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JAN 31 2019

DEPARTMENT OF
WATER RESOURCES

January 28th, 2018

Mr. Shelley Keen
Idaho Department of Water Resources
322 East Front Street
P. O. Box 83720
Boise, Idaho 83720-0098

RE: Annual Report: Aquifer Recharge and Pumping Report for 2018, Dry Lot LLC, License 37-22252

Dear Shelley,

Please see the attached yearly report outlining Dry Lot LLC's activities on the aquifer recharge and pumping project for 2018 at the Valley Club HOA recharge site north of Hailey, Idaho. This report is submitted to comply with the reporting conditions required under water right license 37-22252 and Transfer 74449 in the name of Dry Lot LLC.

Please review this report at your convenience. If you have any questions or comments, please do not hesitate to contact me at (208) 736-8543.

Sincerely,

G. Erick Powell, Ph.D., P.E.

CHARLES E.
BROCKWAY,
Ph.D., P.E.

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

2016 NORTH
WASHINGTON
STREET • SUITE 4

TWIN FALLS,
IDAHO 83301

208•736•8543

FAX: 736•8506

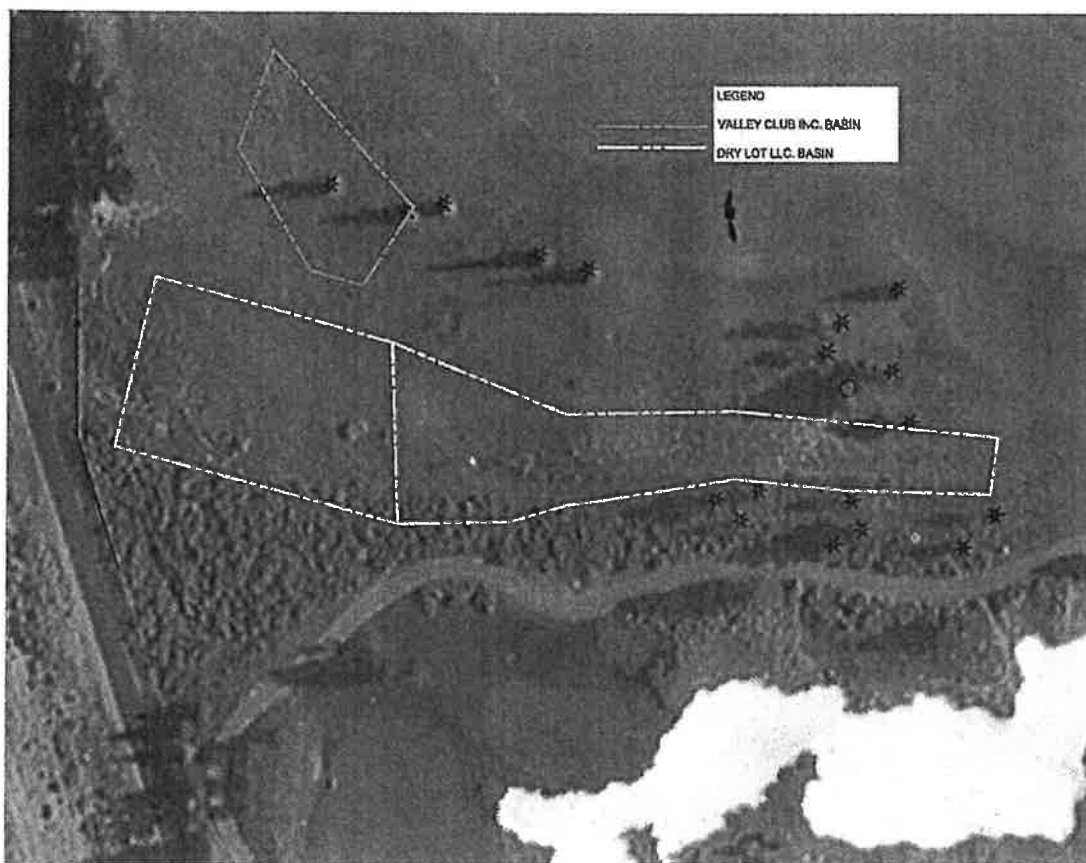
Cc: Mr. Woody Friedlander- Dry Lot LLC
Mr. Barry Bevers- The Valley Club Inc.
Mr. Travis Thompson
Big Wood River Canal Company
Indian Creek HOA c/o: Mr. Randy Budge
Mr. Kevin Lakey- Water District 37 Watermaster

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DEPT OF WATER RESOURCES

**AQUIFER RECHARGE AND PUMPING
DRY LOT LLC
REPORT – 2018
JANUARY 2019**



**AQUIFER RECHARGE AND PUMPING
DRY LOT LLC
REPORT- 2018
JANUARY 2019**

Principal Authors: Zach Latham, M.S. Hydrologist
G. Erick Powell, Ph.D., P.E.

Prepared For: Dry Lot LLC

Prepared By: Brockway Engineering, PLLC
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OVERVIEW

This report documents activities and performance for the reporting year of 2018 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).

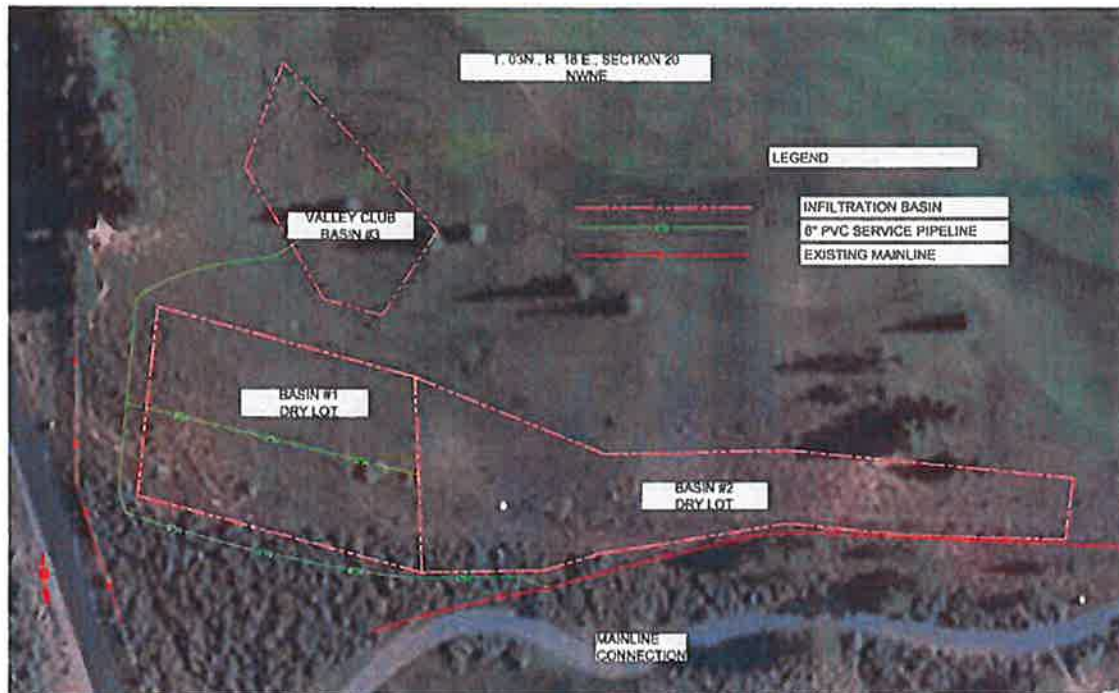


Figure 1: Locations of Dry Lot LLC and Valley Club Infiltration Basins.

Dry Lot LLC water rights 37-22313, 37-22318, and 37-22323 authorize the recharge of up to 75.4 acre-feet of water from the Big Wood River through the adjacent Hiawatha Canal and Valley Club golf course irrigation system. Dry Lot LLC water right 37-22252 authorizes the extraction of irrigation water from the existing Valley Club Home Owners Association's 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.

IDWR Permit No. 37-22252 in the name of Dry Lot LLC was approved on August 8th, 2010 authorizing 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, basin recharge, compliance summary and conclusions.

LOCATION OF FACILITIES

Facilities associated with the Dry Lot LLC and The Valley Club Inc. infiltration basins are located in T.3N 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.

Water right transfer no. 74449 is also conditioned such that the daily volume of water recharged is reported to IDWR. Dry Lot LLC daily infiltration volumes are attached to this report. Table 1 shows the flow meter readings and diversion volumes from the Valley Club Owners Association Inc.'s (HOA) wells during 2018. Table 2 shows the subdivision lots that were irrigated using Dry Lot LLC water right 37-22252 during 2018. Table 3 shows the subdivision lots that were served domestic water from the Valley Club HOA's wells under water rights 37-8613A and 37-8810 during 2018.

2018				
DATE:	East Well in Pump House PUMP #1 METER TOTALIZER (GAL)	East Well in Pump House Total Usage (AFA)	West Well Across Road PUMP #2 METER TOTALIZER (GAL)	West Well Across Road Total Usage (AFA)
1/2/2018	279,097,400		336,765,600	
2/13/2018	279,397,500	0.9	337,314,500	1.7
3/9/2018	279,565,600	1.4	337,723,400	2.9
4/13/2018	280,205,500	3.4	338,029,400	3.9
5/9/2018	282,891,300	11.6	340,574,100	11.7
6/20/2018	288,751,700	29.6	351,066,200	43.9
7/16/2018	294,508,500	47.3	358,276,500	66.0
8/28/2018	309,106,100	92.1	370,153,100	102.5
9/20/2018	315,539,800	111.8	376,924,000	123.2
10/18/2018	316,377,000	114.4	384,606,500	146.8
11/6/2018	316,964,200	116.2	384,606,500	146.8
12/13/2018	317,828,400	118.9	384,607,100	146.8
12/28/2018	318,195,000	120.0	384,614,300	146.8
1/4/2019	318,420,700	120.7	384,614,300	146.8
TOTALS PER WELL:		120.7 Acre-Feet		146.8 Acre-Feet
TOTAL FOR BOTH WELLS:		267.5 Acre-Feet		

Table 1: Valley Club Homeowners Wells' Diversion Volumes for 2018.

2018	
Lot # Served Irrigation Water Under 37-22252 From Valley Club HOA Wells:	
6	57
15	58
16	61
22	65
34	68
36	78
43	83
46	85
48	88
49	92
51	95
52	96
53	97
54	99
56	
TOTAL:	29

Table 2: Lots Receiving Irrigation Water from water right 37-22252 for 2018.

2018 Lot # Served Domestic Water Under 37-8613A & 37-8810 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 3: Lots Receiving Domestic Water from Valley Club Owners Association Inc. water rights 37-8613A and 37-8810.

In 2018, 267.5 acre-feet (an increase of 33.6 AF over 2017) of water was pumped from the Valley Club HOA wells for domestic use in 49 residences and irrigation uses associated with 48 residences in the Valley Club Subdivision. The reason for the increase in volume pumped when compared with 2017 is unknown.

It is important to note that water authorized to be diverted under 37-21337, owned by Village Green at the Valley Club Homeowners Assn. Inc., is also diverted through the two Valley Club HOA wells and the volume diverted in 2018 under this right is included in the 267.5 acre-foot volume reported here. It is unknown whether a not a meter has been installed at the upstream point of delivery for this right, so as to be able to determine the yearly volume pumped and delivered under 37-21337. Although the actual diversion volume under 37-21337 is not known, we have assumed the 16 units served under this right in 2018, each using a conservatively high 300 gallons per day, for a total 2018 usage of 1,753,200 gallons, or 5.4 acre feet. Using this value, the estimated Valley Club Owners Association Inc.'s domestic usage would drop to 262.1 acre-feet.

0.64 acres of irrigation occurred under 37-22252 on a lot owned by The Valley Club Inc. (Lot 97E) in 2018 (Figure 2); this lot 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 LLC's legal counsel Travis Thompson and Shelley Keen. See the attached IDWR Memo dated 9/25/2015 that was previously submitted in the 2015, 2016 and 2017 annual reports. Brockway

Engineering has confirmed that less than 28 acres were irrigated within the NWSW of Section 28 during 2018.

On all lots described in Table 2 (except for Lot 56), irrigation of $\frac{1}{2}$ acre per lot (14 acres on 28 lots) is authorized and occurred under 37-8613A during 2018. 1.0 acre of private irrigation is authorized and occurred under water right 37-4F on lot 57. Additionally, 17.3 total acres were irrigated under 37-22252 on the twenty nine lots described in Table 2 and on Lot 97E. 32.3 total acres of irrigation occurred on the lots described in Table 2 and are shown in Figure 3.

Between May 1st and May 31st 2018, 26.1 acre feet were recharged in Dry Lot LLC basins 1 and 2. Between June 1st and June 30th, 19.5 acre feet were infiltrated and between July 1st and July 31st, 20.6 acre feet were infiltrated. Finally, between August 1st and August 10th 2018, 10.1 acre feet were recharged in Dry Lot LLC basins 1 and 2 for a total of 76.4 acre feet recharged in 2018. Both basins were turned off on August 10th 2018. Approved IDWR transfer no. 74449 is conditioned such that the recharge volume may not exceed 30 acre-feet before June 1st under 37-22313, 37-22318, and 37-22323. During 2018, this condition was met. 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 twenty nine total lots, 17.3 acres was irrigated under 37-22252, requiring 47.4 acre-feet to be recharged. In 2018, an extra $76.4 - 47.4 = 29.0$ acre-feet were recharged under 37-22313, 37-22318, and 37-22323 and that volume was not diverted under 37-22252.



Figure 2: Irrigation on Lot 97 and 97E under 37-22252 and 37-8613A.

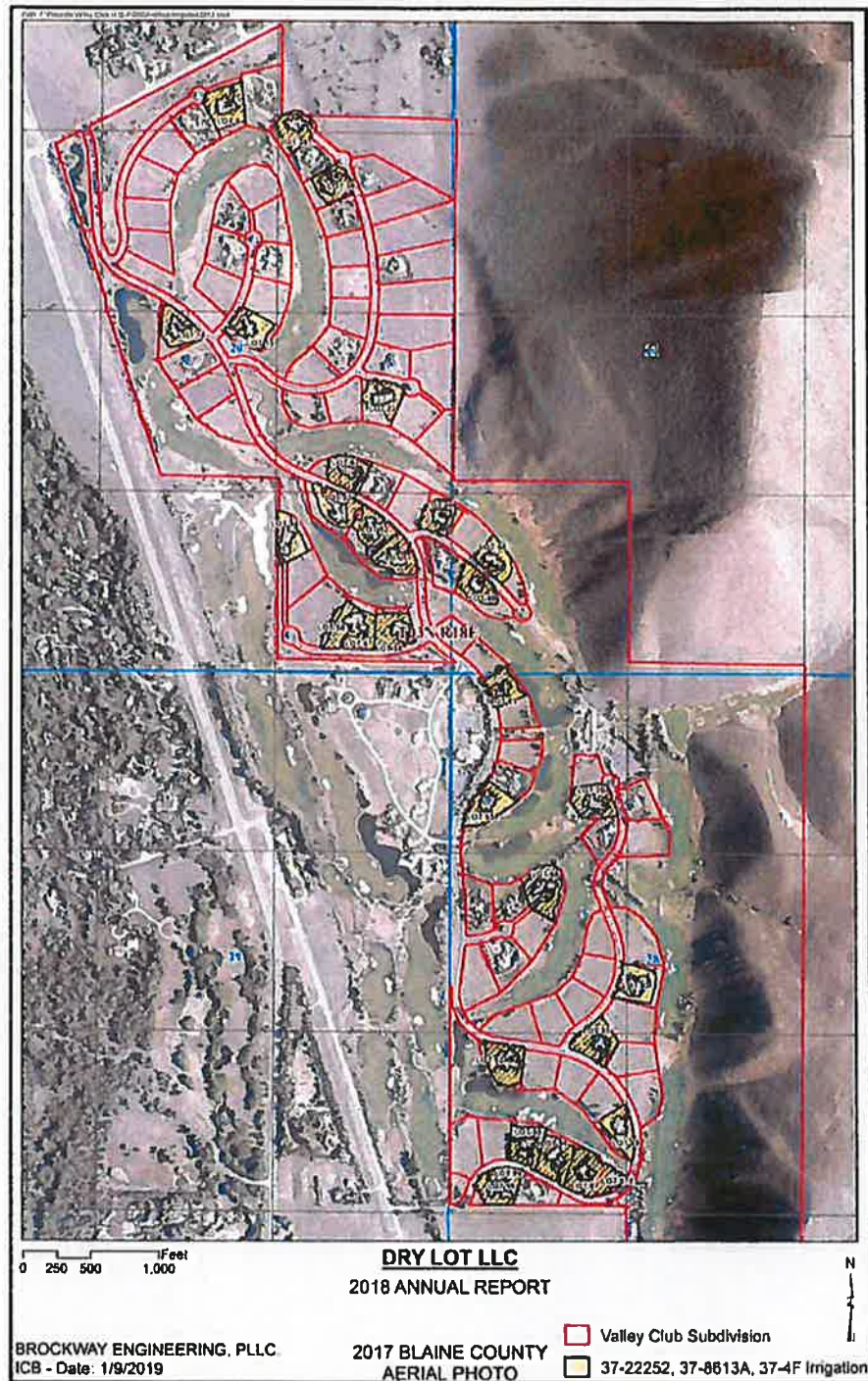


Figure 3: 2018 Irrigated Areas under 37-4F, 37-8613A and 37-22252.

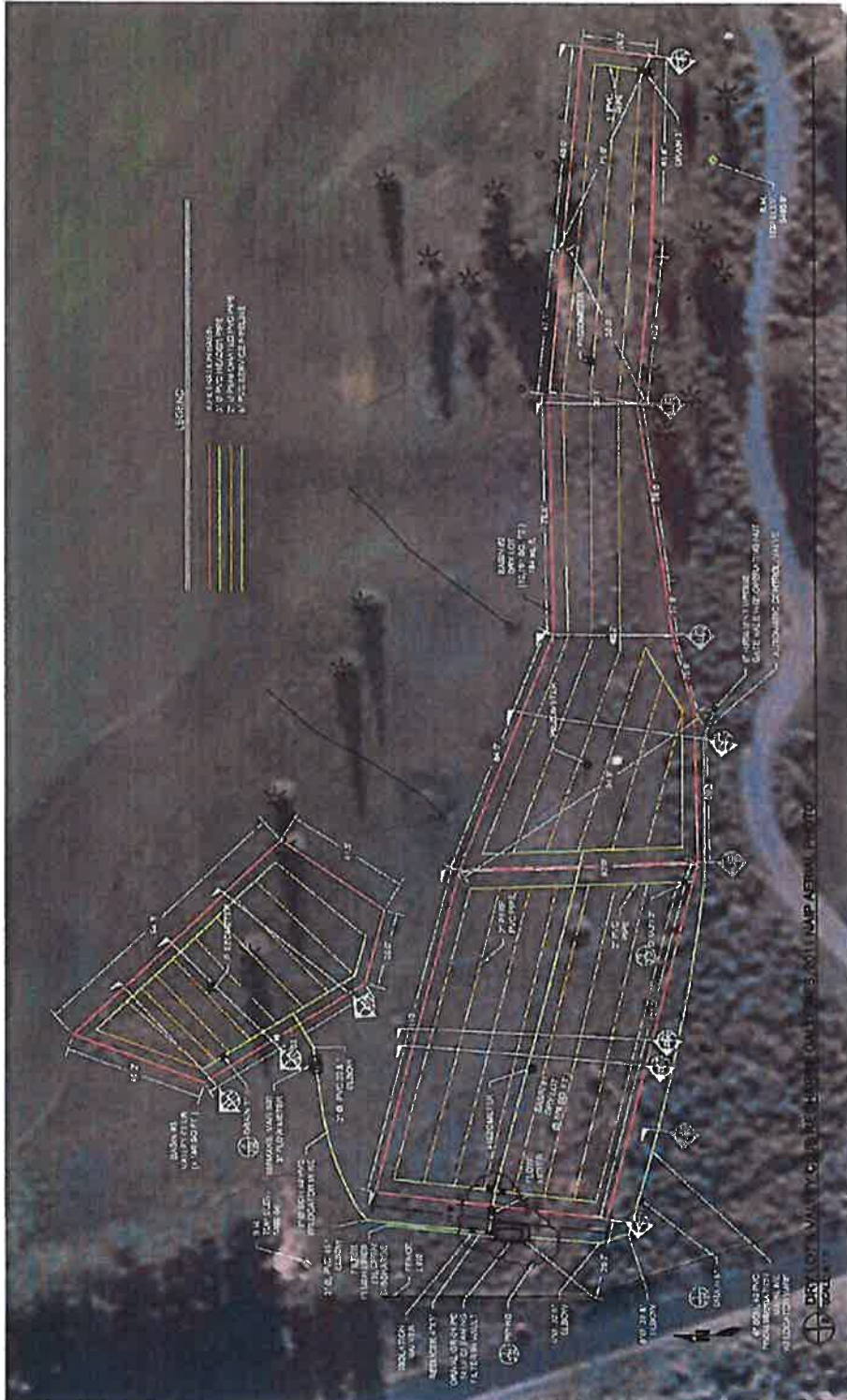
COMPLIANCE SUMMARY

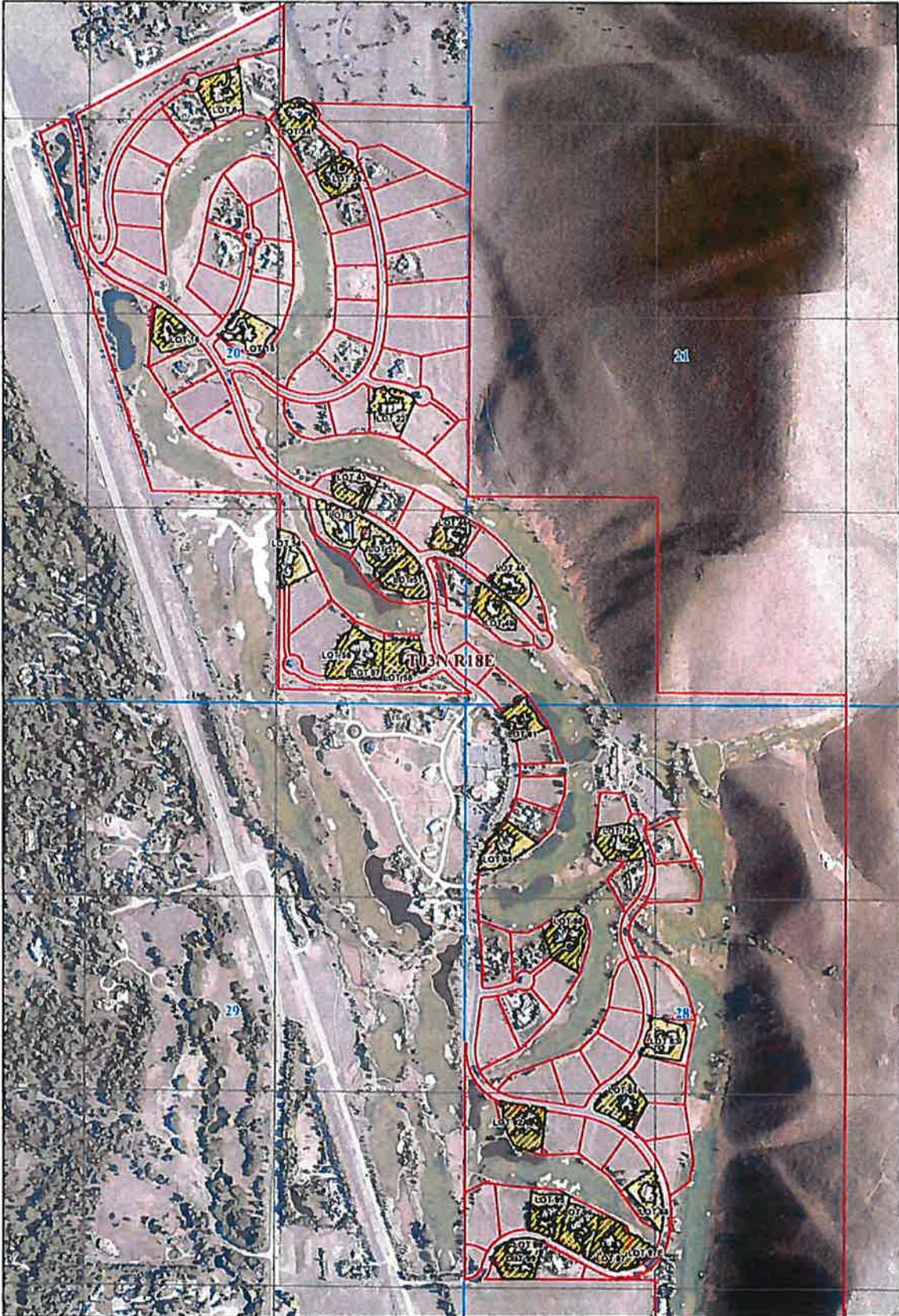
In 2018, forty-nine residences were present within the Valley Club subdivision. 27.5 total acres are authorized to be irrigated under water right 37-22252 although only 17.3 acres were irrigated under this water right in 2018. Within the Valley Club subdivision, one half acre per lot are authorized under water right 37-8613A (in conjunction with a domestic use and residence), and 1.0 acre is authorized under private water right 37-4F appurtenant to Lot 57. 76.4 acre-feet of water was infiltrated into the Dry Lot LLC basins in 2018. Irrigation of 17.3 acres under 37-22252 in 2018 required 47.4 acre-feet to be infiltrated.

CONCLUSIONS

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. On the lots described in Table 2 including Lot 97E, 17.3 total acres were irrigated under 37-22252, 14.0 acres under water right 37-8613A and 1.0 acre under 37-4F on private lot 57 during 2017.
4. The total diversion volume associated with the irrigation on twenty nine lots (irrigation not associated with a domestic or a private irrigation water right) under 37-22252 was 47.4 acre-feet. In 2018, 26.1 acre-feet were recharged before June 1st and 50.3 acre-feet of water was recharged through August 10th in the two Dry Lot LLC Basins, leaving an excess of 29.0 acre-feet infiltrated.
5. The volume recharged in 2018 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 although only 17.3 were irrigated.
6. In 2018, the total volume pumped from the two Valley Club HOA wells for domestic and irrigation uses in the Valley Club Subdivision and under 37-21337, was 267.5 acre-feet. Usage under 37-21337 was estimated at 5.4 acre-feet.
7. Facilities are designed to accommodate The Valley Club Inc.'s recharge volumes based on the approval of Valley Club Inc. water right transfer application no. 78255.

APPENDIX A: INFILTRATION BASIN FACILITY OVERVIEW





DRY LOT LLC
2018 ANNUAL REPORT

BROCKWAY ENGINEERING, PLLC.
ICB - Date: 1/9/2019

2017 BLAINE COUNTY
AERIAL PHOTO

- Valley Club Subdivision
- 37-22252, 37-8613A, 37-4F Irrigation



A horizontal number line with tick marks at 0, 75, 150, and 300. The word "Feet" is written at the right end of the line.

DRY LOT LLC

2018 ANNUAL REPORT
LOT 97 & 97E IRRIGATION
2017 BLAINE COUNTY
AERIAL PHOTO

BROCKWAY ENGINEERING, PLLC.
ICB - Date: 1/9/2019

 Valley Club Subdivision
 37-22252, 37-8613A Irrigation



DRY LOT LLC- DAILY RECHARGE VOLUMES

2018 Daily Recharge Volumes Associated with IDWR WR Transfer:

74449, Condition #1.

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

1/3/2018

Date:	Time:	*Meter Readout (m3):	*Meter Readout (Acre-Feet):	Calculated Daily Volume Infiltrated (Acre-Feet):
1-May	9:40 AM	505,474.0	409.8	0.00
2-May		506,037.3	410.3	0.46
3-May		506,600.7	410.7	0.46
4-May		507,164.0	411.2	0.46
5-May		507,727.3	411.6	0.46
6-May		508,290.7	412.1	0.46
7-May	1:18 PM	508,854.0	412.5	0.46
8-May		510,124.9	413.6	1.03
9-May	11:17 AM	511,395.8	414.6	1.03
10-May		512,645.3	415.6	1.01
11-May		513,894.7	416.6	1.01
12-May		515,144.2	417.6	1.01
13-May		516,393.7	418.6	1.01
14-May		517,643.1	419.7	1.01
15-May		518,892.6	420.7	1.01
16-May		520,142.0	421.7	1.01
17-May	11:56 AM	521,391.5	422.7	1.01
18-May		522,584.9	423.7	0.97
19-May		523,778.2	424.6	0.97
20-May		524,971.6	425.6	0.97
21-May		526,164.9	426.6	0.97
22-May		527,358.3	427.5	0.97
23-May		528,551.7	428.5	0.97
24-May		529,745.0	429.5	0.97
25-May		530,938.4	430.4	0.97
26-May		532,131.7	431.4	0.97
27-May		533,325.1	432.4	0.97
28-May		534,518.4	433.3	0.97
29-May	11:42 AM	535,711.8	434.3	0.97
30-May		536,707.3	435.1	0.81
31-May		537,702.7	435.9	0.81
*PRE-JUNE TOTALS:		32,228.7	26.1 AFA	

Date:	Time:	*Meter Readout (m3):	*Meter Readout (Acre-Feet):	Calculated Daily Volume Infiltrated (Acre-Feet):
1-Jun		538,698.2	436.7	0.81
2-Jun		539,693.6	437.5	0.81
3-Jun		540,689.1	438.3	0.81
4-Jun		541,684.5	439.2	0.81
5-Jun		542,680.0	440.0	0.81
6-Jun	4:01 PM	543,675.4	440.8	0.81
7-Jun		544,851.5	441.7	0.95
8-Jun	2:10 PM	546,027.6	442.7	0.95
9-Jun		546,938.2	443.4	0.74
10-Jun		547,848.7	444.1	0.74
11-Jun		548,759.3	444.9	0.74
12-Jun		549,669.9	445.6	0.74
13-Jun		550,580.4	446.4	0.74
14-Jun	3:22 PM	551,491.0	447.1	0.74
15-Jun	3:55 PM	552,021.2	447.5	0.43
16-Jun		552,749.0	448.1	0.59
17-Jun		553,476.7	448.7	0.59
18-Jun		554,204.5	449.3	0.59
19-Jun		554,932.2	449.9	0.59
20-Jun		555,660.0	450.5	0.59
21-Jun		556,387.7	451.1	0.59
22-Jun		557,115.5	451.7	0.59
23-Jun		557,843.2	452.3	0.59
24-Jun		558,571.0	452.8	0.59
25-Jun		559,298.7	453.4	0.59
26-Jun		560,026.5	454.0	0.59
27-Jun	12:02 PM	560,754.2	454.6	0.59
28-Jun	2:46 PM	560,763.1	454.6	0.01
29-Jun	3:24 PM	561,486.9	455.2	0.59
30-Jun		561,731.8	455.4	0.20
*JUNE TOTALS:		24,029.1	19.5 AFA	

Date:	Time:	*Meter Readout (m3):	*Meter Readout (Acre-Feet):	Calculated Daily Volume Infiltrated (Acre-Feet):
1-Jul		561,976.7	455.6	0.20
2-Jul		562,221.5	455.8	0.20
3-Jul	1:12 PM	562,466.4	456.0	0.20
4-Jul		562,471.9	456.0	0.00
5-Jul	1:33 PM	562,477.4	456.0	0.00
6-Jul	2:13 PM	563,428.8	456.8	0.77
7-Jul		563,771.5	457.1	0.28
8-Jul		564,114.2	457.3	0.28
9-Jul	1:06 PM	564,456.9	457.6	0.28
10-Jul		565,153.1	458.2	0.56
11-Jul		565,849.4	458.7	0.56
12-Jul	3:36 PM	566,545.6	459.3	0.56
13-Jul	2:39 PM	567,702.4	460.2	0.94
14-Jul		568,668.3	461.0	0.78
15-Jul		569,634.3	461.8	0.78
16-Jul		570,600.2	462.6	0.78
17-Jul		571,566.2	463.4	0.78
18-Jul	11:30 AM	572,532.1	464.2	0.78
19-Jul	10:09 AM	573,586.3	465.0	0.85
20-Jul	4:25 PM	575,109.8	466.2	1.24
21-Jul		576,437.6	467.3	1.08
22-Jul		577,765.4	468.4	1.08
23-Jul		579,093.1	469.5	1.08
24-Jul	12:32 PM	580,420.9	470.6	1.08
25-Jul		581,246.5	471.2	0.67
26-Jul		582,072.1	471.9	0.67
27-Jul	1:00 PM	582,897.7	472.6	0.67
28-Jul		583,971.6	473.4	0.87
29-Jul		585,045.5	474.3	0.87
30-Jul		586,119.4	475.2	0.87
31-Jul	2:02 PM	587,193.3	476.0	0.87
*JULY TOTALS:		25,461.5	20.6 AFA	

Date:	Time:	*Meter Readout (m3):	*Meter Readout (Acre-Feet):	Calculated Daily Volume Infiltrated (Acre-Feet):
1-Aug		588,240.8	476.9	0.85
2-Aug		589,288.4	477.7	0.85
3-Aug	1:58 PM	590,335.9	478.6	0.85
4-Aug		591,707.9	479.7	1.11
5-Aug		593,079.9	480.8	1.11
6-Aug	1:43 PM	594,451.9	481.9	1.11
7-Aug		595,766.3	483.0	1.07
8-Aug		597,080.7	484.1	1.07
9-Aug		598,395.1	485.1	1.07
10-Aug	10:14 AM	599,709.5	486.2	1.07
11-Aug	Basin Turned Off.		0.0	0.00
12-Aug	Off.		0.0	0.00
13-Aug	Off.		0.0	0.00
14-Aug	Off.		0.0	0.00
15-Aug	Off.		0.0	0.00
16-Aug	Off.		0.0	0.00
17-Aug	Off.		0.0	0.00
18-Aug	Off.		0.0	0.00
19-Aug	Off.		0.0	0.00
20-Aug	Off.		0.0	0.00
21-Aug	Off.		0.0	0.00
22-Aug	Off.		0.0	0.00
23-Aug	Off.		0.0	0.00
24-Aug	Off.		0.0	0.00
25-Aug	Off.		0.0	0.00
26-Aug	Off.		0.0	0.00
27-Aug	Off.		0.0	0.00
28-Aug	Off.		0.0	0.00
29-Aug	Off.		0.0	0.00
30-Aug	Off.		0.0	0.00
31-Aug	Off.		0.0	0.00
*AUGUST TOTALS:		12,516.2	10.1 AFA	
*SEASON TOTALS:		94,235.5	76.4 AFA	

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.