

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES

APPLICATION FOR PERMIT
To appropriate the public waters of the State of Idaho

RECEIVED

AUG 08 2007

DEPT. OF WATER RESOURCES
SOUTHERN REGION

1. Name of applicant Dry Lot LLC Phone 208-578-2116
Mailing address 116 Valley Club Dr. Hailey, ID 83333
2. Source of water supply Ground Water which is a tributary of N/A
3. Location of point of diversion is Township 03N Range 18E Sec. 20, in the NW $\frac{1}{4}$, SW $\frac{1}{4}$,
NE $\frac{1}{4}$, Govt. Lot _____, B.M., BLAINE County; additional points of diversion, if any: T.03N
R.18E SEC.20 NW1/4 SW1/4 NE1/4 B.M., BLAINE County.
4. Water will be used for the following purposes:
Amount 3.64 cfs for Irrigation purposes from 04/15 to 10/31 (both dates inclusive)
(cfs or acre-feet per annum)
Amount _____ for _____ purposes from _____ to _____ (both dates inclusive)
(cfs or acre-feet per annum)
Amount _____ for _____ purposes from _____ to _____ (both dates inclusive)
(cfs or acre-feet per annum)
Amount _____ for _____ purposes from _____ to _____ (both dates inclusive)
(cfs or acre-feet per annum)
5. Total quantity being appropriated is (a) 3.64 and/or (b) _____
cubic feet per second acre-feet per annum
6. Proposed diverting works:
 - a. Describe type and size of devices used to divert water from the source: Two (2) wells and two (2)
pumps deliver water to irrigation system
 - b. Height of storage dam _____ feet; active reservoir capacity _____ acre-feet; total
reservoir capacity _____ acre-feet.
 - c. Existing well diameters are 10, 12 inches; depth of wells are 140, 140 feet
 - d. Is groundwater with a temperature of greater than 85° degrees being sought? NO
 - e. If wells are already drilled, when? 1994, 1994; Drilling firm Walker Water Systems Inc.;
Well were drilled for (well owner) Valley Ranch Partners; Driller Permit No. 37-94S0089, 37-94S0078
7. Time required for completion of works and application of water to proposed beneficial use is 5 years (minimum 1 year)
8. Description of proposed uses (if irrigation only, go to item 9):
 - a. Hydropower; show total feet of head and proposed capacity in kW. N/A
 - b. Stockwatering; list number and kind of livestock. N/A
 - c. Municipal; show name of municipality. N/A
 - d. Domestic; show number of households. N/A
 - e. Other; describe fully. N/A

9. Description of place of use:

- a. If water is for irrigation, indicate acreage in each subdivision in the tabulation below.
- b. If water is used for other purposes, place a symbol of the use (example: D for Domestic) in the corresponding place of use below. See instructions for standard symbols.

TWP	RGE	SEC	NE				NW				SW				SE				TOTALS
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
03N	18E	20		11.5	40	40				5.4					40	32.4		40	209.3
03N	18E	21											40						40
03N	18E	28					40	40	40	40	40	40		40					280

* 89.1 acres will be irrigated with in 529.3 acre PPU.

Total number of acres to be irrigated 529.3*

10. Describe any other water rights used for the same purposes as described above. 37-8613A, 37-8810

11. a. Who owns the property at the point of diversion? Valley Club Home Owners Association

b. Who owns the land to be irrigated or place of use? Valley Club Home Owners Association

c. If the property is owned by a person other than the applicant, describe the arrangement enabling the applicant to make this filing: See accompanying narrative describing permit and concurrent transfer.

12.. Remarks: See accompanying narrative describing permit and concurrent transfer.

13. MAP OF PROPOSED PROJECT REQUIRED – Attach an 8 ½ "x 11" map clearly identifying the proposed point of diversion, place of use, section #, township & range. (A photocopy of a USGS 7.5 minute topographic quadrangle map is preferred.)

BE IT KNOWN that the undersigned hereby makes this application for permit to appropriate the public waters of the State of Idaho as herein set forth.

Signature of Applicant (include title, if applicable.)

James Luckman

Manager

Received by JS Date 8-8-07 Time 2:15 pm Preliminary check by _____

Fee \$ 370. Receipted by JS # 5029661 Date 8-8-07

Publication prepared by _____ Date _____ Published in _____

Publication approved _____ Date _____

6740 pd.
8/8/07 for applic.

N

BROCKWAY ENGINEERING, PLLC.
ZL - 8/8/07

F:\Projects\Valley Club H.O.A\ARCV IEW 9\VA. 2006 AERIAL MAP.mxd

0 0.125 0.25 0.5 Miles

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

Legend
● Existing Wells
□ TOTAL PPU ACREAGE = 529.3 ac.
□ Section Lines
T03N18E



RECEIVED
AUG 08 2007
DEPT. OF WATER RESOURCES
SOUTHERN REGION

Project No. 938-01-2006

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

Prepared for:

Valley Club Home Owners Association, Inc.
Hailey, ID

August 8, 2007

For information concerning this report, contact
Charles E. Brockway, Ph.D., P.E.



CHARLES E. BROCKWAY, PH.D., P.E.
CHARLES G. BROCKWAY, PH.D., P.E.

2016 NORTH WASHINGTON, SUITE 4
TWIN FALLS, IDAHO 83301

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

Valley Club Home Owners Association Inc.
Hailey, Idaho

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

August 6, 2007

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 0.5acres/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 (Figure 1). 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 proposes to provide irrigation water wherever possible to each lot owner up to an average of 0.9 acres or a total irrigated acreage associated with the residential lots of 89.1 acres. Since the current permits allow irrigation of 49.5 acres, the Association is desirous of securing water rights to allow an additional 40 acres or more of irrigation within the place of use of the domestic system but not limited to any certain acreage per lot.

The Association has acquired additional water rights from the Big Wood River. These water rights are recommended in the Snake River Basin Adjudication and are conveyed from the Big Wood River through the Hiawatha Canal. The Hiawatha Canal conveys some 30 cfs of Big Wood River water rights to users adjacent too 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 newly acquired Big Wood River water rights, 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 40 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 1.

The Valley Club Home Owners Assoc. dba DRY LOT LLC has purchased 60 acres of water rights 37-21130, 37-21137, and 37-21139 in the Big Wood River all with priority dates of 3/24/1883 and a permissible place of use of 60 acres. 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 14, average of about 153 days. The earliest it has been cut is July 1, as seen in Appendix B.

Irrigation water requirements for the proposed additional 40 acres were determined based on estimated Pdef (consumptive irrigation requirement) for turf published by the University of Idaho (Allen, 2007). Peak monthly use was determined from potential evapotranspiration at the 80% probability level as published by Allen. This analysis indicates an estimated maximum monthly day ET of 5.75 mm/day (0.23 inches/day) or an average daily consumptive discharge of 0.47 cfs on 40 acres. Irrigation season Pot ET for turf (lawns) at this site is 685mm (2.27 acre feet/acre) so the total annual ET for 40 acres is estimated at 90.8 acre feet and the net irrigation water requirement is estimated to be 77.3 acre feet as shown in Appendix C.

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.

Based on an application of the Theis equation for pumping of an additional 0.63 cfs from a single well to accommodate the additional peak irrigation requirement of 0.47 cfs, the additional drawdown is estimated less than 1.0 feet at a distance of 1000 feet from the well after continuous pumping for 40 days. This analysis is shown in Appendix A.

Dual infiltration basins near the north end of the project are proposed with water supplied from the pumping plant on the Hiawatha Canal through the pipeline to the northernmost pond on the Valley Club golf course (Figure 1). Water would be pumped from the northern Valley Club pond to two 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 138 acre feet, pond evaporation of 1.22 acre feet and an infiltration period of 153 days, the average infiltration of the basins would be 0.91 acre feet per day or an average discharge of 0.46 cfs (206 gpm). With an infiltration rate of 1.5 ft/day, the basin wetted area required would be 60 acres or 26,140 square feet. The two proposed basins would be approximately 75 x175 feet each in size and located at least 500 feet from the existing wells.

A pump from the Valley Club upper pond to the infiltration basins would be designed for a discharge of 400 gpm. 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 basin with monthly reporting to ascertain the volume infiltrated. Flow meters are currently installed on the two domestic wells and total volumes pumped are documented to assure compliance with water right.

The goal of the water right acquisition is to assure that an additional 40 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 0.9 acres. Each lot owner may irrigate up to 0.5 acres from the original two water rights. The additional 40 acres of irrigation allowed by the proposed permit and transfer can be allocated by the Owners Association any place within the authorized place or use. In addition, the Association would like to assure that the full additional 40 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 40 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 0.9 acres per lot or 89.1 acres. Current ground water rights allow the irrigation of 99x 0.5 or 49.5 acres. The additional irrigated acreage is therefore 39.6 acres at full buildout. The additional water right purchased by Valley Club Owners Assoc. is the 3/24/1883 irrigation right which allows 60 acres of irrigation with the established irrigation diversion of 3.5 af/acre for a full irrigation season or 210 acre feet for the 60 purchased acres. On average, this right has been on 153 days or through September 15. As shown in Appendix C, the consumptive irrigation requirement for the 153 days is estimated at 2.56 acre feet per acre or 168.8 acre feet on the 60 historically irrigated acres assuming a frequently cut alfalfa crop.

The seasonal consumptive irrigation requirement for the 39.6 additional irrigated acres on the Valley Club Subdivision is estimated at 39.6×1.95 ac ft/acre or 77.3 acre feet for the full 183 day season. 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 0.164 ac ft/acre or $0.164 \times 39.6 = 6.5$ acre feet (Table 1). By operating the infiltration system for 153 days, from April 15 through September 15, approximately 138 acre feet will be added to the aquifer which will more than mitigate for the irrigation season consumptive irrigation requirement of 77.3 acre feet. The 77.3 acre feet of seasonal consumptive irrigation requirement for the additional Valley Club Owners acreage is $77.3/168.8 = 46\%$ of the seasonal consumptive irrigation requirement under the purchased water right. Therefore, at full buildout, approximately 54% of the seasonal consumptive irrigation requirement on the 60 acres of the 3/24/1883 water right will not be required for mitigation. Additionally, the average groundwater diversion for the full irrigation season of 138.1 acre feet is matched by the infiltration volume of 138.3 acre feet so there is no net temporal impact on the aquifer. The infiltration volume exceeds the diversion requirement throughout the irrigation season until the surface water right is out of priority (see seasonal graph of infiltration). Since the ground water diversion points and infiltration basins are approximately 700 feet apart the local effect on the aquifer will be minimal. Pumping of the extended season of volume of 6.5 acre feet is not expected to significantly impact any local ground water diversions. The proposed place of use for the recently purchased water rights 37-21130, 37-21137, and 37-21139 will consist of the entire subdivision as shown in Appendix D. This place of use consists of 529.3 acres and the total allowed irrigation including existing and new water rights is 89.1 acres.

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. Any portion of the water right not required for mitigation will be offered to the Idaho State Water Bank.

A maintenance program for the infiltration basin will be developed and followed to assure that infiltration rates are maintained. This program will consist of scarifying the bottom of the basin and/or removal of fine grained sediments as necessary.

The place of use of the water right purchased for ground water mitigation is located approximately three (3) miles south of the new proposed place of use on the Valley Club Subdivision, Figure 2. Cessation of irrigation with Big Wood River water on the historical place of use will reduce deep percolation to the Big Wood River Valley aquifer. However, the infiltration of water in excess of the additional net depletion at the proposed new site will more than mitigate for the increased groundwater pumped at the new site and assist in mitigation for the decreased deep percolation at the historical site.

The water rights purchased by the Dry Lot LLC for mitigation of aquifer pumping requires 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 pervious transfer. This analysis shows that, with the recent lining of part of the canal, moving the diversion of 4.0 cfs of the purchased water rights upstream to the Valley Club Inc diversion will require 0.25 cfs to remain in the canal to make up the loss. Therefore, the remaining 3.75 cfs is available for diversion at the Valley Club Inc. diversion. The spreadsheets showing the IDWR analysis are included in Appendix D.

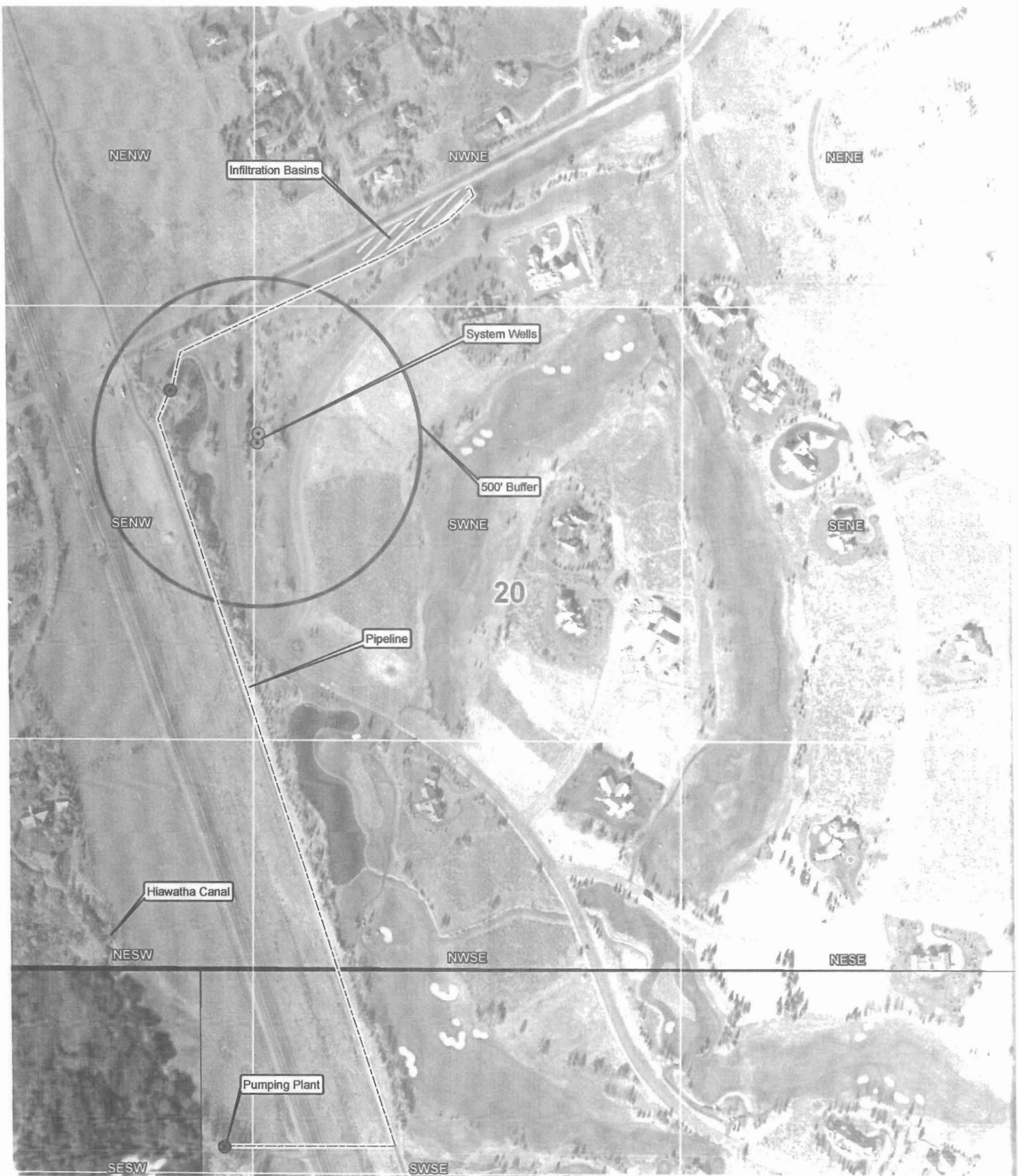


FIGURE 1.

**VALLEY CLUB HOME OWNERS ASSOCIATION
PROPOSED GROUND WATER MITIGATION PLAN
T.03N R.18E SEC.20
2006 AERIAL PHOTOGRAPH**

0 0.025 0.05 0.1 Miles
+ + + + +

BROCKWAY ENGINEERING, PLLC.
ZL - 8/8/07

Legend

- Pumping Plant
- Pipeline
- Infiltration Basins**
- Zone
- 500'
- Infiltration Basin
- Wells
- Section_Lines
- T03N18E



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:
Name Valley Ranch Partners
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 1/4 NE 1/4 1/4
 Gov't Lot _____ County Blaine 10 acre 160 acre
 Valley Club Drive

Address of Well Site Valley Club Drive

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

Lt. _____ 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 ☐ ~~NOX~~ 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
☐ Screens Screen Type _____

From	To	Slot Size	Number	Diameter	Material	Casing	Line
64	136	1/8 x 1/2	± 750			☒	☐
						☐	☐
						☐	☐

10. STATIC WATER LEVEL OR ARTESIAN PRESSURE:

64 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)

Water

Bore Dia.	From	To	Remarks: Lithology, Water Quality & Temperature	Y	N
16	0	3	Surface soil & gravel		
	3	8	Boulders & gravel		
	8	14	Clay & boulders		
	14	16	Gravel		
	16	20	Clay & gravel (stays open)		
10	20	42	Clay & gravel		
	42	47	Coarse gravel, sand & clay		
	47	50	Clay & gravel	T	
	50	57	Coarse gravel		
	57	64	Clay & gravel		
	64	77	Gravel & sand	X	
	77	84	Clay, gravel & sand	?	
	84	97	Gravel & sand	X	
	97	105	Coarse gravel & clay	?	
	105	109	Clay & gravel		X
	109	140	Gravel, sand & clay	X	

RECEIVED

AUG 12 1954

AUG 08 1994

Department of Water Resource
Southern Region Office

MICROFILMEN

MAY 08 1994

Completed Depth : 140 feet (Measurable)
Date: Started 7/13/94 Completed 7/20/94

T3-DRILLER'S CERTIFICATION

I/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

Firm Official _____ Date 7/28/94

and
Supervisor or Operator W. H. Walk Date _____

(Sign once if Firm Official & Operator)

IDAHO DEPARTMENT OF WATER RESOURCES
WELL DRILLER'S REPORTUse Typewriter
or
Ball Point Pen1. DRILLING PERMIT NO. 37. 94. S. 0078 . 000
Other IDWR No. _____2. OWNER: Valley Ranch Partners
Name _____
Address % EHM Engineers 621 N College Suite 100
City Twin Falls State ID Zip 83301

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
Gov't Lot _____ County Blaine 10 acres 160 acres

Address of Well Site Valley Club Drive
City _____
(Give at least name of road + Distance to Road or Landmark)Lt. _____ Bk. _____ Sub. Name The Valley Club
Parcel A

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	0	20	40 Sk	Overbore

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

8. CASING/LINER:

Diameter	From	To	Gauge	Material	Casing	Liner	Welded	Thread
12.75	+3	140	375	Steel	☒	☐	☒	☐
					☐	☐	☐	☐
					☐	☐	☐	☐

Length of Headpipe _____ Length of Tailpipe _____

9. PERFORATIONS/SCREENS

☒ Perforations Method Knife
☐ Screens Screen Type _____

From	To	Slot Size	Number	Diameter	Material	Casing	Liner
70	136	1/2 x 1/4	±1020			☒	☐
						☐	☐
						☐	☐

10. STATIC WATER LEVEL OR ARTESIAN PRESSURE:

71 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
507	36 ft.	84'	7 1/2 hr.

Water Temp. _____ Bottom hole temp. _____

Water Quality test or comments: _____

12. LITHOLOGIC LOG: (Describe repairs or abandonment)

Bore Dia.	From	To	Remarks: Lithology, Water Quality & Temperature	Y	N
18	0	2	Surface		
	2	6	Gravel		
	6	17	Boulders & gravel		
	17	20	Coarse gravel & clay		
12	20	30	Coarse gravel & clay		
	30	45	Gravel & clay		
	45	47	Coarse gravel		
	47	51	Clay & gravel		
	51	71	Coarse gravel & sand	T	
	71	80	Coarse gravel & sand	X	
	80	84	Clay & gravel		
	84	95	Gravel & sand	X	
	95	108	Clay & gravel & sand	X	
	108	130	Coarse gravel & sand	X	
	130	140	Gravel & clay	X	

RECEIVED

AUG 12 1994

Department of Water Resources

J 5 12 11

AUG 02 1994

Department of Water Resources
Southern Region OfficeCompleted Depth 140 feet (Measurable)
Date: Started 6/22/94 Completed 7/8/94

13. DRILLER'S CERTIFICATION

I/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 83301Firm Official _____ Date 7/25/94
and
Supervisor or Operator Paul Walk Date _____
(Sign once if Firm Official & Operator)

RECEIVED
OCT 28 1959
Department of Agriculture

**WELL LOG AND REPORT OF THE
STATE RECLAMATION ENGINEER OF IDAHO**

034429

Permit No. _____ Well No. _____ County Blairstown

Owner Morgan Bros

Address Hailey Idaho

Driller Eugene H. Walker

Address Twin Falls

Well location SE 1/4 NW 1/4 Sec 20 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 Bawl 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 Feet	To Feet	Length	Remarks—seals, grouting, etc.
20	0	174	174	

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 1/4 NW 1/4 Sec 20 T. 2 N. R. 18 E.

WELL LOG

From Feet	To Feet	Type of Material	Water-bearing Formation Ann. Yes or No	Casing Perforated Ann. 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	" "	?	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. Walker
By _____

Dated 1 Oct 1957

License No. 15

Use Typewriter
or
Ball Point Pen

09105'7

☐ Pump ☐ Bailer ☒ Air ☐ Flowing Artesian

Yield gal./min.	Drawdown	Pumping Level	Time
PROPRIETARY INFORMATION CONTACT OWNER.			

Water Temp. 7 Bottom hole temp. 7
Water Quality test or comments: _____

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

Bore Dia.	From	To	Remarks: Lithology, Water Quality & Temperature	Y	N
108	0	2	TOP SOIL		✓
108	2	18	SUBSOIL		✓
8	18	65	ALLUVIUM	✓	
8	65	75	BROWN LIMESTONE		✓
8	75	100	ALLUVIUM	✓	
8	100	112	CLAY & GRAVEL		✓
8	112	120	LIMESTONE	✓	

[illegible][illegible][illegible]

		R	E	C	O	R	D		
--	--	---	---	---	---	---	---	--	--

[illegible]

Department of Water Resources

Sanitation Region Office

[illegible][illegible]

RECEIVED

		FEB 10		
--	--	--------	--	--

1995

[illegible]

Completed Depth 120 (Measurable)

Date: Started 3-12-94 Completed 3-13-94

13. DRILLER'S CERTIFICATION

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

BOX 837
Firm Name BELLEVUE, ID 83213 Firm No. 265

Firm Official Ken Smith Date 4-18-94

and
Supervisor or Operator BOO McVinn Date 4-18-91

(Sign once if Firm Official & Operator)

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		Twp. 3		☒ North	or	☐ South
W		Rge. 18		☒ East	or	☐ West
E		Sec. 20		SW 1/4 NE 1/4 NE 1/4		
S		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	
	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	

RECEIVED

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 83301Firm Official
and

Date 11/28/05

Driller or Operator

Date 11/28/05

(Sign once in Firm Official & Operator)

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
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.

USE TYPEWRITER OR
BALLPOINT PEN

[illegible]

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

REPORT OF WELL DRILLER
State of Idaho

RECEIVED

MAY 29 1969

State law requires that this report shall be filed with the Department of 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

	X		
		Sec.	

LOCATION OF WELL: County BLAINE

SE NW Sec. 20 T. 3N N. 18E E/1

Use other side for additional remarks

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

USGS

CORRECTED COPY

Form 238-7
11/97

IDAHO 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

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

Lt. _____ 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: _____

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 _____

12. LITHOLOGIC LOG: (Describe repairs or abandonment)

Bore Dia.	From	To	Remarks: Lithology, Water Quality & Temperature	Y	N
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	103	Sand & Boulders	X	
6	103	143	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)

507 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.

[illegible]

Appendix B
Water Rights Purchased

Valley Club Owners Assoc.

Cutter Water Right Seasonal CIR

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

Period of Active Priority Based on WD 37 Records

Exceedance 80% Number of Days on 122 or until August 15

Estimated Irrigation Efficiency-flood irrigation 0.5

Acres 66

Alfalfa (frequent cuttings) Pdef Net irrigation water requirement (CIR)

Month	Apr	May	Jun	Jul	Aug 1-15	Aug 16-31	Sep	Oct	Season
Days	15	31	30	31	15	16	0	15	183
Days Active 80% ex	15	31	30	31	15	0	0	0	122
Accum days	15	46	76	107	122				

Supplied									
mm/day	0.55	2.37	4.97	5.52	4.53	4.53	3.16	0.66	
in/day	0.02	0.09	0.20	0.22	0.18	0.18	0.13	0.03	0.00
Pdef in/period	0.33	2.93	5.94	6.82	2.71	0.00	0.00	0.00	18.72
Pdef ft/period	0.03	0.24	0.50	0.57	0.23	0.00	0.00	0.00	1.56
Pdef ac-ft	1.81	16.10	32.67	37.50	14.89	0.00	0.00	0.00	102.96
Applic Effic %	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61
Div. Req't	2.96	26.39	53.56	61.47	24.41	0.00	0.00	0.00	168.79
									2.56 af/ac

Full Season									
mm/day	0.55	2.37	4.97	5.52	4.53		3.16	0.66	
in/day	0.02	0.09	0.20	0.22	0.18		0.13	0.03	0.00
Pdef in/period	0.33	2.93	5.94	6.82	5.59		3.78	0.39	25.78
Pdef ft/period	0.03	0.24	0.50	0.57	0.47		0.31	0.03	2.15
Pdef ac-ft	1.81	16.10	32.67	37.50	30.77		20.77	2.17	141.79
Applic Effic %	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61
Div. Req't	2.96	26.39	53.56	61.47	50.45		34.05	3.56	232.44
									3.52 af/ac

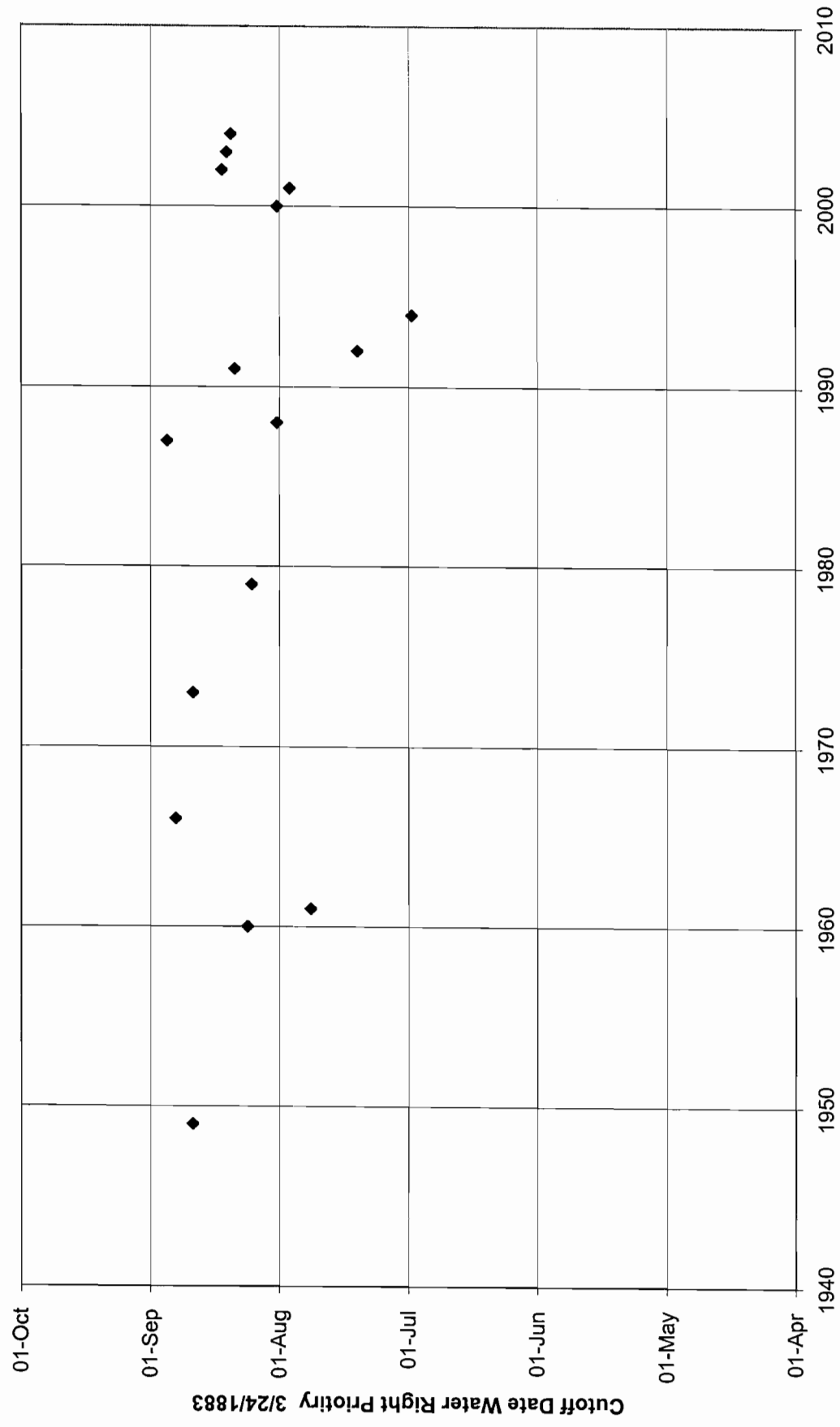
Difference in seasonal CIR and CIR provided under water rights

Number of days active= 122 or 38.82 af 27.4% %

Difference in seasonal diversion req't and diversion requirement provided under water rights

or 63.65 af 27.4% %

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				

[illegible]

[illegible]

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

Hailey Ranger Stn (NWS NOAA--103942)

Statistics based on 30 years between 1947 to 1981

Open water - shallow systems (ponds, streams)

Potential Evapotranspiration

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Growing Season ^a	Annual
Mean	mm/day												mm	
Monthly ^b	0.41	0.72	1.2	2.32	3.28	3.77	4.26	3.8	2.78	1.71	0.85	0.33	770	770
15-Day Moving Average ^c	0.4	0.71	1.19	2.35	3.27	3.75	4.25	3.81	2.75	1.7	0.82	0.33		
7-Day Moving Average ^d	0.41	0.72	1.2	2.32	3.28	3.75	4.26	3.8	2.77	1.71	0.83	0.33		
3-Day Moving Average ^e	0.41	0.72	1.2	2.32	3.28	3.75	4.27	3.8	2.78	1.71	0.84	0.33		
Standard Deviation	mm/day												mm	
Monthly	0.1	0.07	0.16	0.26	0.47	0.32	0.28	0.26	0.23	0.3	0.11	0.06	26	26
15-Day Moving Average	0.08	0.06	0.16	0.33	0.45	0.45	0.23	0.31	0.34	0.23	0.15	0.07		
7-Day Moving Average	0.11	0.13	0.22	0.48	0.61	0.58	0.28	0.38	0.45	0.4	0.2	0.09		
3-Day Moving Average	0.14	0.17	0.23	0.58	0.74	0.71	0.4	0.48	0.54	0.5	0.24	0.11		
20% Exceedance	mm/day												mm	
Monthly	0.44	0.78	1.28	2.5	3.48	3.93	4.41	3.93	2.96	1.88	0.73	0.38	798	798
15-Day Moving Average	0.53	0.86	1.45	2.98	3.95	4.3	4.58	4.21	3.21	2.15	0.92	0.41		
7-Day Moving Average	0.65	1	1.64	3.18	4.23	4.64	4.75	4.39	3.59	2.61	1.08	0.52		
3-Day Moving Average	0.76	1.13	2.03	3.6	4.64	4.98	4.98	4.59	3.74	2.7	1.16	0.59		
80% Exceedance	mm/day												mm	
Monthly	0.38	0.66	1.12	2.15	2.95	3.48	4.07	3.68	2.95	1.51	0.55	0.28	744	744
15-Day Moving Average	0.27	0.56	0.95	1.78	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	2.5	1.57	0.78	0.24	0.09		
Ave Highest ET	mm/day												--	
15-Day Moving Average ^f	0.47	0.8	1.38	2.62	3.63	4.11	4.44	4.06	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	3.38	2.27	0.92	0.44		
3-Day Moving Average ^h	0.67	1.01	1.78	3.23	4.33	4.75	4.85	4.47	3.62	2.51	1.08	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	2.48	1.41	0.51	0.28		
7-Day Moving Average ^g	0.28	0.55	0.91	1.74	2.43	2.98	3.8	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	2.6	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	-0.46	0.04	0.75	-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	3.95	0.61	1.28	3.17	0.68	2.88	0.98	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

Appendix C

Water Requirements and Aquifer Water Balance

Valley Club Homeowners Association

Seasonal Aquifer Mitigation

Weather Station	Hailey	Data from	ET Idaho	Allen 2007	Infiltration System	
Number of lots	99	0.4 acres		No of ponds	2	
Acres/lot irrigated	39.6 acres			Pond size 1L	175	
Total irrigated acres				W	75	
				Area	0.30 acres	
				Total area	0.60 acres	

Turf(lawns)		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Growing Annual
Month	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	0.90	1.40	2.40	4.22	12.47	20.15	23.44	20.38	12.78	4.69	1.26	0.77	90.06 106.89

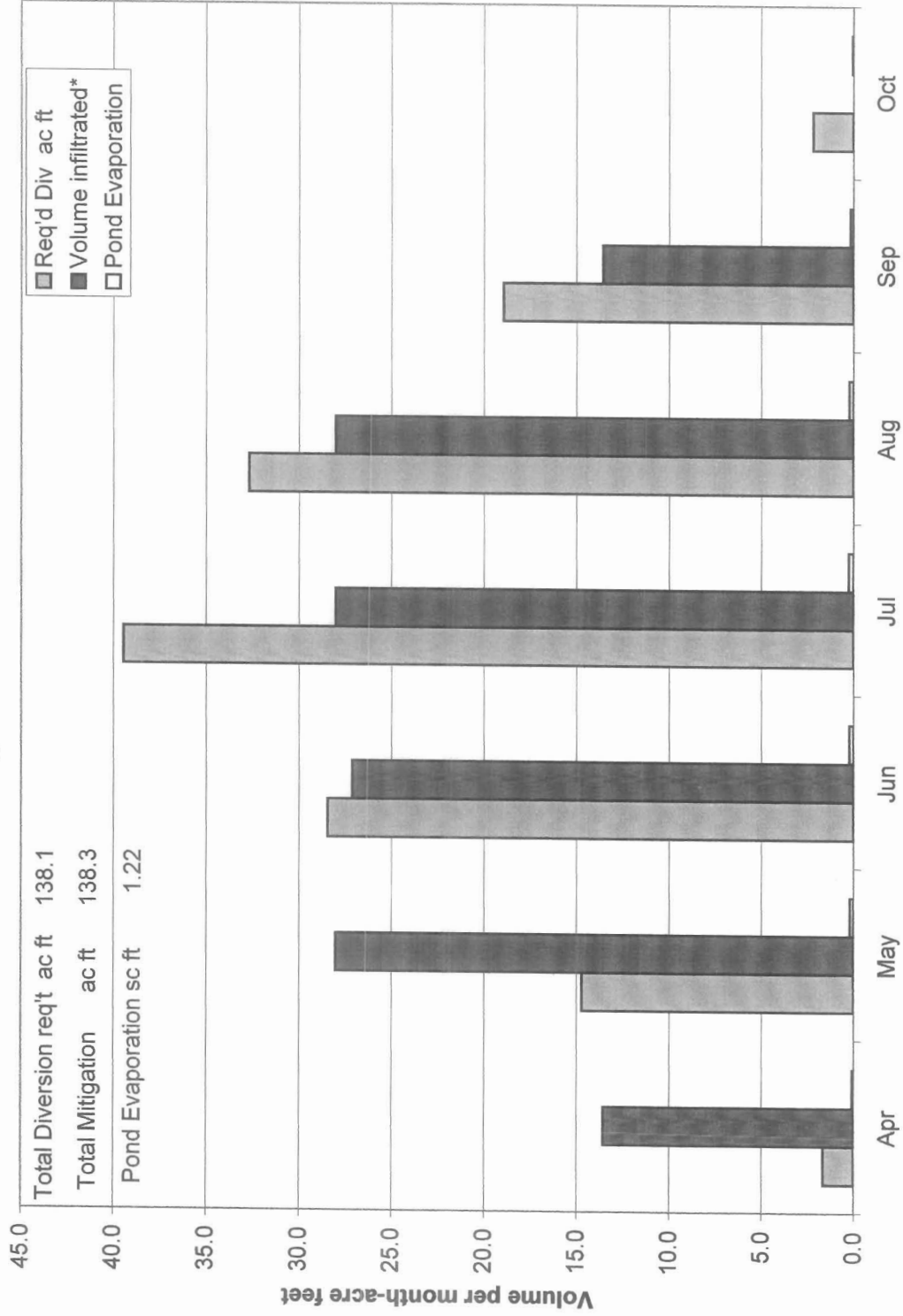
Turf(lawns)		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Growing Annual
Month	mm/day	0.02	0.13	0.21	0.47	2.02	4.04	5.42	4.49	2.69	0.6	-0.26	-0.05	574 620
	in/day	0.00	0.01	0.01	0.02	0.08	0.16	0.22	0.18	0.11	0.02	-0.01	0.00	22.87 24.70
	Pdef in/mo	0.02	0.15	0.26	0.56	2.49	4.83	6.69	5.55	3.22	0.74	-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	0.08	0.48	0.86	1.85	8.23	15.93	22.09	18.30	10.61	2.45	-1.03	-0.20	75.47 81.51

Average year		Apr	May	Jun	Jul	Aug	Sep	Oct	Season	Full season
Month	Days	15	31	30	31	31	30	15	183	
Aquifer Pumping										
Pdef (CIR)ac ft/period		0.9	8.2	15.9	22.1	18.3	10.6	1.2	77.3 af	
Irrig. Efficiency		0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	
Req'd Div ac ft		1.7	14.7	28.5	39.4	32.7	18.9	2.2	138.1 af or	3.5 af/acre diversion
Accum. Diversion		1.7	16.4	44.8	84.3	116.9	135.9	138.1	af	
Avg daily cfs		0.06	0.24	0.48	0.64	0.53	0.32	0.07	0.38 cfs or	

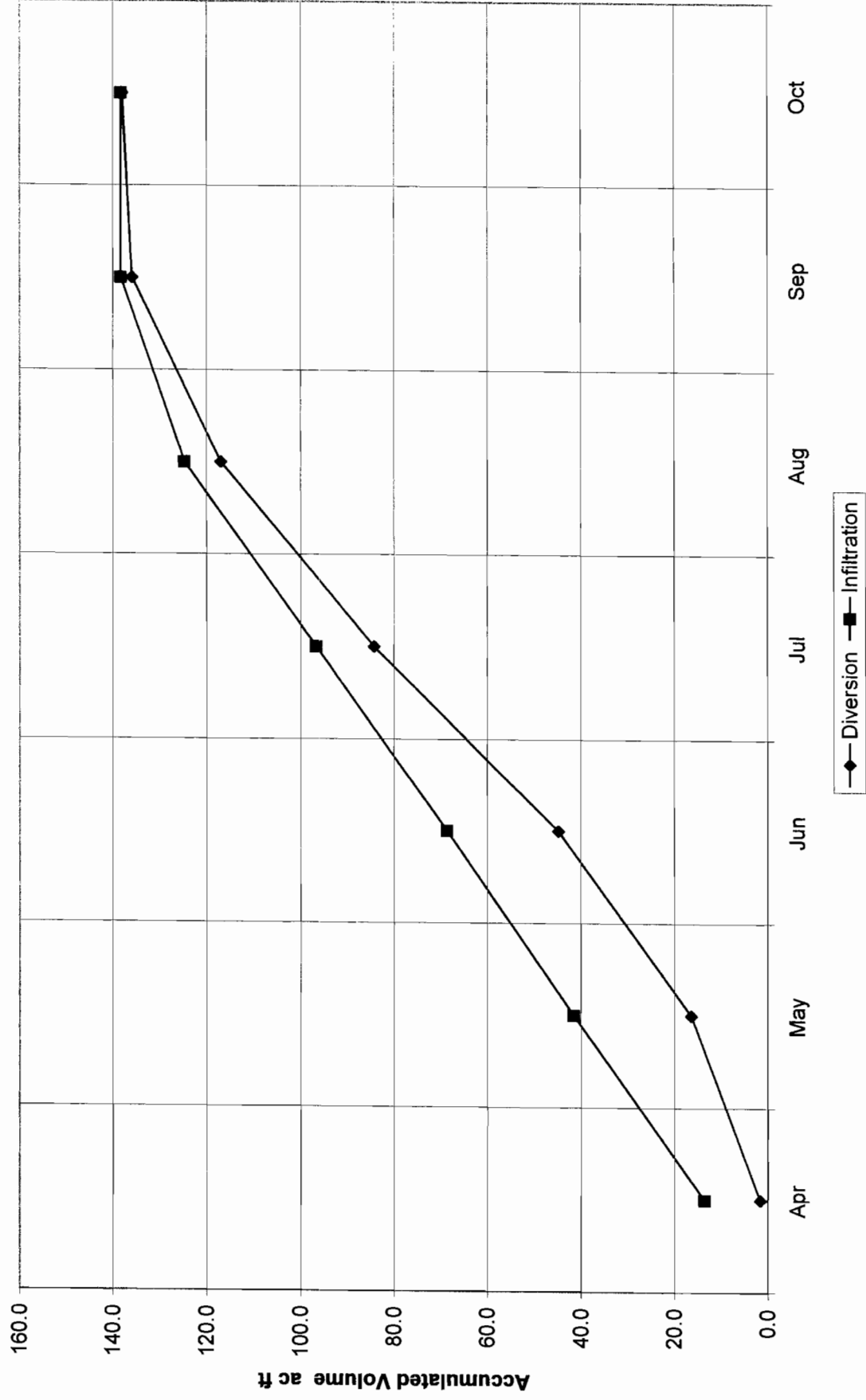
Infiltration		Apr	May	Jun	Jul	Aug	Sep	Oct	Season	Full season
Month	Days	15	31	30	31	31	30	15	183	
Volume infiltrated*		13.56	28.02	27.12	28.02	28.02	13.56		138.3 af*	* Water right in priority until Sept 15=153 days
Daily avg cfs		0.457	0.457	0.457	0.457	0.457	0.228			
Accumulated inflit.		13.6	41.6	68.7	96.7	124.7	138.3			
Pond Evap										
Pond Evap mm/day		2.32	3.28	3.77	4.26	3.8	2.78	1.71		
Pond Evap in/day		0.092	0.131	0.150	0.170	0.151	0.111	0.068		
Pond Evap ac ft/period		0.07	0.20	0.23	0.26	0.24	0.17	0.05	1.22 ac ft	Open water evap- Allen 2007
Pond Evap cfs		0.002	0.003	0.004	0.004	0.004	0.003	0.002		
									139.5 ac ft	Total infiltration +pond evap

Infiltration +Pond Evap		Apr	May	Jun	Jul	Aug	Sep	Oct	Season	Full season
Month	Days	15	31	30	31	31	30	15	183	
Avg total daily cfs		0.46	0.46	0.46	0.46	0.46	0.23	0.00	0.46 cfs or	206.7 gpm
Volume total af		13.63	28.29	27.34	28.29	28.26	13.73	0.05	139.52	
Accumulated vol		13.63	41.85	69.20	97.48	125.74	139.47	139.52	0.23 af	
Excess(infil-div)		11.90	13.32	-1.34	-11.43	-4.66	-5.39	-2.18		
Excess accumulated		11.90	25.22	23.89	12.46	7.80	2.42	0.23		

Valley Club Homeowners Mitigation Plan Additional Irrigation and Extended Season Full Buildout



Valley Club Homeowners Aquifer Balance



Appendix D
Hiawatha Canal Data

CONVEYANCE LOSS - WORSTELL

NAME OF DITCH:

Hiawatha Ditch

BY:

adm

DATE:

02/05/01

REACH	LENGTH (FT)	AVE WIDTH (FT)	SEEPAGE (FT/DAY)	WORSTELL LOSS (CFS)	DELIVERY (CFS)	DELIVERY 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	29.99	0.0910	0.00	37.54	0.00
1	1910	18.0	3.00	1.30	6.88	29.99	0.0434	0.92	34.81	0.42
2	450	18.0	3.00	0.31	0.04	23.11	0.0133	0.01	26.63	0.00
3	480	18.0	3.00	0.33	0.02	23.07	0.0142	0.00	26.28	0.00
4	430	18.0	3.00	0.29	0.02	23.05	0.0127	0.00	25.94	0.00
5	1770	15.0	0.00	0.00	2.02	23.03	0.0000	0.35	25.62	0.16
6	730	15.0	0.00	0.00	1.45	21.01	0.0000	0.25	23.60	0.11
7	490	15.0	0.00	0.00	0.05	19.56	0.0000	0.01	22.15	0.00
8	1820	15.0	0.00	0.00	0.00	19.51	0.0000	0.00	22.10	0.00
9	1470	15.0	1.50	0.42	0.62	19.51	0.0214	0.12	22.10	0.05
10	4500	14.0	1.28	1.02	0.24	18.90	0.0539	0.06	21.07	0.03
11	680	12.0	1.00	0.10	2.17	18.66	0.0055	0.55	19.81	0.25
12	970	12.0	1.00	0.15	0.04	16.49	0.0089	0.01	17.54	0.00
13	350	12.0	1.00	0.05	0.13	16.45	0.0032	0.04	17.35	0.02
14	440	12.0	1.00	0.07	0.66	16.31	0.0041	0.18	17.16	0.08
15	1860	12.0	1.00	0.28	1.44	15.65	0.0180	0.42	16.43	0.19
16	530	12.0	1.00	0.08	0.82	14.21	0.0057	0.24	14.71	0.11
17	490	12.0	1.00	0.07	0.68	13.39	0.0055	0.00	13.81	0.09
18	450	12.0	1.00	0.07	0.00	12.71	0.0055	0.00	13.06	0.00
19	820	10.0	1.00	0.10	1.10	12.71	0.0082	0.35	12.99	0.16
20	550	7.0	0.66	0.04	1.95	11.61	0.0033	0.49	11.78	0.22
21	1260	4.0	0.66	0.04	0.20	10.06	0.0042	0.06	10.20	0.03
22	2900	4.0	0.66	0.10	2.86	9.86	0.0098	0.95	9.95	0.43
23	1	4.0	0.66	0.00	7.00	7.00	0.0000	2.32	7.00	1.05
TOTALS	26361			7.55	29.99		0.2409	7.55		3.41

or

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

loss after move of
4.0 from #18 to #1

Net contribution after move:
 $0.42 - 0.17 = 0.25$

0.5 cfs required to mitigate
removal of rights.

$\Rightarrow 0.25$ required to remain
in canal to make up
deficit

Before move share of loss:

$$\frac{4.00 \times 0.498}{4.00} = 0.498 \text{ cfs}$$

After move share of loss:

$$\frac{4.00 \times 0.42}{6.88} = 0.244 \text{ cfs}$$

$\Rightarrow$ Impact due to change =
 $0.498 - 0.244 = 0.254 \text{ cfs}$

0.5 per
Calculations
on
1991 Hiawatha
Transfield

CONVEYANCE LOSS - WORSTELL

DATE: 02/05/01

BY: adm

NAME OF DITCH: Hiawatha Ditch

REACH	LENGTH (FT)	AVE WIDTH (FT)	SEEPAGE (FT/DAY)	WORSTELL LOSS (CFS)	DELIVERY (CFS)	DELIVERY LEFT (CFS)	LOSS FACTOR	DELIVERY LOSS (CFS)	FLOW (CFS)	DELIVERY LOSS MINUS HIWATHA RIGHTS FOR LOSS
Decree	900	24.0	10.00	2.73	0.00	29.99	0.0910	0.00	39.16	0.00
1	1910	18.0	3.00	1.30	6.88	29.99	0.0434	0.92	36.43	0.51
2	450	18.0	3.00	0.31	0.04	23.11	0.0133	0.01	28.25	0.00
3	480	18.0	3.00	0.33	0.02	23.07	0.0142	0.00	27.90	0.00
4	430	18.0	3.00	0.29	0.02	23.05	0.0127	0.00	27.56	0.00
5	1770	15.0	2.25	0.75	2.02	23.03	0.0328	0.42	27.24	0.23
6	730	15.0	1.50	0.21	1.45	21.01	0.0099	0.32	24.47	0.17
7	490	15.0	1.50	0.14	0.05	19.56	0.0071	0.01	22.81	0.01
8	1820	15.0	1.50	0.52	0.00	19.51	0.0265	0.00	22.62	0.00
9	1470	15.0	1.50	0.42	0.62	19.51	0.0214	0.17	22.10	0.09
10	4500	14.0	1.28	1.02	0.24	18.90	0.0539	0.08	21.07	0.04
11	680	12.0	1.00	0.10	2.17	18.66	0.0055	0.72	19.81	0.39
12	970	12.0	1.00	0.15	0.04	16.49	0.0089	0.01	17.54	0.01
13	350	12.0	1.00	0.05	0.13	16.45	0.0032	0.05	17.35	0.03
14	440	12.0	1.00	0.07	0.66	16.31	0.0041	0.23	17.16	0.13
15	1860	12.0	1.00	0.28	1.44	15.65	0.0180	0.53	16.43	0.29
16	530	12.0	1.00	0.08	0.82	14.21	0.0057	0.30	14.71	0.17
17	490	12.0	1.00	0.07	0.68	13.39	0.0055	0.26	13.81	0.14
18	460	12.0	1.00	0.07	0.00	12.71	0.0055	0.00	13.06	0.00
19	820	10.0	1.00	0.10	1.10	12.71	0.0082	0.43	12.99	0.24
20	650	7.0	0.66	0.04	1.55	11.61	0.0033	0.61	11.78	0.33
21	1260	4.0	0.66	0.04	0.20	10.06	0.0042	0.08	10.20	0.04
22	2900	4.0	0.66	0.10	2.86	9.86	0.0098	1.17	9.95	0.64
23	1	4.0	0.66	0.00	7.00	7.00	0.0000	2.86	7.00	1.57
TOTALS	26361			9.17	29.99		0.3171	9.17		5.03

loss after moving 4.0
from #18 to #1
Net contribution after move =
0.51 - 0.21 = 0.30
0.75 cfs req'd to mitigate
removal
=> 0.45 cfs req'd to
remain in canal to
make up deficit

REACH = SECTION OF CHANNEL
LENGTH = LENGTH OF REACH, THE CHANNEL CAN BE DIVIDED INTO EQUAL LENGTH REACHES
OR ACTUAL LENGTHS BETWEEN DELIVERY POINTS
SEEPAGE = 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 LEFT = TOTAL DELIVERIES IN REACH
DELIVERY LOSS = WORSTELL LOSS/DELIVERY LEFT
LOSS FACTOR = SUM(LOSS FACTORS OF CURRENT AND PREVIOUS REACHES) X DELIVERY;
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

BY:

adm

DATE:

02/05/01

REACH	LENGTH (FT)	AVE WIDTH (FT)	SEEPAGE (FT/DAY)	WORSTELL LOSS (CFS)	DELIVERY (CFS)	DELIVERY 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	29.99	0.0910	0.00	37.54	0.00
1	1910	18.0	3.00	1.30	2.83	29.99	0.0434	0.39	34.81	0.17
2	450	18.0	3.00	0.31	0.04	27.11	0.0113	0.01	30.63	0.00
3	480	18.0	3.00	0.33	0.02	27.07	0.0121	0.00	30.28	0.00
4	430	18.0	3.00	0.29	0.02	27.05	0.0108	0.00	29.94	0.00
5	1770	15.0	0.00	0.00	2.02	27.03	0.0000	0.00	29.62	0.15
6	730	15.0	0.00	0.00	1.45	25.01	0.0000	0.24	27.60	0.11
7	490	15.0	0.00	0.00	0.05	23.56	0.0000	0.01	26.15	0.00
8	1820	15.0	0.00	0.00	0.00	23.51	0.0000	0.00	26.10	0.00
9	1470	15.0	1.50	0.42	0.62	23.51	0.0178	0.11	26.10	0.05
10	4500	14.0	1.28	1.02	0.24	22.90	0.0445	0.06	25.07	0.03
11	580	12.0	1.00	0.10	2.17	22.66	0.0046	0.51	23.81	0.23
12	970	12.0	1.00	0.15	0.04	20.49	0.0072	0.01	21.54	0.00
13	350	12.0	1.00	0.05	0.13	20.45	0.0026	0.03	21.35	0.01
14	440	12.0	1.00	0.07	0.66	20.31	0.0033	0.16	21.16	0.07
15	1860	12.0	1.00	0.28	0.82	19.65	0.0144	0.38	20.43	0.17
16	530	12.0	1.00	0.08	0.82	18.21	0.0044	0.22	18.71	0.10
17	490	12.0	1.00	0.07	0.68	17.39	0.0043	0.18	17.81	0.08
18	450	12.0	1.00	0.07	4.00	16.71	0.0042	1.10	17.06	0.50
19	820	10.0	1.00	0.10	1.10	12.71	0.0082	0.31	12.99	0.14
20	650	7.0	0.56	0.04	1.55	11.61	0.0033	0.45	11.78	0.20
21	1260	4.0	0.66	0.04	0.20	10.06	0.0042	0.06	10.20	0.03
22	2300	4.0	0.66	0.10	2.86	9.86	0.0098	0.86	9.95	0.39
23	1	4.0	0.66	0.00	7.00	7.00	0.0000	2.11	7.00	0.95
TOTALS	26361			7.55	29.99		0.2102	7.55		3.41

Contribution before move

loss needed to remain in Hiawatha to negotiate removal of rights from canal

Reflects less loss due to lining #5-#8

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

Prior to installation of membrane lining

CONVEYANCE LOSS - WORSTELL

NAME OF DITCH: Hiawatha Ditch BY: adm DATE: 02/05/01

REACH	LENGTH (FT)	AVE WIDTH (FT)	SEEPAGE (FT/DAY)	WORSTELL LOSS (CFS)	DELIVERY (CFS)	DELIVERY 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	29.99	0.0910	0.00	39.16	0.00
1	1910	18.0	3.00	1.30	2.88	29.99	0.0434	0.39	36.43	0.21
2	450	18.0	3.00	0.31	0.04	27.11	0.0113	0.01	32.25	0.00
3	480	18.0	3.00	0.33	0.02	27.07	0.0121	0.00	31.90	0.00
4	430	18.0	3.00	0.29	0.02	27.05	0.0108	0.00	31.56	0.00
5	1770	15.0	2.25	0.75	2.02	27.03	0.0279	0.40	31.24	0.22
6	730	15.0	1.50	0.21	1.45	25.01	0.0083	0.30	28.47	0.16
7	490	15.0	1.50	0.14	0.05	23.56	0.0059	0.01	26.81	0.01
8	1820	15.0	1.50	0.52	0.00	23.51	0.0220	0.00	26.62	0.00
9	1470	15.0	1.50	0.42	0.62	23.51	0.0178	0.15	26.10	0.08
10	4500	14.0	1.28	1.02	0.24	22.90	0.0445	0.07	25.07	0.04
11	680	12.0	1.00	0.10	2.17	22.66	0.0046	0.65	23.81	0.36
12	970	12.0	1.00	0.15	0.04	20.49	0.0072	0.01	21.54	0.01
13	350	12.0	1.00	0.05	0.13	20.45	0.0026	0.04	21.35	0.02
14	440	12.0	1.00	0.07	0.66	20.31	0.0033	0.21	21.16	0.11
15	1860	12.0	1.00	0.28	1.44	19.65	0.0144	0.47	20.43	0.26
16	530	12.0	1.00	0.08	0.82	18.21	0.0043	0.23	17.81	0.13
17	490	12.0	1.00	0.07	0.68	17.39	0.0044	0.27	18.71	0.15
18	460	12.0	1.00	0.07	4.00	16.71	0.0042	1.36	17.06	0.21
19	820	10.0	1.00	0.10	1.10	12.71	0.0082	0.38	12.99	0.30
20	650	7.0	0.66	0.04	1.55	11.61	0.0033	0.54	11.78	0.30
21	1260	4.0	0.66	0.04	0.20	10.06	0.0042	0.07	10.20	0.04
22	2960	4.0	0.66	0.10	2.86	9.86	0.0098	1.04	9.95	0.57
23	1	4.0	0.66	0.00	7.00	7.00	0.0000	2.56	7.00	1.40
TOTALS	26361			9.17	29.99		0.2743	9.17		5.03

Contribution before move

loss needed to remain in Hiawatha to mitigate removal of rights from reach

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;
 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

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.

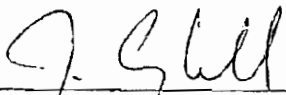
f. Notices. All notices and communications under this Agreement shall be in writing and shall be (i) delivered in person or (ii) mailed, postage prepaid, either by registered or certified mail, return receipt requested, or by overnight express carrier, addressed in each case to the party's address set 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.

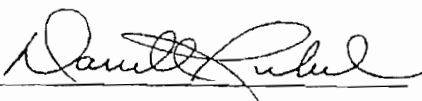
DATE: 5/9/07

By: 
John Campbell, President

"BUYER"

DRY LOT, LLC

DATE: 5-11-07

By: 

5000

5-11-07

DATE 5-11-07

92-376/1241

PAY TO THE ORDER OF

Sun Valley Title Trust Account

One Hundred Thousand, 00/100

\$ 100,000.00

DOLLARS

FOR

First Bank of Idaho

314 North State • Idaho, Idaho 83203 • (208) 378-1320

1241037601 3 3300 763111

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.