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DEPARTMENT OF
WATER RESOURCES

January 19th, 2015

Mr. Shelly 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 2014, Dry Lot LLC, Permit 37-22252

Dear Mr. Keen,

Please see the attached yearly report outlining Dry Lot LLC's activities on the aquifer recharge and pumping project for 2014 at the Valley Club HOA recharge site north of Hailey, Idaho. This report is submitted to comply with the reporting conditions required under Permit No. 37-22522 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,

Charles E. Brockway, PhD, PE
Project Manager

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

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

Cc: Woody Friedlander, President Valley Club HOA
Barry Beavers-The Valley Club
Travis Thompson
Big Wood River Canal Company
Indian Creek HOA

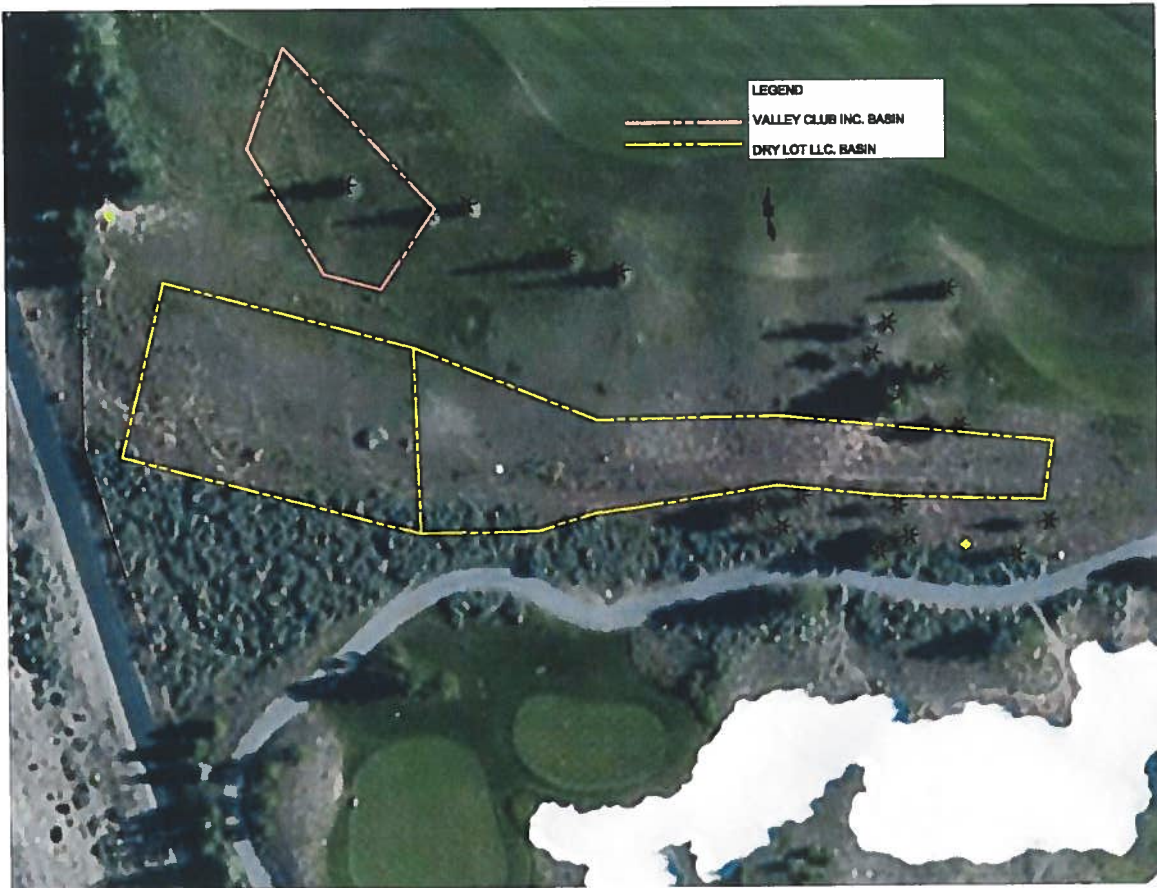
2016 NORTH
WASHINGTON
STREET • SUITE 4

TWIN FALLS,
IDAHO 83301

208•736•8543

FAX: 736•8506

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



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

Principal Authors: Zach Latham, M.S. Hydrologist
Charles E. Brockway, PhD, PE

Prepared For: Dry Lot LLC

Prepared By: Brockway Engineering, PLLC
2016 North Washington Street, Suite 4
Twin Falls, ID 83301
(208) 736-8543 (Phone)
(208) 736-8506 (Fax)

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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).

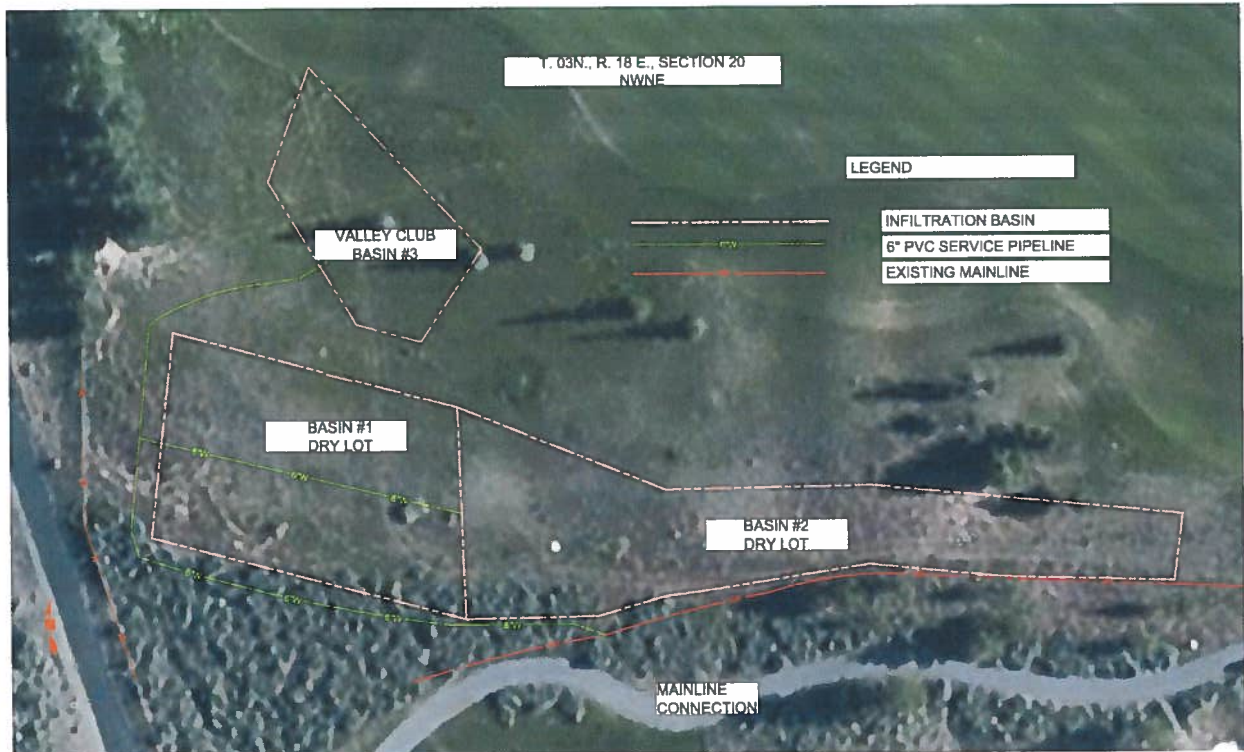


Figure 1: Locations of Dry Lot LLC and Valley Club Infiltration Basins.

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				
DATE:	East Well in Pump House PUMP #1 METER	East Well in Pump House Total	West Well Across Road PUMP #2 METER	West Well Across Road Total
	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.

