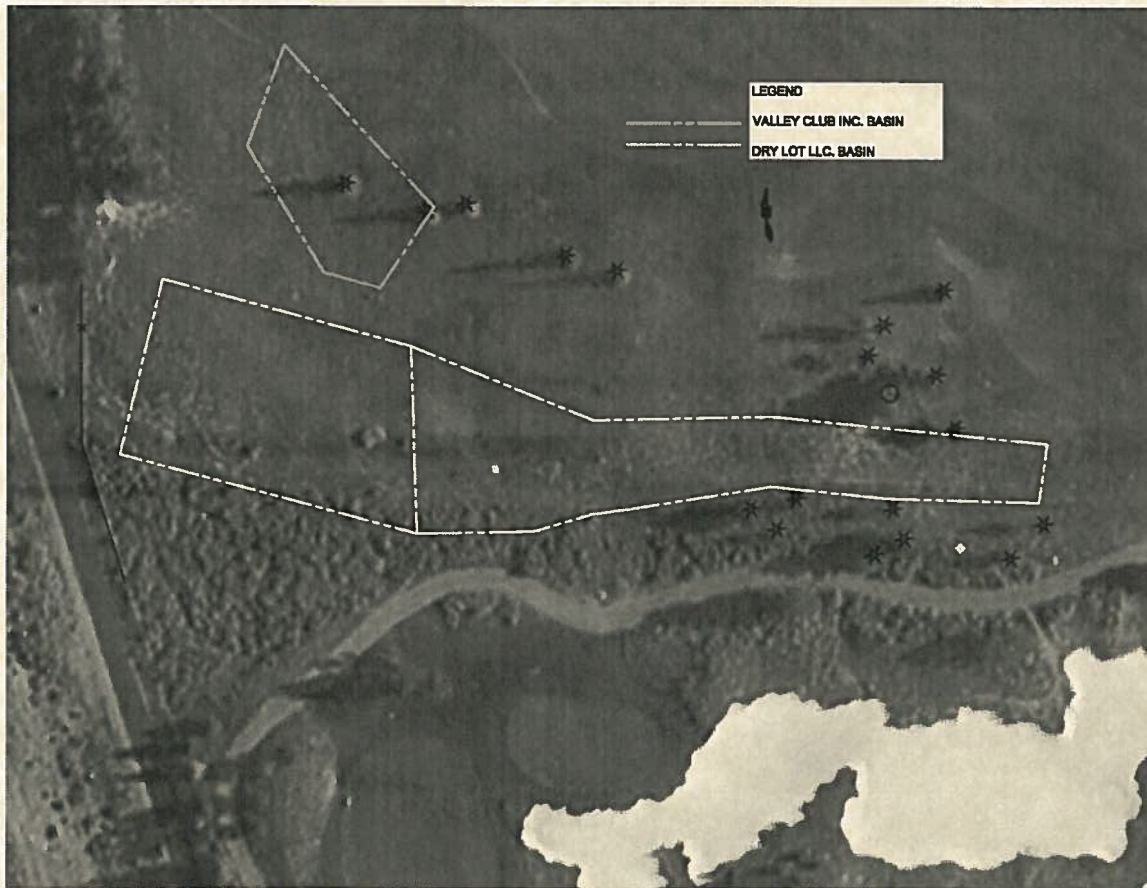
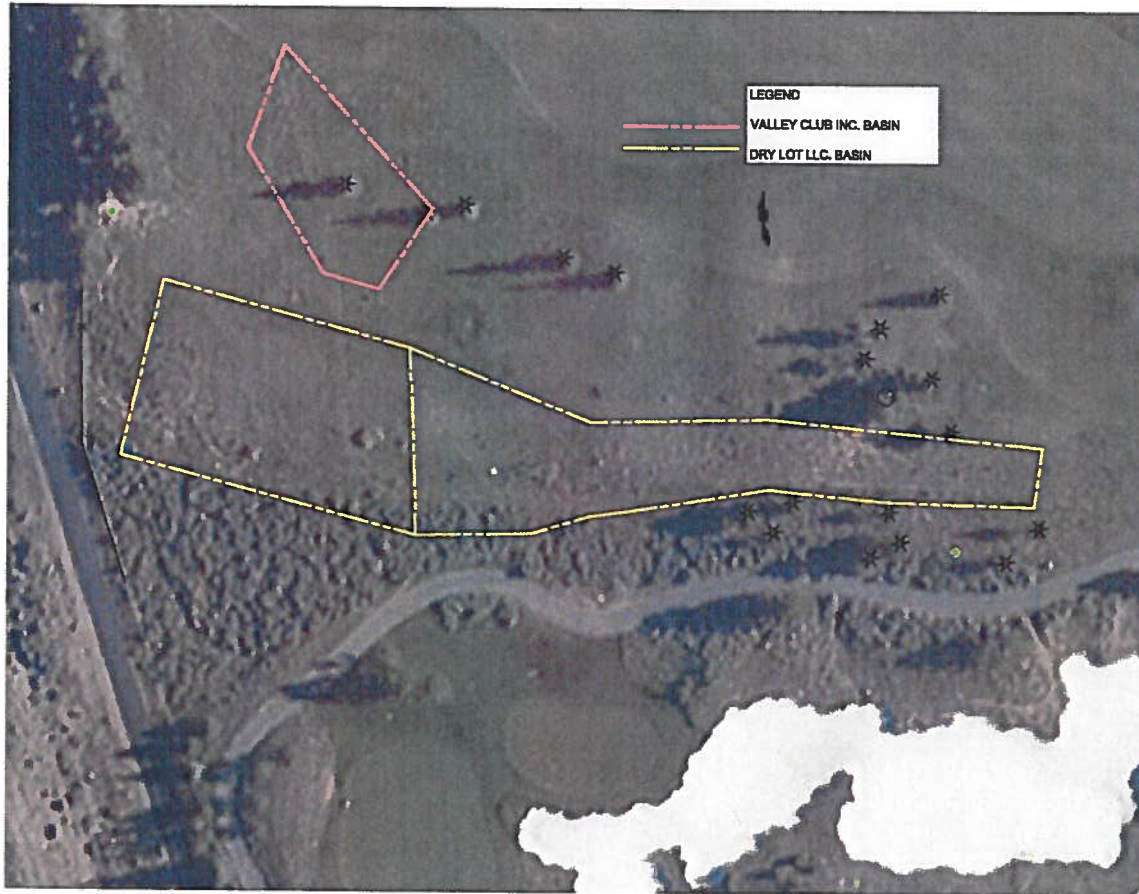


**AQUIFER RECHARGE AND PUMPING
DRY LOT LLC
REPORT – 2015
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EXECUTIVE SUMMARY

This report documents activities and performance for the reporting year of 2015 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 two of Dry Lot LLC water right license 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).

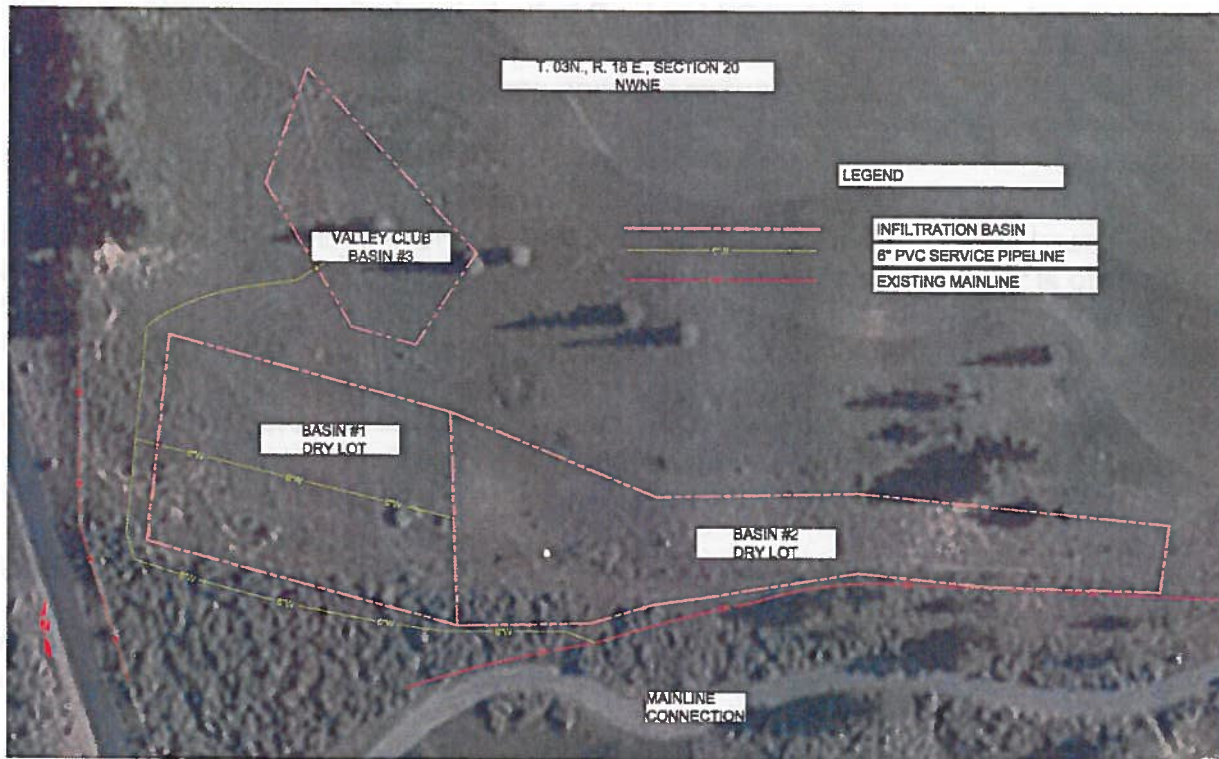


Figure 1: Locations of Dry Lot LLC and Valley Club Infiltration Basins.

Dry Lot LLC water right 37-22252 and other existing water rights authorize the recharge of 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 the extraction of 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 $\frac{1}{4}$ for the irrigation of up to 27.5 acres 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 8th, 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). Proof of beneficial use of 37-22252 was filed with IDWR on June 11th 2015 and the water right permit was licensed as permitted on September 1st 2015 for the irrigation of 27.5 acres using 75.4 acre-feet of water.

This report has been drafted 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

Condition of approval #2 on Dry Lot LLC water right license 37-22252 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 2015. Table 2 shows the subdivision lots served from Valley Club Homeowners Association wells with both domestic water and irrigation water under water right 37-22252 during 2015.

2015				
DATE:	<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 TOTALIZER (GAL):	Total Usage (AFA):	PUMP #2 METER TOTALIZER (GAL):	Total Usage (AFA):
01/06/15	154,917,700		179,951,100	
1/27/2015	155,553,600	2.0	180,777,400	2.5
2/23/2015	156,405,300	4.6	181,179,300	3.8
3/26/2015	157,594,100	8.2	183,403,300	10.6
4/24/2015	159,488,600	14.0	185,697,800	17.6
5/27/2015	166,831,200	36.6	192,152,300	37.4
6/24/2015	174,044,600	58.7	198,552,300	57.1
7/27/2015	183,555,300	87.9		
8/24/2015	190,552,400	109.4	220,461,700	124.3
9/22/2015	196,756,200	128.4	229,367,100	151.7
10/28/2015	201,583,600	143.2	235,321,600	169.9
10/29/2015	201,644,400	143.4	235,408,900	170.2
11/24/2015	203,235,400	148.3	237,613,900	177.0
12/01/15	204,870,100	153.3	239,883,500	183.9
01/05/16	205,767,500	156.1	241,155,500	187.8
TOTALS PER WELL:		156.1 Acre-Feet	187.8 Acre-Feet	
TOTAL FOR BOTH WELLS:		343.9 Acre-Feet		

Table 1: Valley Club Homeowners Wells' Diversion Volumes for 2015.

2015			
Lot # Served by			
Valley Club HOA Wells:			
5	34	53	80
6	35	54	83
7	36	57	85
9	37	58	88
10	41	61	92
13	43	64	95
15	44	65	96
16	46	66	97
17	48	67	98
22	49	68	99
26	50	70	
29	51	77	
32	52	78	
TOTAL:		49	

Table 2: Lots Served by Valley Club Homeowners Wells' in 2015.

In 2015, 343.9 acre-feet (an increase of 39.1 AF over 2014) of water was pumped from the Valley club HOA wells for domestic use in 49 residences and irrigation uses for 48 residences. Reasons behind the increase are not known. The irrigation of ½ acre per lot (24.0 acres on 48 lots) is authorized under 37-8613A, 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 52.5 acres.

In 2015, total irrigation was delineated at approximately 53.9 acres using 2015 NAIP aerial imagery. Due to additional construction on a lot within the subdivision, irrigation did not occur on lot 26 in 2015. An additional infiltration volume (see below) enabled 0.5 of the excess 1.4 acres to be irrigated. 0.75 acres of irrigation originating from 37-22252 occurred on a lot owned by the Valley Club Inc. which is located directly east of Valley Club HOA Lot 97. Although this parcel is located outside of the current GIS shapefile in the IDWR database, this area can be added as discussed by Dry Lot's counsel Travis Thompson with Shelley Keen. See Attached Memo 9/25/2015. Dry Lot seeks to add this area to the GIS shapefile, and it is confirmed that less than 28 acres within the NWSW of Section 28 was irrigated in 2015.

Between May 5th and May 26th 2015, 30.9 acre feet were recharged in Dry Lot LLC basins 1 and 2. Between June 4th and July 8th 2015, 45.4 acre feet were recharged in Dry Lot LLC basins 1 and 2 for a total of 76.3 acre feet recharged in 2015. 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-nine 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 0.9 AF infiltrated in 2015 accounts for the consumptive use associated with the turf grown on an excess of 0.5 irrigated acres, leaving 0.9 acres unaccounted for.

The difference between the 75.4 acre-feet of infiltration authorized and the 76.3 acre-feet actually infiltrated in 2015 is an excess of 0.9 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.

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.

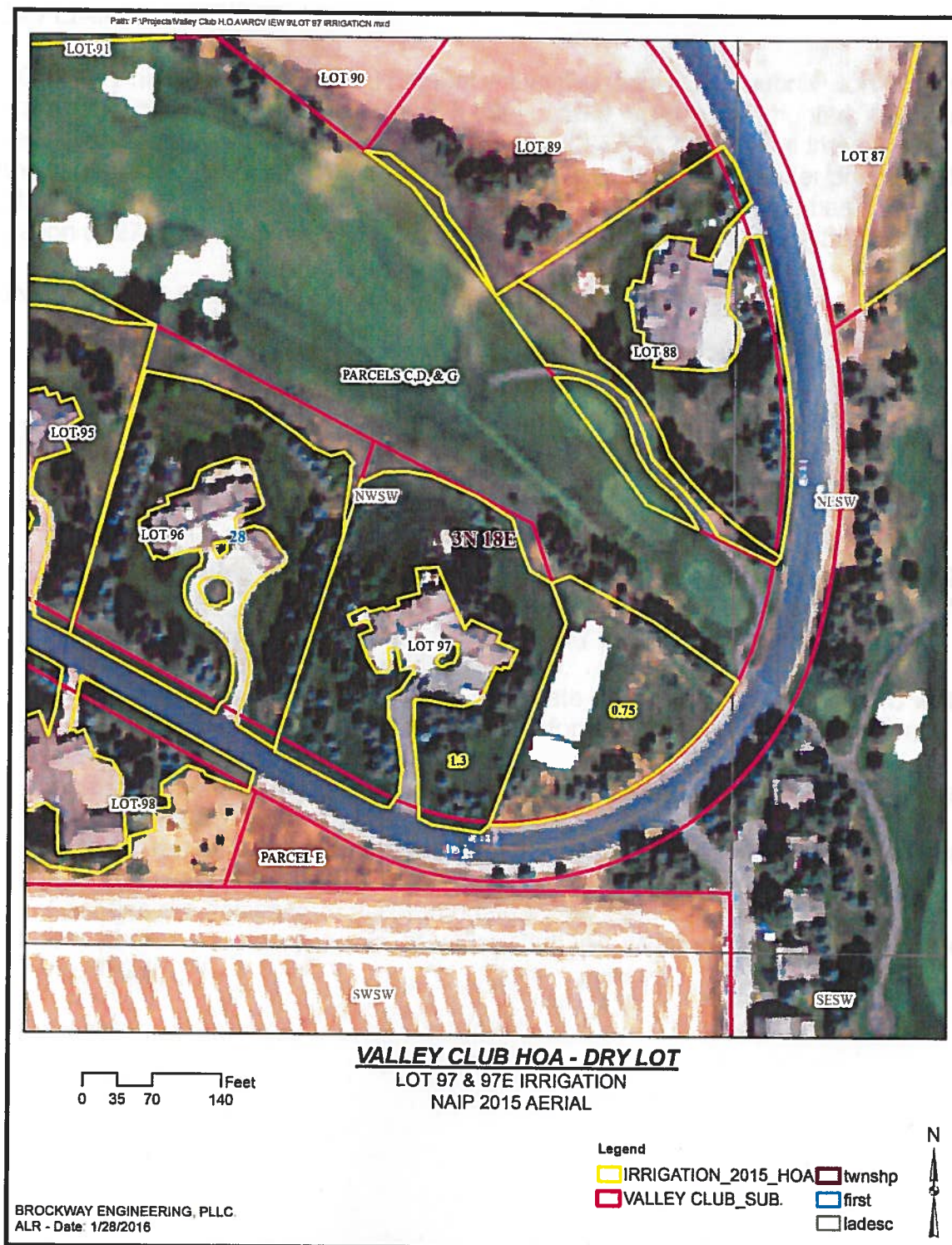


Figure 2: Irrigation east of Valley Club Inc. property under 37-22252.

COMPLIANCE SUMMARY

In 2015 forty-nine residences were present within the Valley Club subdivision (irrigation associated with only 48 residences) and a total of 53.9 acres were irrigated. 27.5 total acres are authorized to be irrigated under water right 37-22252, 24.0 acres are authorized under water right 37-8613A, and 1.0 acre is authorized under private water right 37-4F. 76.3 acre-feet of water was infiltrated into the Dry Lot LLC basins in 2015. Irrigation of 27.5 acres under 37-22252 requires 75.4 acre-feet to be infiltrated.

CONCLUSIONS AND RECOMMENDATIONS

1. Construction on the infiltration basins for the project commenced in early December 2011 and was completed in mid-May 2012.
2. Water right 37-22252 was licensed on September 1st 2015.
3. In 2015, 53.9 total acres were irrigated on 48 lots, 27.5 acres under water right 37-22252, 24.0 under 37-8613A, and 1.0 acre under 37-4F on private lot 57, leaving 1.4 excess acres irrigated.
4. The total volume associated with irrigation on forty-eight lots (irrigation not associated with a domestic or a private irrigation water right) under 37-22252 is 75.4 acre-feet. In 2015, 30.9 acre-feet were recharged before June 1st and 76.3 acre-feet of water was recharged through July 8th in the two Dry Lot Basins, leaving an excess of 0.9 acre-feet infiltrated.
5. The volume recharged in 2015 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.
6. An excess volume of 0.9 acre-feet infiltrated accounted for 0.5 of the 1.4 acres of excess irrigation within the HOA.
7. In 2015, the total volume pumped from the Valley Club HOA wells for domestic and irrigation uses was 343.9 acre-feet.
8. 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.

MEMORANDUM

DATE: September 25, 2015
TO: Water Right File 37-22252
FROM: Shelley W. Keen ^{SWK}
RE: Place of Use

This morning Travis Thompson, attorney for Dry Lot LLC, called to discuss the place of use description for Water Right 37-22252. The place of use includes 28 acres within the NW $\frac{1}{4}$ SW $\frac{1}{4}$ of Section 28, Township 3 North, Range 18 East. The map attached to the license outlines the 28-acre area. Outside the area outlined on the map is a small, triangle-shaped parcel Dry Lot LLC may acquire from The Valley Club Inc. Travis wanted to know if the triangle-shaped parcel could be irrigated under Right 37-22252 as long as no more than 28 acres within the NW $\frac{1}{4}$ SW $\frac{1}{4}$ of Section 28 is irrigated.

We reviewed Transfer Processing Memorandum No. 24, which states on page 6:

An application for transfer is not required if a change in the location of use within 40-acre legal subdivisions is proposed that would not result in an increase in the number of acres within any 40-acre legal subdivision nor use of water at a new 40-acre legal subdivision (except for a proposed change in location outside of prescribed boundaries such as those provided for irrigation use under Section 42-219, *Idaho Code* or by court decree, even when the change in location would be included within the same 40-acre legal subdivisions existing prior to the proposed change).

An application for transfer is not required for the situation described in the preceding paragraph, even when the place of use is described by a shapefile in the department's GIS database. The department will not initiate an enforcement action against the water right owner due to a discrepancy between the department's shape file and the physical location of use within the 40-acre legal subdivisions if the discrepancy is limited to the situation described in the preceding paragraph. The department *may* update the shapefile in its GIS database from its own information or information provided by the water right owner.

Based on the guidance quoted above, I told Travis that a transfer would not be required to bring the triangle-shaped parcel into the place of use, as long as no more than 28 acres are irrigated within the NW $\frac{1}{4}$ SW $\frac{1}{4}$ of Section 28. I recommended that Dry Lot LLC notify IDWR when the change occurs by describing it in the annual report required in condition no. 2 of the license. When the change is reported, IDWR may adjust the place of use boundaries in its GIS records.

DRY LOT LLC- DAILY RECHARGE VOLUMES

2015 Daily Recharge Volumes Associated with IDWR WR Transfer:

74449, Condition #1.

*Values in **bold** indicate observed values.

2/2/2016

Date:	Time:	*Meter Readout (m3):	*Meter Readout (Acre-Feet):	Calculated Daily Volume Infiltrated (Acre-Feet):
23-Apr	3:25 PM	220,191.00	178.51	0.00
24-Apr		221,032.75	179.19	0.68
25-Apr		221,874.50	179.88	0.68
26-Apr		222,716.25	180.56	0.68
27-Apr		223,558.00	181.24	0.68
28-Apr		224,399.75	181.92	0.68
29-Apr		225,241.50	182.61	0.68
30-Apr		226,083.25	183.29	0.68
1-May		226,925.00	183.97	0.68
2-May		227,766.75	184.65	0.68
3-May		228,608.50	185.34	0.68
4-May		229,450.25	186.02	0.68
5-May	12:45 PM	230,292.00	186.70	0.68
6-May		230,878.36	187.18	0.48
7-May		231,464.71	187.65	0.48
8-May		232,051.07	188.13	0.48
9-May		232,637.43	188.60	0.48
10-May		233,223.79	189.08	0.48
11-May		233,810.14	189.55	0.48
12-May	3:06 PM	234,396.50	190.03	0.48
13-May		236,123.91	191.43	1.40
14-May		237,851.32	192.83	1.40
15-May		239,578.73	194.23	1.40
16-May		241,306.14	195.63	1.40
17-May		243,033.55	197.03	1.40
18-May		244,760.96	198.43	1.40
19-May		246,488.37	199.83	1.40
20-May		248,215.78	201.23	1.40
21-May		249,943.19	202.63	1.40
22-May		251,670.60	204.03	1.40
23-May		253,330.20	205.38	1.35
24-May		254,989.80	206.72	1.35
25-May		256,649.40	208.07	1.35
26-May		258,309.00	209.41	1.35
27-May		Off.	209.41	0.00
28-May		Off.	209.41	0.00
29-May		Off.	209.41	0.00
30-May		Off.	209.41	0.00
31-May		Off.	209.41	0.00
*PRE-JUNE TOTALS:		38,118.00	30.90 AFA	

Date:	Time:	*Meter Readout (m3):	*Meter Readout (Acre-Feet):	Calculated Daily Volume Infiltrated (Acre-Feet):
1-Jun		Off.	209.41	0.00
2-Jun		Off.	209.41	0.00
3-Jun		Off.	209.41	0.00
4-Jun	2:05 PM	258,309.00	209.41	0.00
5-Jun		258,881.45	209.88	0.46
6-Jun		259,453.90	210.34	0.46
7-Jun		260,026.35	210.81	0.46
8-Jun		260,598.80	211.27	0.46
9-Jun		261,171.25	211.73	0.46
10-Jun		261,743.70	212.20	0.46
11-Jun		262,316.15	212.66	0.46
12-Jun	4:27 PM	262,888.60	213.13	0.46
13-Jun		264,550.05	214.47	1.35
14-Jun		266,211.50	215.82	1.35
15-Jun		267,872.95	217.17	1.35
16-Jun		269,534.40	218.52	1.35
17-Jun		271,195.85	219.86	1.35
18-Jun		272,857.30	221.21	1.35
19-Jun		274,518.75	222.56	1.35
20-Jun		276,180.20	223.90	1.35
21-Jun		277,841.65	225.25	1.35
22-Jun		279,503.10	226.60	1.35
23-Jun		281,164.55	227.94	1.35
24-Jun	4:02 PM	282,826.00	229.29	1.35
25-Jun		285,076.69	231.12	1.82
26-Jun		287,327.37	232.94	1.82
27-Jun		289,578.06	234.76	1.82
28-Jun		291,828.74	236.59	1.82
29-Jun		294,079.43	238.41	1.82
30-Jun		296,330.11	240.24	1.82
*JUNE TOTALS:		38,021.11	30.82 AFA	

Date:	Time:	*Meter Readout (m3):	*Meter Readout (Acre-Feet):	Calculated Daily Volume Infiltrated (Acre-Feet):
1-Jul		298,580.80	242.06	1.82
2-Jul		300,831.49	243.89	1.82
3-Jul		303,082.17	245.71	1.82
4-Jul		305,332.86	247.54	1.82
5-Jul		307,583.54	249.36	1.82
6-Jul		309,834.23	251.19	1.82
7-Jul		312,084.91	253.01	1.82
8-Jul	10:07 AM	314,335.60	254.84	1.82
9-Jul	Basin Turned Off.		254.84	0.00
10-Jul		Off.	254.84	0.00
11-Jul		Off.	254.84	0.00
12-Jul		Off.	254.84	0.00
13-Jul		Off.	254.84	0.00
14-Jul		Off.	254.84	0.00
15-Jul		Off.	254.84	0.00
16-Jul		Off.	254.84	0.00
17-Jul		Off.	254.84	0.00
18-Jul		Off.	254.84	0.00
19-Jul		Off.	254.84	0.00
20-Jul		Off.	254.84	0.00
21-Jul		Off.	254.84	0.00
22-Jul		Off.	254.84	0.00
23-Jul		Off.	254.84	0.00
24-Jul		Off.	254.84	0.00
25-Jul		Off.	254.84	0.00
26-Jul		Off.	254.84	0.00
27-Jul		Off.	254.84	0.00
28-Jul		Off.	254.84	0.00
29-Jul		Off.	254.84	0.00
30-Jul		Off.	254.84	0.00
31-Jul		Off.	254.84	0.00
*JULY TOTALS:		18,005.49	14.60 AFA	
SEASON TOTALS:		94,144.60	76.3 AFA	