

Palmer, Cherie

From: Erick Powell [erick.powell@brockwayeng.com]
Sent: Friday, May 31, 2013 4:41 PM
To: Palmer, Cherie
Cc: Jack Bariteau; 'Barry Bevers'; willmillerconsulting@gmail.com
Subject: Additional Information Regarding Permit No. 37-21338
Attachments: permit 37-21338 ponds.pdf; Photos of system.pdf; Pond System Diagram.pdf; Potential Split of Water Right Permit 37-21338.pdf; Proposed Subdivision Pond Design.pdf

Hi Cherie,

I have attached five (5) files with additional information regarding the Valley Club Inc. water right permit no. 37-21338. This information is intended to supplement your field exam and help you finalize the license for the Valley Club and the Subdivision. An overview of the included files is presented below. Most of this information are items that you requested from the Valley Club or that we discussed on the phone. Please do not hesitate to contact me if you have any questions regarding this information. We would like to stay informed of your progress and be able to answer any questions that you might have. Also, we would request the opportunity to review your draft of the license prior to the license being issued by IDWR.

We appreciate your efforts to complete this license.

Thanks,

Erick

Additional information provided to IDWR regarding permit no. 37-21338

1. Potential Split of Water Right Permit 37-21338.pdf
 - Brief narrative of a potential split of the water right based on approximate 2010 surface area
 - Summary tables of surface area
 - Potential split calculations
2. Permit 37-21338 ponds.pdf
 - 2011 aerial photo of the ponds
 - Shapefile showing the surface area delineations from aerial photo
 - Estimated maximum depths per pond from site visit on 5/7/2013
3. Pond System Diagram.pdf
 - Schematic map of the pipe, pump, system details.
 - Provided by the Valley Club, Inc.
4. Photos of system.pdf
 - Photographs of ponds, pumps, and system
 - Pond numbers on photographs refer to the pond numbers in "Permit 37-21338 ponds.pdf" file
 - Taken on 5/7/2013
5. Proposed Pond Design.pdf
 - The Subdivision is planning on doing construction and revision to the ponds on the Subdivision property. This information is provided to represent what is planned, not what was in place in 2010.
 - Comparison of Northern pond design and current pond area
 - Comparison of Main Subdivision pond design and current pond area

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All information, calculations, maps, drawings, or other documents transmitted via email are preliminary unless explicitly stated in the email text or in the documents themselves.

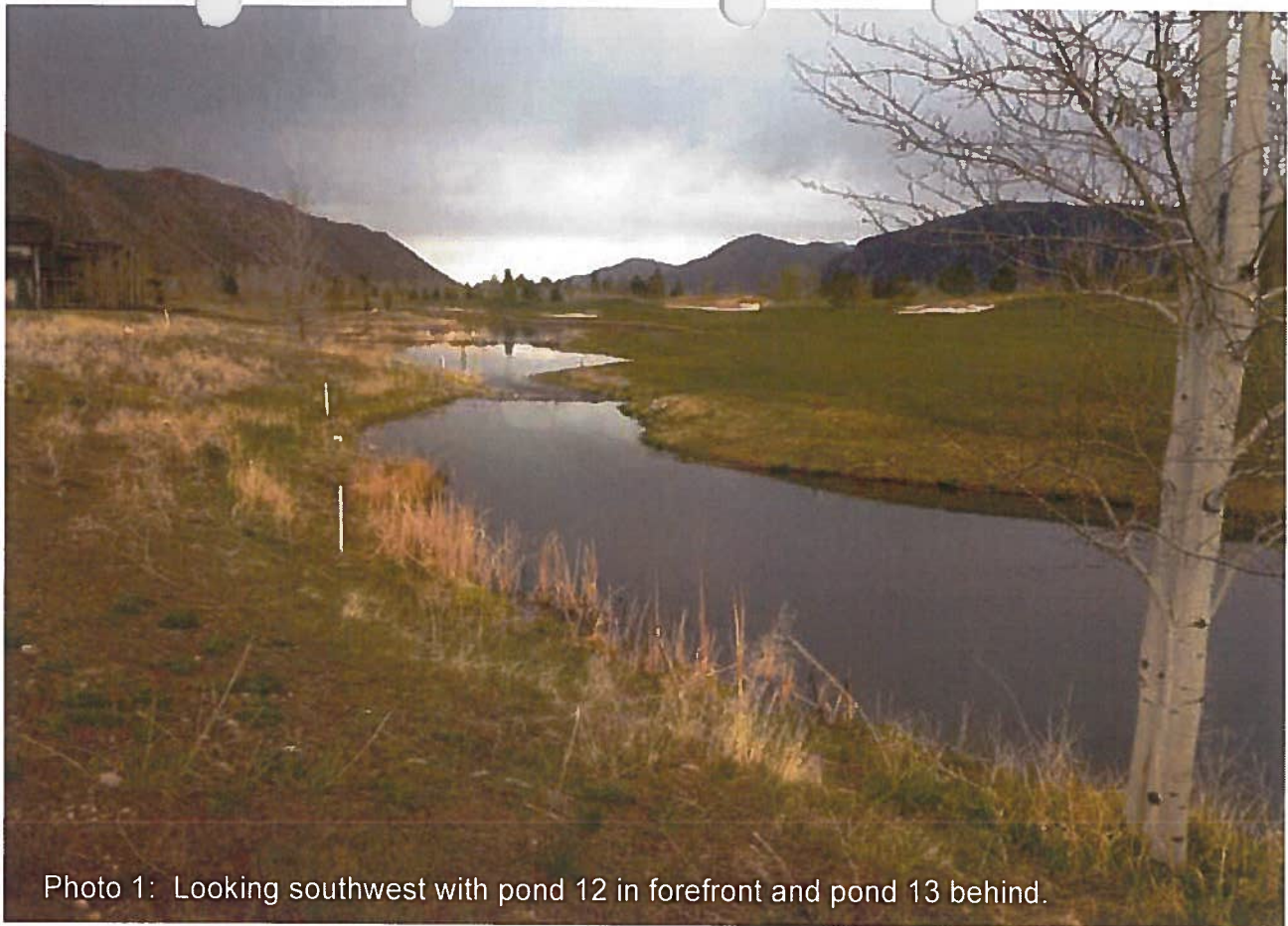


Photo 1: Looking southwest with pond 12 in forefront and pond 13 behind.

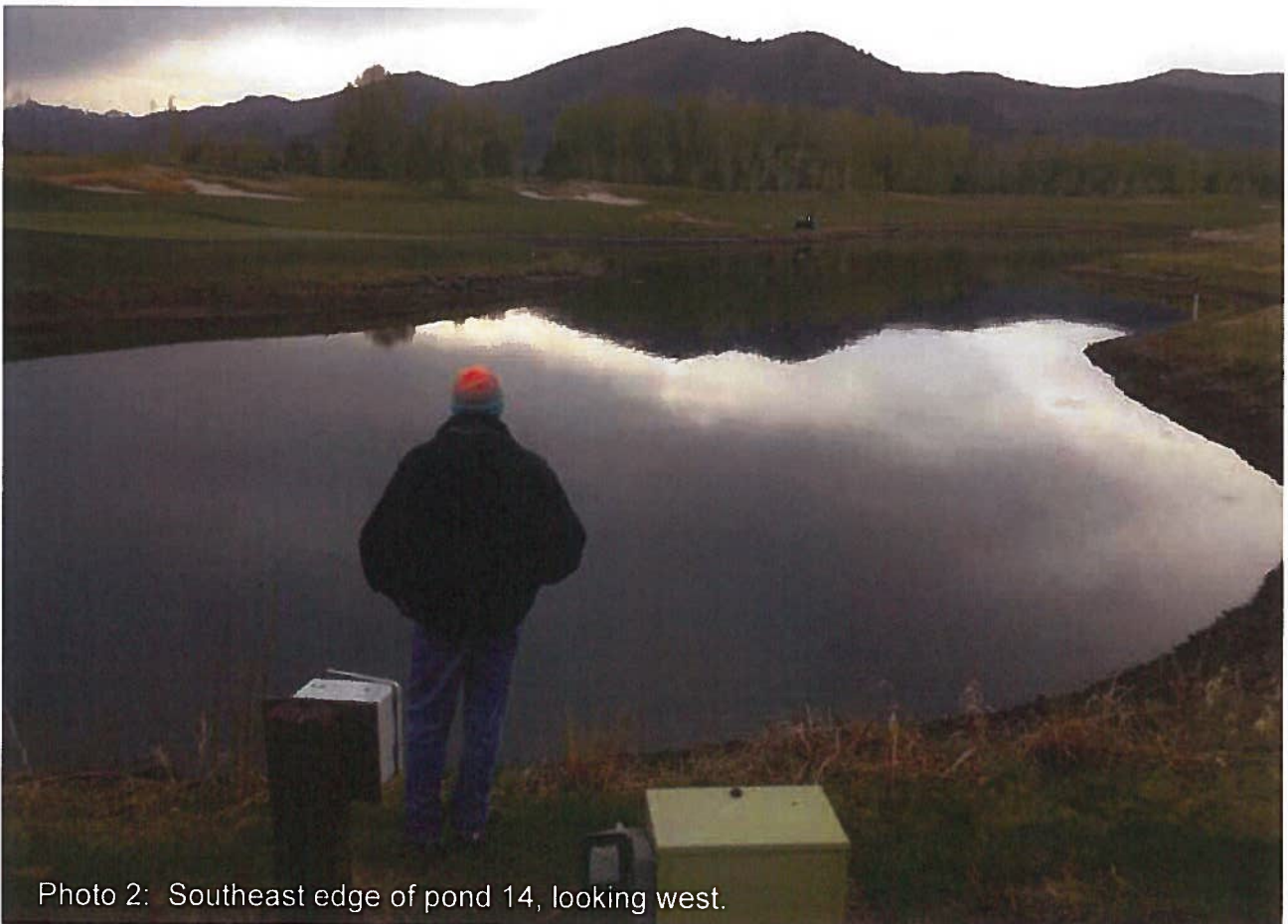


Photo 2: Southeast edge of pond 14, looking west.



Photo 3: Pump house at the northern end of pond 15.

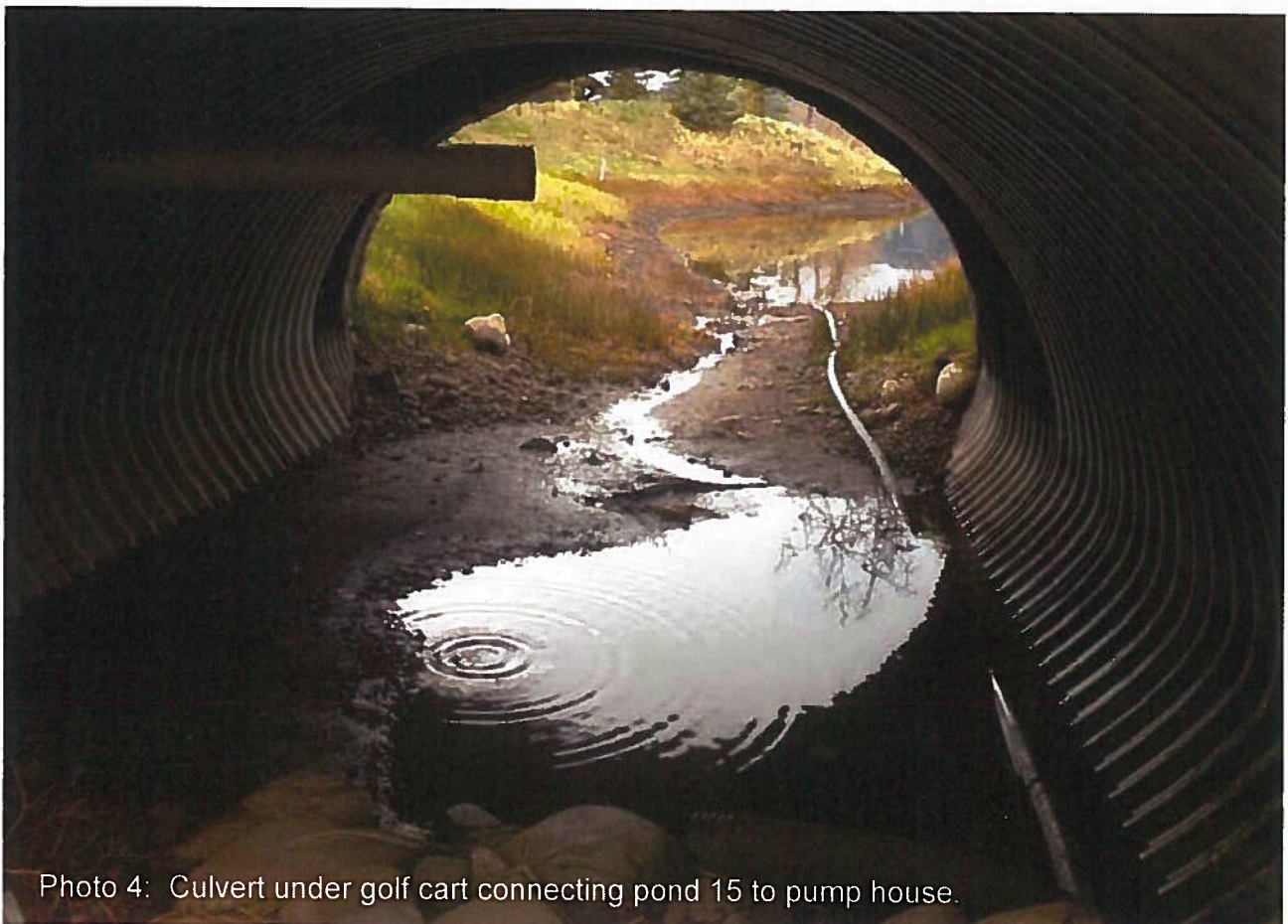


Photo 4: Culvert under golf cart connecting pond 15 to pump house.

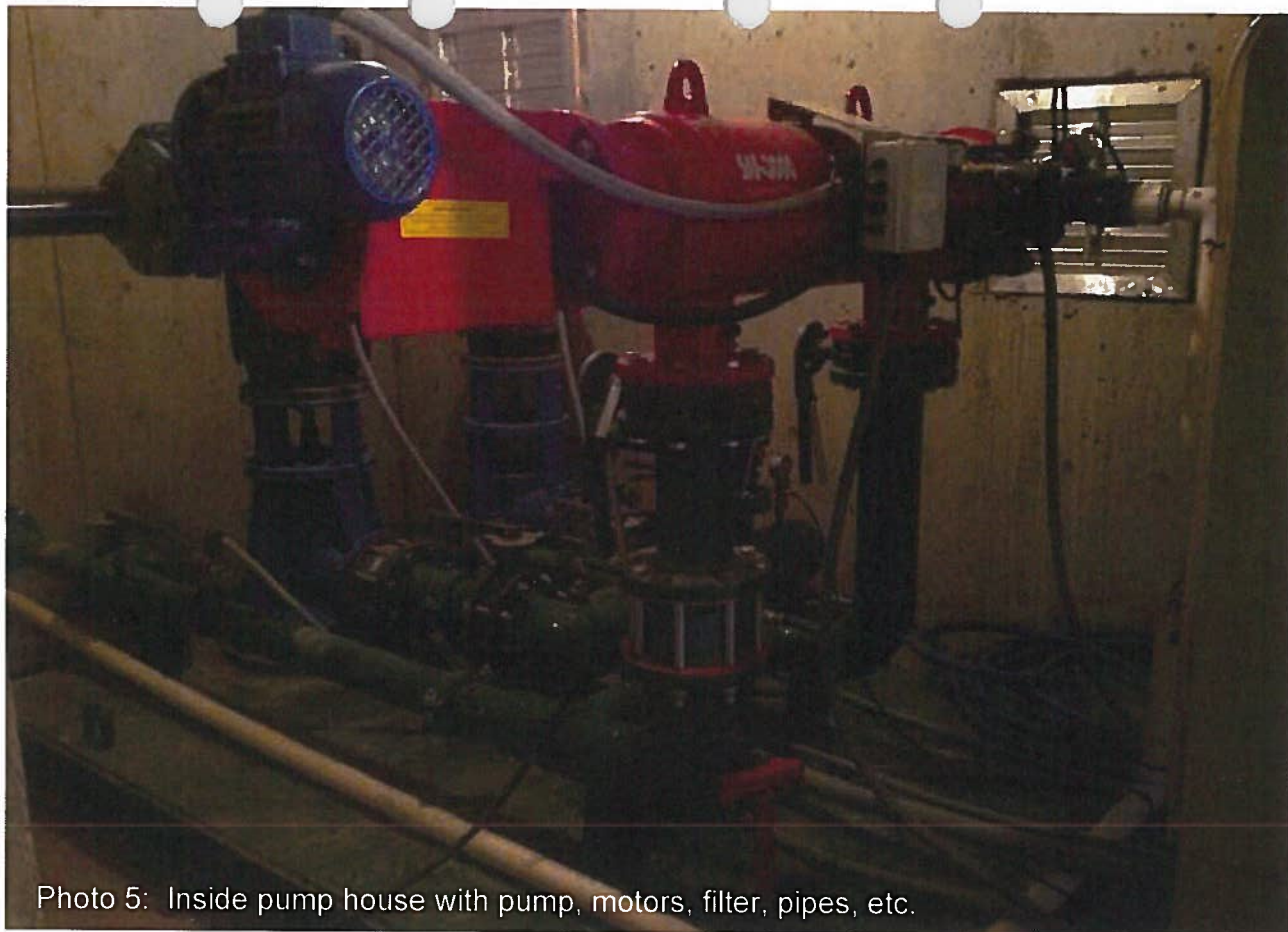


Photo 5: Inside pump house with pump, motors, filter, pipes, etc.



Photo 6: Inside pump house with pump, motors, filter, pipes, etc.



STREAMSIDE MAX POND DEPTHS

BROCKWAY ENGINEERING PLLC

Pond #:	Surface Area (ft ²)	Max Depth (ft):
1	5,728	10
2	5,927	7
3	5,483	6
4	2,472	6
5	2,846	4
6	7,877	5
7	7,256	7
8	19,881	10
9	4,262	6
10	1,894	4
11	2,937	6
12	5,012	6
13	8,307	6
14	93,805	12
15	53,239	7
16	33,328	7
17	42,065	8

Notes:

1. Surface Area determined by delineation of 2011 NAIP aerial photo
2. Maximum Depths collected by Will Miller and Zach Latham on 5/7/2013
3. Surface area of Hiawatha ponds includes historical surface area of Hiawatha Canal

Legend

- Hiawatha Offstream Pond
- Hiawatha Onstream Pond
- Sections
- QQ

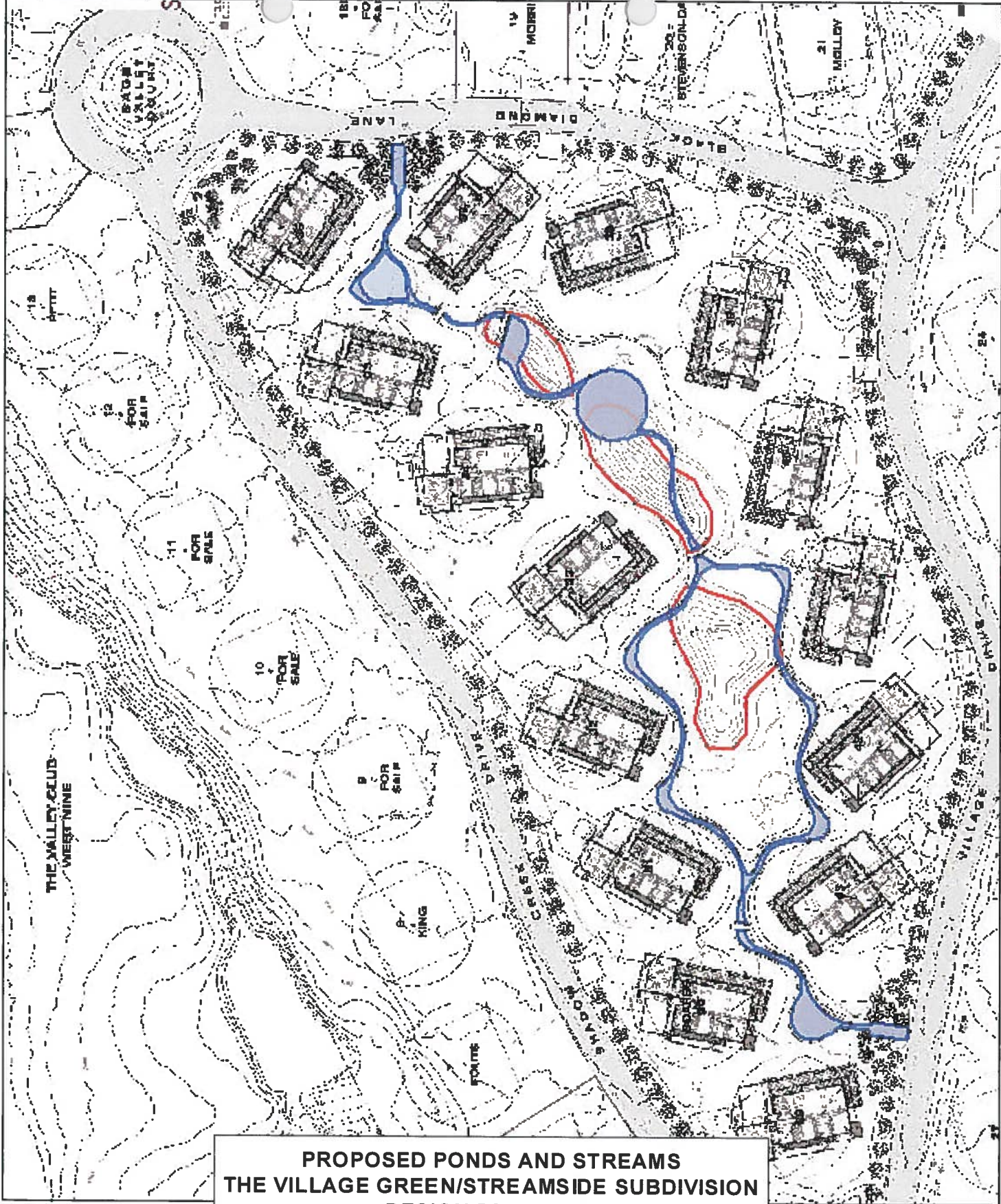


PERMIT 37-21338 ESTIMATED MAXIMUM DEPTH OF PONDS NAIP 2011 AERIAL PHOTO

A horizontal number line with tick marks at 0, 400, and 800. The word "Feet" is written at the right end. A solid line segment starts at 0 and ends at 400. At 400, there is a vertical tick mark and a small vertical line segment (a jump) that goes up and then continues as a solid line segment to 800.

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GEP - MAY 10, 2013



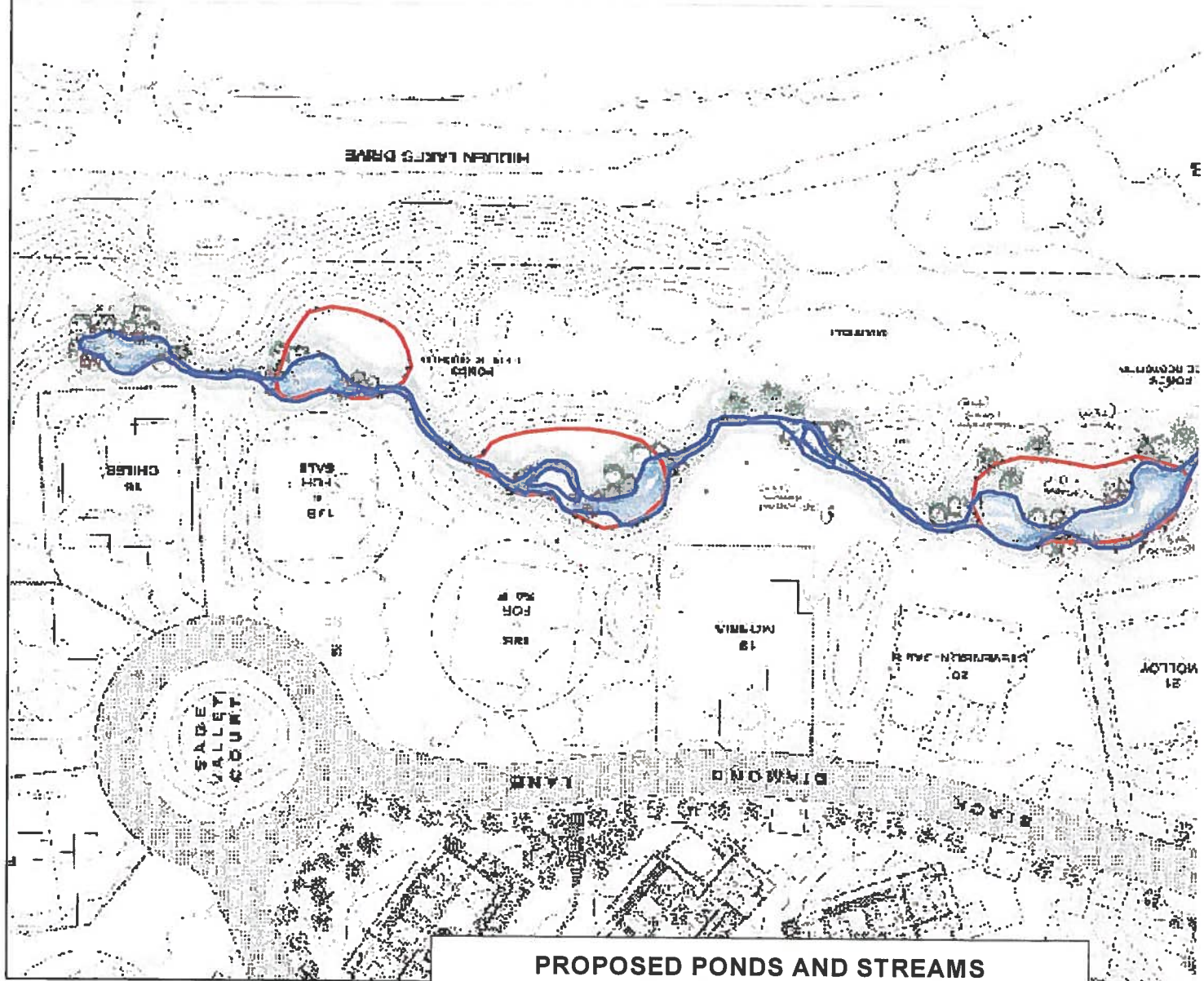


**PROPOSED PONDS AND STREAMS
THE VILLAGE GREEN/STREAMSIDE SUBDIVISION
DESIGN DRAWINGS**

Legend

- Proposed Ponds = 0.38 acres
- Existing Ponds = 0.41 acres





**PROPOSED PONDS AND STREAMS
THE VILLAGE GREEN/STREAMSIDE SUBDIVISION
DESIGN DRAWINGS**

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Legend
Prop
Exist

Potential Split of Water Right Permit No. 37-21338
Brockway Engineering, PLLC
May 21, 2013

The Valley Club, Inc. (Valley Club) submitted a water right permit application to IDWR on 8/19/2004 for “ponds and waterways in new residential and golf development.” This water right permit (Water right permit no. 37-21338) authorizes recreation, recreation storage, aesthetic and aesthetic storage on the West Nine Golf Course and the Village Green/Streamside Subdivision. The Valley Club filed ‘Proof of Beneficial Use’ on 10/29/ 2010, which indicates that the water right development is complete and no additional development will occur. IDWR conducted a field exam on 10/17/2012 and has requested additional information from the Valley Club.

Table 1 contains the water surface area comparison of the original permit design, current conditions based on the 2011 aerial photograph, and the proposed revisions within the subdivision. Note that there are four small portions of the ponds along the fairway that extend into the residential development property. The surface area of these small areas is approximately 0.11 acres. These areas have been included in the Valley Club Golf Course portion, even though they are technically on the subdivision property.

Table 1: Surface water comparison of the Valley Club West Nine area, including the Village Green/Streamside subdivision, between the permit design, current conditions based on a 2011 aerial photograph, and the proposed Streamside construction work.

	Permit Design (2004)	Current Subdivision Conditions (2011)	Proposed Subdivision Revisions (Future)
Streamside	2.22 acres	0.86 acres	0.85 acre
Valley Club Golf Course	3.28 acres	4.43 acres ^a	4.43 acres ^a
Hiawatha Canal	0.7 acres (3.27 acres)	0.7 acres ^b (2.97 acres)	0.7 acres ^b (2.97 acres)
Total	6.20 acres	5.99 acres	5.98 acres
Maximum Average Depth based on 31 acft	5.0 ft	5.2 ft	5.2 ft
^a Current Valley Club West Nine surface water area includes 0.11 acres of surface water that is on subdivision property, but are part of the fairway ponds.			
^b Actual new surface water area for the Hiawatha Canal is assumed to be the 0.7 acres, as originally designed. No comparison of historical vs. current Hiawatha Canal surface area has been performed.			

The original permit design included 3.27 acres of surface water on the Hiawatha Canal with 0.7 acres being new surface area. The 2011 aerial photo delineation shows approximately 2.97 acres of surface water; this is less than the original design values, so it is presumed that the modifications along the Hiawatha Canal did not exceed the authorized 0.7 acres of new surface area.

The permit design was for 6.3 acres of new surface water; the evaporation from this new open water was mitigated through a water right transfer that dried up 6.3 acres of irrigation. From our 2011 aerial photo analysis, it appears that the system as constructed

consists of 5.99 acres of new open surface water, which is under the maximum surface water authorized by this permit. Revisions to the storage system on the Village Green/Streamside Subdivision would slightly reduce the open water area.

The original design for the Village Green/Streamside property included approximately 2.22 acres of streams and ponds, or 39.6% of the permit designed aesthetic water surface area (2.22 acres/6.3 acres = 39.6%). As of 2011, the aesthetic water features account for 0.86 acres on ponds, or 13.7% of the permitted acres (0.86 acres/6.3 acres = 13.7%).

The intent of the original permit was to establish aesthetic and recreation water rights on the golf course and the subdivision property. From our perspective, the water permit 37-21338 should therefore be split to reflect the change of ownership of the subdivision property. As the original permit requested 6.3 acres of surface water and 0.86 acres of surface water were constructed on the subdivision, a possible split could be 13.7% and is outlined in Table 2.

Table 2. Possible split of water right permit 37-21338 between The Valley Club, Inc. and the Village Green/Streamside Subdivision.

Water Right	WR Permit 37-21338	Valley Club Portion	Subdivision Portion
Priority Date	8/19/2004	8/19/2004	8/19/2004
Period of Use	4/15 – 10/31	4/15 – 10/31	4/15 – 10/31
Beneficial Use	As Outlined	As Outlined	As Outlined
Flow Rate	2.02 cfs	2.02 cfs	2.02 cfs
Storage Volume	31 AFA	26.8 AFA	4.2 AFA
Point of Diversion	As Described	As Described	As Described
Place of Use	Valley Club and Subdivision Property	Valley Club Property	Subdivision Property