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JUN 17 2015

DEPARTMENT OF
WATER RESOURCESSTATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

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JUN 15 2015

DEPT OF WATER RESOURCES
SOUTHERN REGION

A Beneficial Use Field Report is prepared by a water right examiner as the result of an examination to clearly confirm and establish the extent of the beneficial use of water established in connection with a permit during the development period authorized by the permit and any extensions of time previously approved.

A. GENERAL INFORMATIONPermit No. 37-222521. Owner Dry Lot, LLCPhone No. (208) 788-0837Current address 116 Valley Club Dr., Hailey, ID 833332. Examiner's name Charles E. BrockwayEXAM DATE 10/13/20143. Accompanied by Woody FriedlanderEmail charles.e.brockway@brockwayeng.comAddress 2016 Washington St. N., Ste. 4, Twin Falls, ID 83301Relationship to permit holder ConsultantPhone No. (208) 736-85434. Source Ground Watertributary to N/A**B. OVERLAP REVIEW**1. Other water rights with the same place of use See Attached 2015 Annual Report2. Other water rights with the same source and point of diversion 37-22313, 37-22318, 37-22323**C. DIVERSION AND DELIVERY SYSTEM****1. Point(s) of Diversion:**

Ident. No.	Gov't Lot	¼	¼	¼	Sec	Twp	Rge	County	Method of Determination/Remarks
		NW	SW	NE	20	3N	18E	Blaine	East Well #1
		NW	SW	NE	20	3N	18E	Blaine	East Well #2

2. Place(s) of Use: Method of determination GIS

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
3N	18E	20	1.8	12	26	34				2.0					28	11		23	137.8
3N	18E	21											8.7						8.7
3N	18E	23					2.7	12	23	4.5	3.9	28							74.1

3. **Delivery System Diagram:** Indicate all major components and distances between components. Indicate weir size/ditch size/pipe diameter (inside), as applicable. Use the space provided or ☒ see attached.

Scale: 1" = _____

- ☒ Copy of USGS Quadrangle attached showing location(s) of point(s) of diversion and place(s) of use (**required**)
☒ Aerial photo attached (required for irrigation of 10+ acres)
☒ Photo of diversion and system attached

4.

Well or Diversion Identification No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
A0016203	High Thrust	40	6228A-SO-	Goulds SN#	Size 9BEH #Stages:6
			X07X125R4028	LP94372	12/12/94 6"
E0009079		50	Not Available		

*Code to correspond with no. on map and aerial photo

D. FLOW MEASUREMENTS

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date
In-line prop meter	Prop	McCromet	er 94-9592-6	9592	6"	
In-line prop meter	Prop	McCromet	er 94-9591-6	9591	6"	

2. **Measurements:** Meter readings 2103, 2014, both wells contained in annual reports

See Attached Narrative

This image shows a single sheet of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

Has the permit holder met all conditions of permit approval, including any mitigation requirements and/or measuring device installation requirements? ☒ Yes ☐ No If no, what must be done to meet the permit requirements?

[illegible]

F. FLOW CALCULATIONS

☐ Additional computation sheets attached

Measured Method:

*See 6/9/10 measurement results (attached)

G. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{I,R} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 75.4 \text{ AFA per transfer limited to recharged volume}$$

$$V_{DR} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation Season}) \times 1.9835 = 0.52 \times 199 \times 1.9835 = 205.2$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = 75.4$$

2. Volume Calculations for Other Uses:

H. RECOMMENDATIONS

1. Recommended Amounts

Beneficial Use	Period of Use		Rate of Diversion	Annual Volume
	From	To	Q (cfs)	V (afa)
Irrigation	4/15	10/31	0.52	75.4
	Totals:		0.52	75.4

2. Recommended Amendments

- ☐ Change P.D. as reflected on page 1 ☐ Add P.D. as reflected on page 1 ☐ None
☐ Change P.U. as reflected on page 1 ☐ Add P.U. as reflected on page 1 ☐ Other

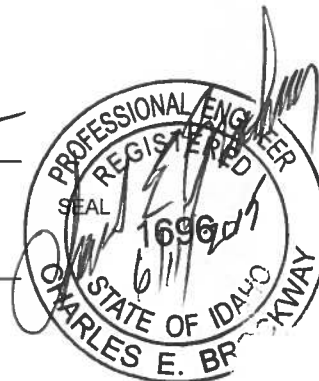
I. AUTHENTICATION

Field Examiner's Signature

Date _____

Reviewer

Date _____



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WATER RESOURCES

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DEPT OF WATER RESOURCES
SOUTHERN REGION

NARRATIVE TO ACCOMPANY BENEFICIAL FIELD REPORT

DRY LOT LLC PERMIT 37-22252.

Water right 37-22252 was granted to Dry Lot LLC on August 10, 2010 with a priority date of 8/8/2007 for the purpose of irrigating up to 27.5 acres on any of the area within the Valley Club Home Owners Association. The irrigation water is pumped from two wells owned and operated by the Valley Club Home Owners. These wells are also the source of domestic water for the existing 47 residences; they are located in the northwest corner of the subdivision (see Figure 1). The POU for water right 37-22252 consists of 220.6 acres within which 27.5 acres may be irrigated. The irrigation water is pumped through the Valley Club HOA distribution system to the lots in the subdivision.

As of 2014, the irrigated area on each lot consisted of a maximum of 0.5 acres authorized under the Valley Club HOA water right 37-8613A (23.0 acres on 46 currently irrigated lots), irrigated acres authorized under 37-22252 (27.5 acres) and one acre under a private water right(37-4F) totaled of 51.5 acres.

In 2014, total irrigation was delineated at approximately 52.8 acres. Due to additional construction on a lot within the subdivision, irrigation did not occur on lot 9 in 2014, leaving 46 lots irrigated. Lot 57 has no residence on it, but it is being irrigated, so it doesn't qualify for 0.5 acres of irrigation under Valley Club HOA water right 37-8613A. The additional infiltration volume enabled approximately 1.0 of the excess 1.3 acres to be irrigated. Table 1 shows the number and location (by subdivision lot number) of acres of land irrigated in connection with this water right during 2014.

Per IDWR's actual signed permit, Condition 4 on water right permit 37-22252 limits the irrigation under this right to 27.5 acres in any one season. A GIS analysis shows that this condition has been met as 27.5 acres were irrigated under 37-22252 within the POU in 2014.

Condition 5 requires the mitigation for the ground water use under 37-22252 by recharge of water authorized by 37-22313, 37-22318, and 37-22323. Dry Lot LLC has maintained ownership of water rights 37-22313, 37-22318, and 37-22323.

Condition 6 has been met since the volume of water recharged to the aquifer exceeds the 75.4 acre feet required for the irrigation of the authorized 27.5 acres. The recharge basins are fully operational and in 2014, 77.4 acre feet of water was measured as recharge during 2014 to the aquifer through an IDWR approved magnetic flow meter. This recharge volume exceeds the required 75.4 acre feet for irrigation of the 27.5 acres authorized.

The total ground water pumping from the Valley Club HOA wells in 2014 was 304.8 acre feet, 77.4 acre feet of which was water pumped under water right 37-22252. A calibration check of the two (2) McCrometer propeller meters on the two HOA wells performed by Brockway Engineering in 2009 showed that the meter on Well 1 registers 15% high and the meter on Well 2 registers 8% low (see Memo to the Valley Club HOA-Domestic Well Flow Meter Check Tests, attached). Meter readings for 2014 show that approximately 47.4% of the annual volume was provided from Well 1 and 52.6 % was provided from Well2,(see 2014 Aquifer Recharge and Pumping Report-Dry Lot LLC, attached) Therefore, an estimated weighted adjusted annual volume of pumping under the Dry Lot water right 37-22252 is 80.7 acre feet instead of the

reported 77.4 acre feet. This amounts to a pumped volume for irrigation 4.4% greater than the authorized volume due to the error in the flow meters.

Condition 9 of water right permit 37-22252 requires the submission of an annual report to include the volume of water diverted from the HOA wells, for each month of the prior calendar year, the number and location of the acres of land irrigated in connection with this right, and the number and location of the homes served domestic water from the authorized points of diversion pursuant to other rights during the previous calendar year. Please see the attached 2014 report (Aquifer Recharge and Pumping, Dry Lot LLC Report -2014)..

The applicant has complied with all of the conditions of water right permit 37-22252



Figure 1: Valley Club HOA Wells Locations.

DRY LOT LLC**IRRIGATION ANALYSIS- RESIDENCE LOTS**

BROCKWAY ENGINEERING, PLLC.

6/9/2015

Lot #:	Actual 2013 Assumed 14'	Irrigation Authorized	
		Under 37-8613A Per Lot WITH a	2014 Irrigation Per Lot Attributed to Dry Lot Permit
	Acres:	Residence (acres):	37-22252 (acres):
5	1.27	0.5	0.77
6	1.40	0.5	0.90
7	1.07	0.5	0.57
9	0	0	0.00
10	0.92	0.5	0.42
13	1.19	0.5	0.69
15	0.85	0.5	0.35
16	1.16	0.5	0.66
22	1.18	0.5	0.68
29	0.98	0.5	0.48
32	0.60	0.5	0.10
34	0.90	0.5	0.40
35	0.99	0.5	0.49
36	0.85	0.5	0.35
37	0.71	0.5	0.21
41	0.84	0.5	0.34
43	1.12	0.5	0.62
44	1.34	0.5	0.84
46	0.99	0.5	0.49
48	1.01	0.5	0.51
49	1.15	0.5	0.65
50	1.09	0.5	0.59
51	1.30	0.5	0.80
52	0.93	0.5	0.43
53	1.19	0.5	0.69
54	1.19	0.5	0.69
56	0.29	0	0.29
*57	1.76	0.5	0.26
58	1.30	0.5	0.80
61	0.91	0.5	0.41
64	1.08	0.5	0.58
65	1.28	0.5	0.78
66	1.73	0.5	1.23
67	1.05	0.5	0.55
68	1.41	0.5	0.91
70	1.33	0.5	0.83
77	1.01	0.5	0.51
78	1.10	0.5	0.60
80	1.04	0.5	0.54
83	1.16	0.5	0.66
85	1.42	0.5	0.92
88	1.16	0.5	0.66
92	1.24	0.5	0.74
95	1.15	0.5	0.65
96	1.38	0.5	0.88
97	1.28	0.5	0.78
98	1.07	0.5	0.57
99	1.38	0.5	0.88
* 1.0 acre deduction under 37-4F applied to Lot 57			
ACRE TOTALS =	52.8	23.0	28.8
		Permit 37-22252 =	27.5
		Difference =	1.3

Table 1: 2014 Irrigation Per Valley Club HOA Lot.

Close

IDAHO DEPARTMENT OF WATER RESOURCES
Water Permit Report

6/3/2015

WATER RIGHT NO. 37-22252

<u>Owner Type</u>	<u>Name and Address</u>
Current Owner	DRY LOT LLC C/O BARKER ROSHOLT & SIMPSON LLP ATTN TRAVIS THOMPSON 195 RIVER VISTA PL STE 204 TWIN FALLS, ID 83301-3029 (208) 733-0700
Attorney	TRAVIS L THOMPSON BARKER ROSHOLT & SIMPSON LLP 195 RIVER VISTA PL STE 204 TWIN FALLS, ID 83301-3029 (208)733-0700
Representative	CHARLES E BROCKWAY C/O BROCKWAY ENGINEERING 2016 N WASHINGTON ST #4 TWIN FALLS, ID 83301

Priority Date: 08/08/2007

Status: Active

<u>Source</u>	<u>Tributary</u>
GROUND WATER	

<u>Beneficial Use</u>	<u>From</u>	<u>To</u>	<u>Diversion Rate</u>	<u>Volume</u>
IRRIGATION	04/15	10/31	0.52 CFS	
Total Diversion			0.52 CFS	

Location of Point(s) of Diversion:

GROUND WATER|NWSWNE|Sec. 20|Township 03N|Range 18E|BLAINE County
GROUND WATER|NWSWNE|Sec. 20|Township 03N|Range 18E|BLAINE County

IRRIGATION Use:

Acre Limit: 27.5

Place(s) of use:

Place of Use Legal Description: IRRIGATION BLAINE County

<u>Township</u>	<u>Range</u>	<u>Section</u>	<u>Lot</u>	<u>Tract</u>	<u>Acres</u>	<u>Lot</u>	<u>Tract</u>	<u>Acres</u>	<u>Lot</u>	<u>Tract</u>	<u>Acres</u>	<u>Lot</u>	<u>Tract</u>	<u>Acres</u>
03N	18E	20		NENE	1.8		NWNE	12		SWNE	26		SENE	34
				SENE	2									
				NESE	28		NWSE	11		SESE	23			
		21		SWSW	8.7									
		28		NENW	2.7		NWNW	12		SWNW	23		SENE	4.5
				NESW	3.9		NWSW	28						

Total Acres: 220.6

Conditions of Approval:

1. 004 This right does not grant any right-of-way or easement across the land of another.
2. X27 This right is limited to the irrigation of 27.5 acres of turf grass within the place of use described above in a single irrigation season.
3. 116 The use of water under this right is mitigated by the ground water recharge authorized pursuant to water rights 37-22313, 37-22318, and 37-22323. See Transfer 74449. The water right holder shall maintain control of rights 37-22313, 37-22318, and 37-22323 for mitigation purposes.
4. The annual volume of water diverted under this right shall not exceed the annual volume of water delivered into the infiltration basin(s) for ground water recharge under rights 37-22313, 37-22318, and 37-22323 as measured at the point(s) of recharge.
5. 115 Prior to the diversion and use of water under this right, the right holder shall install and maintain acceptable measuring device(s) at the authorized point(s) of diversion in accordance with Department specifications.
6. R19 The right holder shall maintain a totalizing measuring device of a type approved by the Department as a part of the diverting works.
By January 31 each year, the right holder shall report to the Department: a) The volume of water diverted from the authorized points of diversion for each month of the prior calendar year, b) The number and location (by subdivision lot number) of the acres of land irrigated in connection with this right during the prior calendar year, and c) The number and location (by subdivision lot number) of the homes served domestic water from the authorized points of diversion pursuant to other water rights during the prior calendar year.
7. Use of water under this right will be regulated by a watermaster with responsibility for the distribution of water among appropriators within a water district. At the time of this approval, this water right is within State Water District No. 37.
8. R05 This permit does not authorize the construction of any new well or the deepening or enlargement of any existing well.
9. 068 The diversion and use of water described in this right may be subject to additional limitations agreed to by the protestant(s) and the right holder under separate agreement to which the Department is not a party and which may be enforceable by a court of law.
10. 020 Any license issued by IDWR pursuant to the right or portion thereof for the use of trust water is subject to a term review of 20 years after the date of this approval to determine availability of water for the use and to re-evaluate the public interest at the end of the term.
11. 051 Failure of the right holder to comply with any condition of approval is cause for the Director to cancel this permit.
12. 069

Dates:

Proof Due Date: 08/01/2015
Proof Made Date:
Approved Date: 08/10/2010
Moratorium Expiration Date:
Enlargement Use Priority Date:
Enlargement Statute Priority Date:
Application Received Date: 08/08/2007
Protest Deadline Date: 06/02/2008
Number of Protests: 2
Field Exam Date:
Date Sent to State Off:
Date Received at State Off:

Other Information:

State or Federal:
Owner Name Connector:
Water District Number: 37
Generic Max Rate per Acre:
Generic Max Volume per Acre:
Swan Falls Trust or Nontrust: T
Swan Falls Dismissed:
DLE Act Number:
Cary Act Number:
Mitigation Plan: True

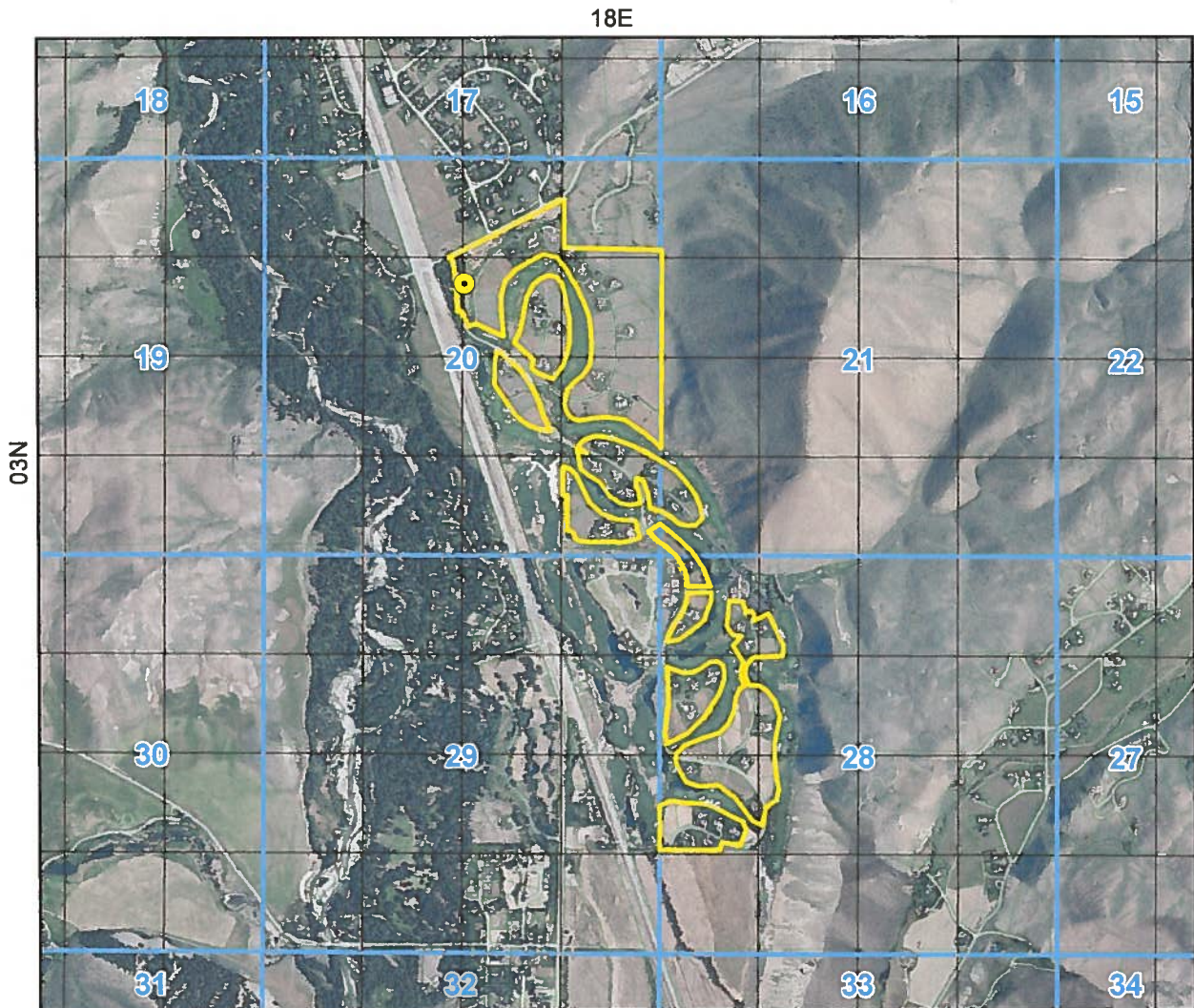
[Close](#)

State of Idaho
Department of Water Resources

Permit To Appropriate Water
37-22252

IRRIGATION

The map depicts the place of use for the water use listed above and point(s) of diversion of this right as currently derived from interpretations of the paper records and is used solely for illustrative purposes. Discrepancies between the computer representation and the permanent document file will be resolved in favor of the actual water right documents in the water right file.



-  Point of Diversion
-  Place Of Use Boundary
-  Townships
-  PLS Sections
-  Quarter Quarters
-  Taxlots

0 0.3 0.6 1.2 Miles



Brockway Engineering

MEMO TO THE VALLEY CLUB H.O.A. – DOMESTIC WELL FLOW METER CHECK TESTS

PROJECT: 938-02-2010

SUBJECT: Well Flow Meter Check Tests

DATE: 6-11-10

FROM: Zach Latham

PURPOSE:

This memo summarizes the flow meter tests done on the two Valley Club Homeowners Association (HOA) wells performed by Zach Latham of Brockway Engineering PLLC and accompanied by Woody Friedlander of the Valley Club HOA on Wednesday, June 9th 2010. The purpose of the flow meter tests was to determine if the existing in-line McCrometer propeller meters associated with each well's delivery line are functioning properly and recording the correct instantaneous flow rate as well as the correct total volume pumped by each well. Irrigation by common lot owners was not observed during the test although it is unknown how many lot owners were occupying a residence and whether or not they were irrigating or using potable water on the morning of the flow meter tests.

METHODS:

Well 1 is referred to as the well that sits in the existing HOA pump house and is driven by a 40 horsepower Gould pump. Well 1 was installed in late 1994. A Fuji Ultrasonic Meter (meter) was used to determine the flow out of each well and in the delivery line serving the common HOA system. The meter consists of a logging computer unit and a pair of detectors mounted on a sliding sensor and was calibrated by the Idaho Department of Water Resources in 2008. The meter was fitted to the Well 1 delivery line according to pipe material and sizing specifications, near the second pressure gauge upstream of the blue in-line McCrometer meter (see Figure 1). The location used to measure the flow on the Well 1 delivery line was very close to an upstream check valve and the McCrometer meter. The close proximity of the Fuji meter to sources of head loss within the Well 1 delivery line was unavoidable and may have influenced instantaneous and total gallons observed flows. The total gallons as recorded by the McCrometer meter and the Fuji meter were recorded and then Well 1 was turned on (See Table 1).

Well 2 is referred to as the well that sits between Valley Club drive and a golf course pond, immediately west of the HOA pump house. Well 2 is driven by a Berkley submersible 50 horsepower pump. After the Well 1 test was finished, the meter was taken off of Well 1 and was fitted onto the Well 2 delivery line according to pipe material and sizing specifications, upstream of the blue in-line McCrometer meter (see Figure 2). The location used to measure the flow on the Well 2 delivery line was very close to where the delivery pipe bends and enters the pump house and to the McCrometer meter. The close proximity of the Fuji meter to sources of head loss within the Well 2 delivery line was also unavoidable and may have influenced instantaneous and total gallons observed flows. The total gallons as recorded by the McCrometer meter and the Fuji meter were recorded and then Well 2 was turned on (See Table 2).

RESULTS:

Well 1 ran for approximately 26 minutes and total gallons pumped and instantaneous flow rated were read and recorded of reach meter. The pressure in the delivery system as well as the depth to water in both of the 100,000 gallon storage tanks was read and recorded. The total volume pumped as recorded by the McCrometer meter was 11,800 gallons and the total volume pumped as recorded by the Fuji meter was 10,089 gallons, a difference of 1,711 gallons or 15% high when compared to the Fuji meter. The McCrometer meter recorded an average instantaneous flow rate of 425.3 gallons per minute (gpm) and was on average 18% higher than the average instantaneous flow rate of 347.9 gpm recorded by the Fuji Meter. The storage tank height increased from 9.16' to 9.37' or 0.21' in 22 minutes using approximately 8,000 gallons. The level in the tanks dropped by 0.34' in 26 minutes after the Well 1 test stopped. Therefore, the common system used more than 8,000 gallons or 308 gallons per minute during the 26 minutes after Well 1 was turned off.

Well 2 ran for approximately 30 minutes and total gallons pumped and instantaneous flow rated were read and recorded of reach meter. The pressure in the delivery system as well as the depth to water in both of the 100,000 gallon storage tanks was read and recorded. The total volume pumped as recorded by the McCrometer meter was 15,300 gallons and the total volume pumped as recorded by the Fuji meter was 16,454 gallons, a difference of 1,154 gallons or 8% low when compared to the Fuji meter. The McCrometer meter recorded an average instantaneous flow rate of 507.1 gpm and was on average 9% lower than the average instantaneous flow rate of 553.6 gpm recorded by the Fuji Meter. The storage tank height increased from 8.90' to 9.31' or 0.41' in 30 minutes using approximately 15,800 gallons.

SUMMARY:

The Well 1 McCrometer in-line flow meter appears to be registering an instantaneous flow rate that is 18% high and the totalizer on the meter registered 15% high although head loss within the delivery pipe near the point of measurement may have influenced the difference between meters. The Well 2 McCrometer in-line flow meter appears to be registering an instantaneous flow rate that is 9% low and the totalizer on the meter registered 9% low although head loss within the delivery pipe near the point of measurement may have also influenced the difference between meters. The water usage rate of more than 8,000 gallons in 26 minutes (greater than 308 gpm) is high even though irrigation is not occurring and there is a low suspected occupancy at the time of the flow meter tests. An analysis on past recorded water use based on monthly volumes pumped from both wells should be performed in order to evaluate whether or not water use reflected by recorded volumes is attributed to actual use by the HOA or if elevated volumes are due to a failure at some juncture within the HOA common water delivery system.

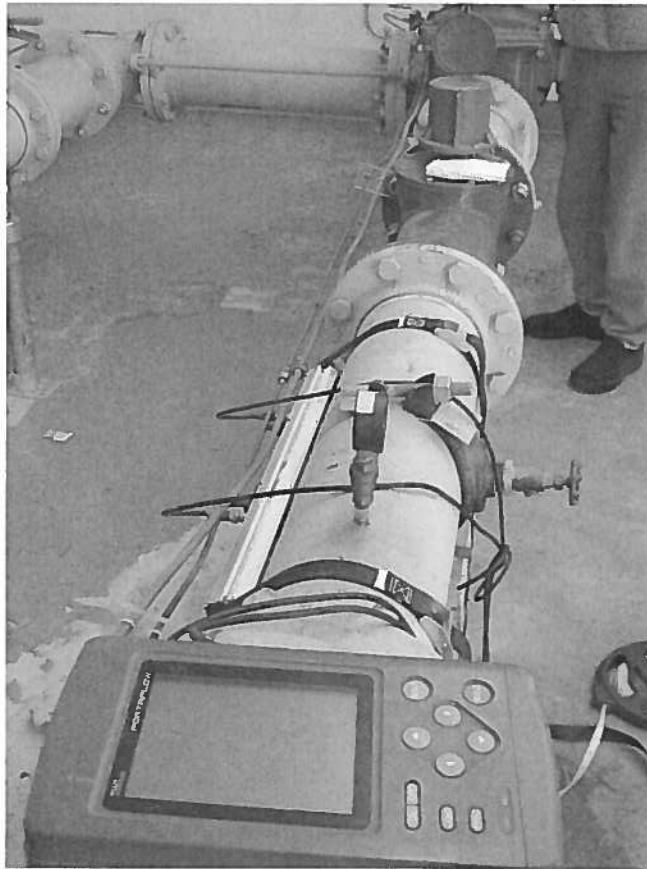


Figure 1. Fuji Meter Placement on Well 1 Delivery Line.

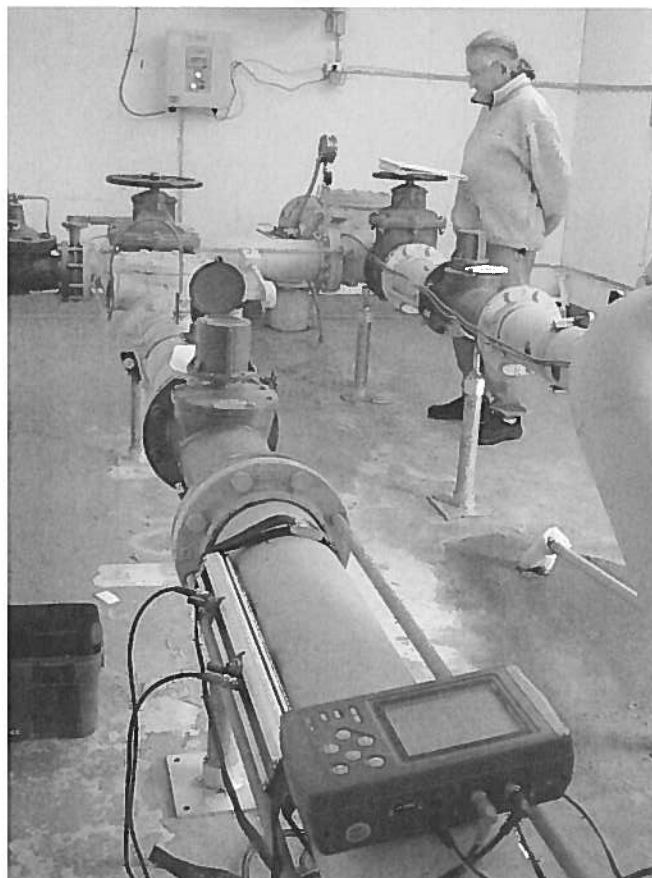


Figure 2. Fuji Meter Placement on Well 2 Delivery Line.

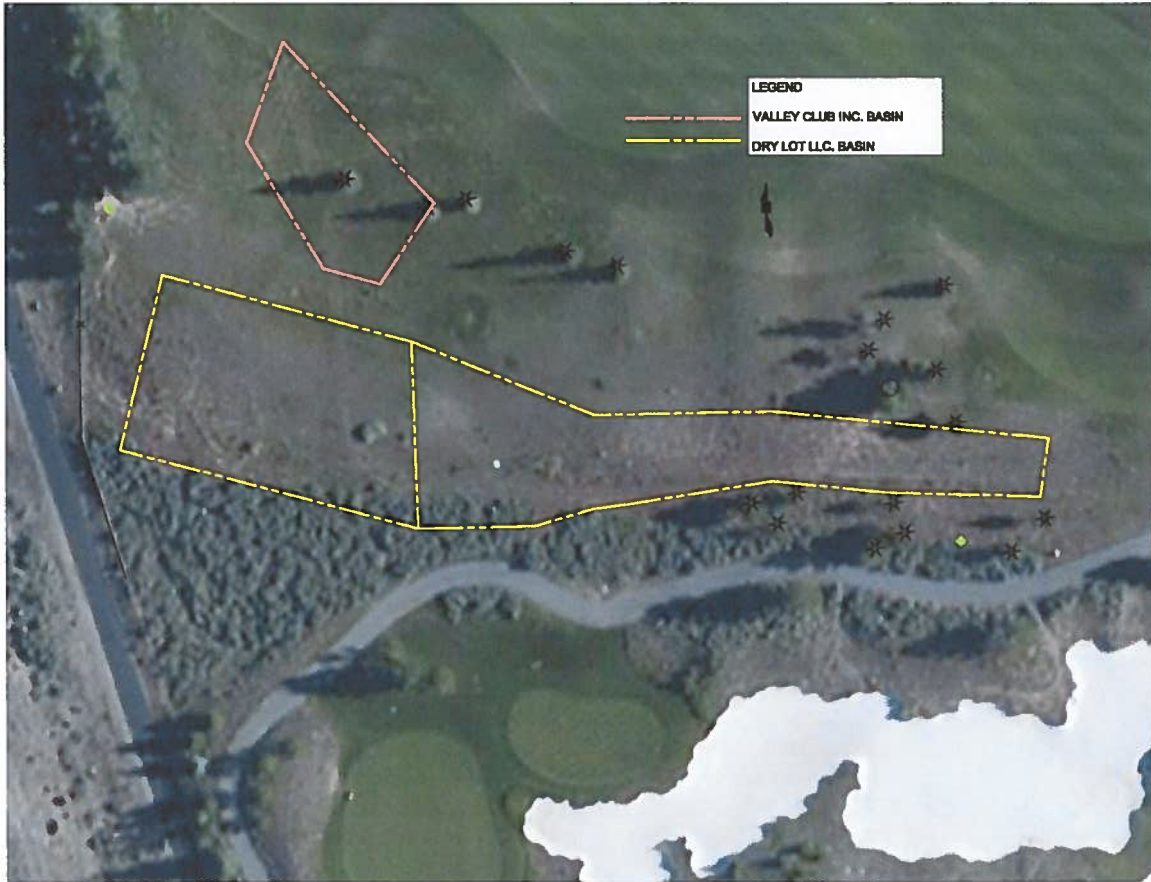
WELL 1									
FUJI ULTRASONIC METER:					EXISTING McCROMETER IN-LINE METER:				Meter
Time:	Velocity:	Discharge:	Total Volume:	Remarks:	Time:	Discharge:	Total Volume:	Storage Tanks:	Line Pressure:
	(ft/s)	(gal/m)	(gallons)			(gal/m)	(x 100 gallons)	Water Depth (ft)	(psi)
8 28 00								9 5	
9 18 00								9 03	
9 30 00		0	0	Pump Start		0	743894		
9 30 30					9 30 30	430			
9 31 00		335	250		9 31 00	425			21%
9 32 00		349	689		9 32 00	425			18%
9 33 00		348	934		9 33 00	425	743907		18%
9 34 00		353	1267		9 34 00	425		76	17%
9 35 00		349	1600		9 35 00	425			18%
9 36 00		351	1951		9 36 00	425	743920	9 16	17%
9 37 00		344	2301		9 37 00	425	743923	9 17	19%
9 38 00		348	2652		9 38 00	425	743927	9 18	18%
9 39 00		350	3000		9 39 00	425	743932	9 19	18%
9 40 00		345	3345		9 40 00	425	743936	9 19	19%
9 42 00	3 75	347	4046		9 42 00	425	743945	9 22	18%
9 44 00	3 72	348	4747		9 44 00	425	743953	9 24	18%
9 46 00	3 73	350	5446		9 46 00	425	743962	9 26	18%
9 48 00	3 74	350	6143		9 48 00	425	743970	9 27	18%
9 50 00	3 76	355	6870		9 50 00	425	743979	9 29	16%
9 52 00	3 69	344	7542		9 52 00	425	743987	9 32	19%
9 54 00	3 74	350	8241		9 54 00	425	743995	9 33	18%
9 56 00	3 73	346	8941		9 56 00	425	744004	9 35	19%
9 58 00			9646		9 58 00	425	744012	9 37	
9 59 00			10089	Pump Stop	9 59 00				
10 25 00					10 25 00			9 03	
Average Discharge (gal/m) =		347.9			Average Discharge (gal/m) =		425.3		
Total (gal) =		10089			Total (gal) =		11800		
					Volume Difference (gal) =		1711		Average Discharge Difference (gal/m) = 77.4
					Volume Difference (%) =		15%		Average Discharge Difference (%) = 18%

Table 1. Well 1 Pumping Data.

WELL 2									
FUJI ULTRASONIC METER:					EXISTING McCROMETER IN-LINE METER:				Meter
Time:	Velocity:	Discharge:	Total Volume:	Remarks:	Time:	Discharge:	Total Volume:	Tank Water Depth:	Line Pressure:
	(ft/s)	(gal/m)	(gallons)			(gal/m)	(x 100 gallons)	(ft)	(psi)
10 33 00	0	0	0		10 33 00	0	726849	8 92	69
10 35 00				Pump Start	10 35 00	500		8 9	
10 36 00	5 97	563	436		10 36 00	510	726854	8 93	-10%
10 37 00	5 96	557	985		10 37 00	510	726860	8 94	-9%
10 38 00	5 96	561	1544		10 38 00	510	726865	8 95	-10%
10 39 00	5 88	553	2101		10 39 00	510	726870	8 97	-8%
10 40 00	5 88	549	2656		10 40 00	510	726875	8 98	-8%
10 41 00	5 92	555	3341		10 41 00	510	726881	8 99	-9%
10 42 00	5 87	551	3767		10 42 00	510	726886	9 01	-8%
10 43 00	5 87	551	4341		10 43 00	510	726891	9 02	-8%
10 44 00	5 88	553	4958		10 44 00	510	726896	9 03	-8%
10 45 00	5 84	551	5428		10 45 00	505	726901	9 05	-9%
10 50 00		551	8186		10 50 00	505	726927	9 11	-9%
10 55 00	5 91	553	10957		10 55 00	500	726952	9 18	-11%
11 00 00	5 87	549	13704		11 00 00	500	726978	9 25	-10%
11 05 00			16454	Pump Stop	11 05 00	0	727002	9 31	
Average Discharge (gal/m) =		553.6			Average Discharge (gal/m) =		507.1		
Total (gal) =		16454			Total (gal) =		15300		
					Volume Difference (gal) =		-1154		Average Discharge Difference (gal/m) = -46.5
					Volume Difference (%) =		-8%		Average Discharge Difference (%) = -9%

Table 2. Well 2 Pumping Data.

AQUIFER RECHARGE AND PUMPING DRY LOT LLC REPORT – 2014 January 2015



**AQUIFER RECHARGE AND PUMPING
DRY LOT LLC
REPORT- 2014
January 2015**

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EXECUTIVE SUMMARY

This report documents activities and performance for the reporting year of 2014 at the Dry Lot LLC aquifer recharge site located at the Valley Club north of Hailey, Idaho (Figure 1). This report is prepared to comply with condition number nine of Dry Lot LLC water right permit No. 37-22252 and condition number five of Dry Lot LLC water rights 37-22313, 37-22318, and 37-22323 issued by the Idaho Department of Water Resources (IDWR).

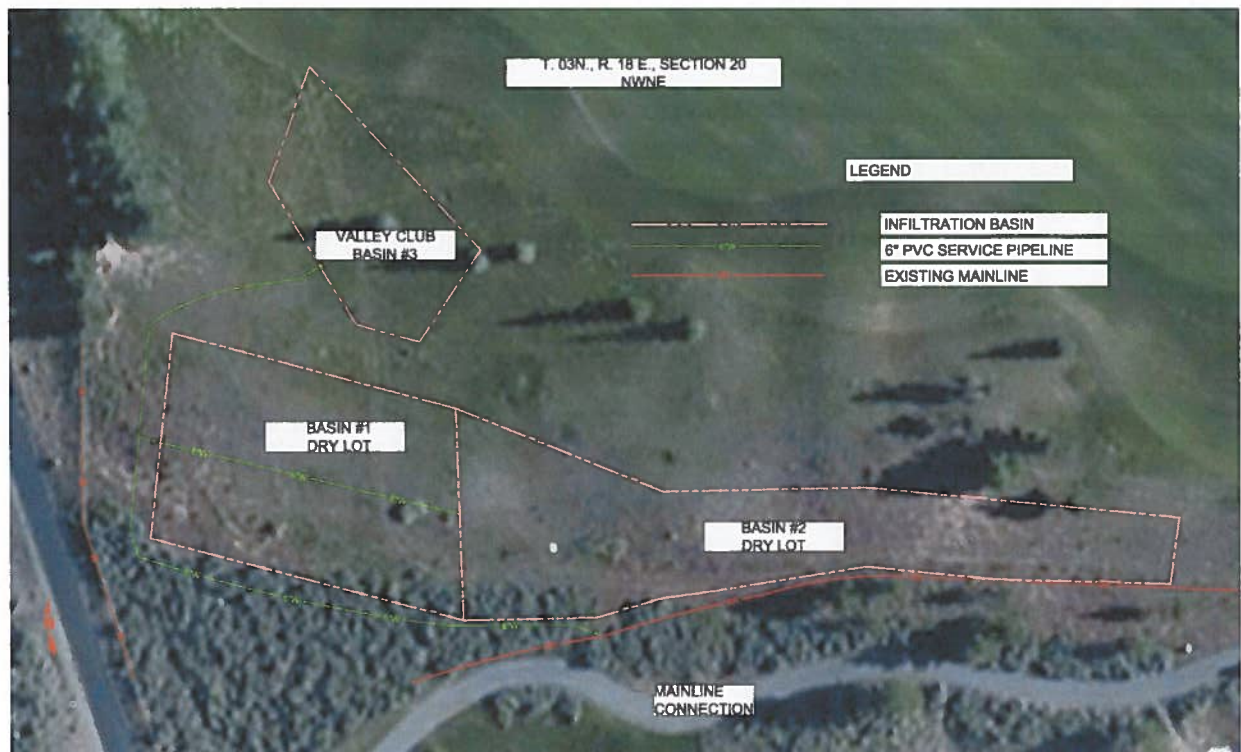


Figure 1: Locations of Dry Lot LLC and Valley Club Infiltration Basins.

Under the Dry Lot LLC permit and existing water rights, it is proposed to recharge up to a maximum of 75.4 acre-feet of water from the Big Wood River through the adjacent Hiawatha Canal and Valley Club golf course irrigation system and to extract irrigation water from the existing Valley Club HOA wells in T.03N R.18E SEC.20 SW $\frac{1}{4}$ NE $\frac{1}{4}$ and SE $\frac{1}{4}$ NW $\frac{1}{4}$ to irrigate up to 27.5 acres of turf grass anywhere within ninety-nine currently platted subdivision lots.

Water right transfer application no. 78255 approved in 2014 in the name of The Valley Club Inc authorizes the recharge of 12.8 acre-feet annually and the extraction of the same volume for supplemental irrigation from an existing well in the T.03N R.18E SEC.20 NW $\frac{1}{4}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$.

IDWR Permit No. 37-22252 in the name of Dry Lot LLC was approved on August 8, 2010 authorizing limits of 75.4 acre-feet to be recharged for 27.5 acres of irrigation. Planning and design of the infiltration system was coordinated with the Valley Club Inc. The design of the system was revised to add an additional recharge volume to accommodate a proposed project by the Valley Club Inc for enhanced golf course irrigation (see Figure 1).

This report on behalf of Dry Lot LLC includes the following information: location of facilities; flow volumes of recharge water applied to the site; compliance summary; and conclusions and recommendations.

LOCATION OF FACILITIES

Facilities associated with the Dry Lot LLC and Valley Club Inc infiltration basins are located in T.03N R.18E SEC.20 NWSE. Infiltration basin recharge water is diverted from the Valley Club Inc's irrigation system, flows through a 6" delivery line into an Orival OR-04-PE 100 micron mesh filter, and can enter either of the two Dry Lot LLC, or one Valley Club Inc infiltration basins. Basin layout was designed and constructed to meet the required area for infiltration, as well as to meet physical constraints such as accommodating for existing irrigation piping and golf course irrigation facilities. An infiltration basin facility overview is shown in Appendix A.

BASIN RECHARGE

Reporting condition nine of the Dry Lot LLC permit requires submittal of an annual report by January 31, of each year to include the following:

- a) The volume of water diverted from the authorized points of diversion for each month of the prior calendar year,
- b) The number and location (by subdivision lot number) of the acres of land irrigated in connection with this right during the prior calendar year and,
- c) The number and location (by subdivision lot number) of the homes served domestic water from the authorized points of diversion pursuant to other water rights during the prior calendar year.

Table 1 shows the flow meter readings and diversion volumes from the Valley Club HOA wells during 2014. Table 2 shows the subdivision lots served from Valley Club Homeowners Association wells with both domestic water and irrigation water under permit 37-22252 in 2014.

In 2014, 304.8 acre-feet (an increase of 63.6 AF over 2013) of water was pumped from the Valley club HOA wells for domestic use for 47 residences and irrigation uses for 46 residences. Reasons behind the increase are not known. A domestic exemption of ½ acre of irrigation per lot (23.0 acres on 46 lots) plus 1.0 acre of private irrigation under

water right 37-4F on lot 57 and 27.5 acres authorized under 37-22252 brought the total allowable irrigation within the subdivision to 51.5 acres. In 2014, total irrigation was delineated at approximately 52.8 acres. Due to additional construction on a lot within the subdivision, irrigation did not occur on lot 41 in 2014 which lowered the total allowable irrigated area. An additional infiltration volume (see below) enabled 1.0 of the excess 1.3 acres to be irrigated.

Between April 16th and May 12th 2014, 31.9 acre feet were recharged in Dry Lot LLC basins 1 and 2. Between June 3rd and July 8th 2014, 45.5 acre feet were recharged in Dry Lot LLC basins 1 and 2 for a total of 77.4 acre feet recharged in 2014. A recharge volume not to exceed 30 acre-feet before June 1st is authorized under 37-22313, 37-22318, and 37-22323. Additionally, a recharge volume of 75.4 acre-feet is authorized under 37-22252 when all of the 27.5 acres are irrigated under 37-22252. On the forty-seven lots, 27.5 acres was irrigated under 37-22252, requiring 75.4 acre-feet to be recharged.

Historically, the grass- turf(lawns)- irrigated, grown at the place of use has an associated annual P_{def} of 597mm or 1.96 acre-feet per acre using Hailey Ranger Station data from Allen and Robison 2012¹. Therefore, the excess 2.0 AF infiltrated in 2014 accounts for the consumptive use associated with the turf grown an excess of 1.0 irrigated acres, leaving 0.3 acres unaccounted for.

The difference between the 75.4 acre-feet of infiltration authorized and the 77.4 acre-feet actually infiltrated in 2014 is an excess of 2.0 acre-feet infiltrated. The excess infiltration volume is attributed to fluxuations in flow rates into the Dry Lot LLC basins, which made it difficult to forecast the time at which the infiltration volume limit of 75.4 acre feet would be reached.

COMPLIANCE SUMMARY

In 2014 forty-seven residences were present within the Valley Club subdivision (irrigation associated with only 46 residences) and a total of 52.8 acres were irrigated. 27.5 total acres are authorized to be irrigated under permit 37-22252, 23.0 acres are authorized under domestic exemptions, and 1.0 acre is authorized under private water right 37-4F. 77.4 acre feet of water was infiltrated into the Dry Lot LLC basins in 2014. Irrigation of 27.5 acres under permit 37-22252 requires 75.4 acre-feet to be infiltrated.

¹ Allen, Richard G. and Clarence W. Robison, 2012. Evapotranspiration and Consumptive Irrigation Water Requirements for Idaho: Supplement updating the Time Series through December 2008, Research Technical Completion Report, Kimberly Research and Extension Center, University of Idaho, Moscow, ID.

2014				
	<i>East Well in Pump House</i>	<i>East Well in Pump House</i>	<i>West Well Across Road</i>	<i>West Well Across Road</i>
	PUMP #1 METER	Total	PUMP #2 METER	Total
DATE:	TOTALIZER (GAL):	Usage (AFA):	TOTALIZER (GAL):	Usage (AFA):
1/2/2014	107,885,500	0.0	127,669,200	0.0
1/30/2014	108,314,000	1.3	128,095,600	1.3
2/24/2014	108,788,200	2.8	128,564,500	2.7
3/26/2014	109,333,500	4.4	129,086,000	4.3
4/25/2014	110,141,900	6.9	129,925,200	6.9
5/27/2014	116,291,600	25.8	135,506,600	24.1
6/25/2014	125,259,700	53.3	144,329,200	51.1
7/28/2014	135,837,000	85.8	155,846,400	86.5
8/25/2014	143,151,100	108.2	164,932,400	114.4
9/22/2014	148,463,300	124.5	172,918,000	138.9
10/13/2014	152,108,800	135.7	176,346,400	149.4
10/22/2014	152,667,500	137.4	177,050,500	151.5
11/24/14	153,670,000	140.5	178,333,500	155.5
12/17/14	154,314,000	142.5	179,163,100	158.0
01/06/15	154,917,700	144.3	179,951,100	160.4
TOTALS PER WELL:		144.3 Acre-Feet	160.4 Acre-Feet	
TOTAL FOR BOTH WELLS:		304.8 Acre-Feet		

Table 1: Valley Club Homeowners Wells' Diversion Volumes for 2014.

2014			
Lot # Served by Valley Club HOA Wells:			
5	35	53	78
6	36	54	80
7	37	57	83
9	41	58	85
10	43	61	88
13	44	64	92
15	46	65	95
16	48	66	96
22	49	67	97
29	50	68	98
32	51	70	99
34	52	77	
TOTAL:		47.0	

Table 2: Lots Served by Valley Club Homeowners Wells' in 2014.

CONCLUSIONS AND RECOMMENDATIONS

1. Construction on the infiltration basins for the project commenced in early December 2012 and was completed in mid-May 2012.
2. In 2014, 52.8 total acres were irrigated on 46 lots, 27.5 acres under permit 37-22252, 23.0 under domestic exemption, and 1.0 acre under 37-4F on private lot 57, leaving 1.3 excess acres irrigated.
3. The total volume associated with irrigation on forty-six lots (irrigation not associated with a domestic exemption or a private irrigation water right) under 37-22252 is 75.4 acre-feet. In 2014, 31.9 acre-feet were recharged before June 1st and 77.4 acre-feet of water was recharged through July 8th in the two Dry Lot Basins, leaving an excess of 2.0 acre-feet infiltrated.
4. The volume recharged in 2014 was adequate under existing Dry Lot LLC water rights 37-22313, 37-22318, and 37-22323 for the irrigation of 27.5 acres as authorized under 37-22252.
5. An excess volume of 2.0 acre-feet infiltrated accounted for 1.0 of the 1.3 acres of excess irrigation within the HOA.
6. In 2014, the total volume pumped from the Valley Club HOA wells for domestic and irrigation uses was 304.8 acre-feet.
7. Facilities are designed to accommodate Valley Club Inc's recharge volumes based on the recent approval of Valley Club Inc water right transfer application no. 78255.

LEGEND

- 1. 140' x 140' KIRKHOFF
- 2. 140' x 140' KIRKHOFF
- 3. 140' x 140' KIRKHOFF
- 4. 140' x 140' KIRKHOFF
- 5. 140' x 140' KIRKHOFF
- 6. 140' x 140' KIRKHOFF

DRY LOT & VALLEY CLUB RECHARGE GALLERIES, 2011 NAIAP PHOTO

SCALE 1" = 100'

DRY LOT & VALLEY CLUB RECHARGE GALLERIES, 2011 NAIAP PHOTO