Addendum").
- B. The parties have agreed to reduce the portion of the Seller's water rights to be sold by the Seller and purchased by the Buyer with a corresponding reduction in the purchase price.
- C. The Parties desire to amend the Agreement and Addendum accordingly.

TERMS AND CONDITIONS

1. The Recitals set forth above are an integral part of this First Amendment and are fully incorporated herein by this reference.
2. The Parties mutually agree that the Agreement and Addendum remain in full force and effect except as modified by this First Amendment. In the event of any conflict the terms and conditions of this First Amendment shall control over those in the Agreement and Addendum.
3. Recital C of the Agreement shall be amended to read as follows:

C. Buyer desires to purchase from Seller a portion of the Seller's Water Rights used to irrigate fifty-eight and one-half (58.5) acres of the Seller's Property (the "Water Rights"), and Sellers are willing to sell the Water Rights to Buyer, subject to approval by the Idaho Department of Water Resources (hereinafter referred to as the "Department") of: 1) the Buyer's application for permit to divert ground water from the two (2) wells which are part of its public water supply system and to irrigate fifty-eight and one-half (58.5) of the Buyer's Property and other land located in the Subdivision, using the Water Rights for mitigation; and 2) any other applications for permit or transfer required by the Department to fulfill the purpose and use identified in C.1 (the "Applications"); and to all other terms and conditions hereinafter set forth.

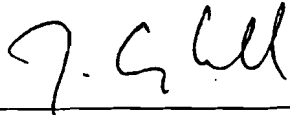
4. The total purchase price for the Water Rights set forth in paragraph 3 of the Agreement shall be One Million Seven Hundred Fifty-five Thousand Dollars (\$1,755,000).

IN WITNESS WHEREOF, the parties have caused their names to be subscribed on the dates set forth below.

"SELLER"

OLD CUTTERS, INC.

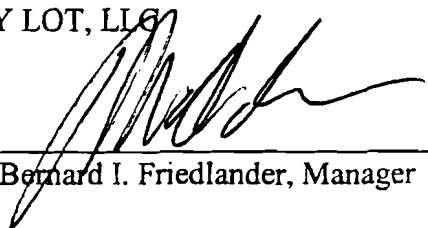
DATE: 3/28/08

By: 
John Campbell, President

"BUYER"

DRY LOT, LLC

DATE: 4.03.08

By: 
Bernard I. Friedlander, Manager