

A. GENERAL INFORMATION

Exam Date: 9/1/2015

- ### 3. SOURCE

B. OVERLAP REVIEW

- ### C. DIVERSION AND DELIVERY SYSTEM

1. LOCATION OF POINT(S) OF DIVERSION:

Method of Determination: GPS waypoints previously recorded and verified on previous field exams for other water rights diverted from these same wells. Well #1 WMIS #1000878 and Well #2 WMIS #1000879.

2.

PLACE OF USE: DOMESTIC

[illegible]

Method of Determination: Aerial imagery from 2011; 2013 and 2015 was used to verify that the place of use is located as recorded. See attached map.

3. ☒ Delivery System Diagram Attached (required). Indicate all major components and distances between components. Indicate weir size/pipe as applicable.
- ☒ Map Attached Showing Location(s) of point(s) of diversion and place(s) of use (required). Scale must be 1:24,000 or greater.
- ☒ Aerial Photo Attached (required for irrigation of 10+ acres).
- ☒ Photo of Diversion and System Attached

4.

<u>Well or Diversion ID No.*</u>	<u>Motor Make</u>	<u>Hp</u>	<u>Motor Serial No.</u>	<u>Pump Make</u>	<u>Pump Serial No. or Discharge Size</u>
E0009078		50		Submersible	
E0009079	US Motor	40		Goulds	LP94372

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

D. FLOW MEASUREMENTS

1.

<u>Measurement Equipment</u>	<u>Type</u>	<u>Make</u>	<u>Model No.</u>	<u>Serial No.</u>	<u>Size</u>	<u>Calib. Date</u>
Installed		McCrometer		9495926	6 in	
	Ultrasonic	Fuji Meter				

2. Measurements:

Measurement performed on 11/09/2005 by Troy Winward and Nathan Erickson:

Well #1	Time Pumped	Total Gallons	Avg GPM	Avg CFS	% Difference
Installed Meter	10 min	5300	530	1.18	
Fuji Meter	10 min	5787	578.7	1.29	8.4

Well #2	Time Pumped	Total Gallons	Avg GPM	Avg CFS	% Difference
Installed Meter	10 min	4100	410	0.91	
Fuji Meter	10 min	4204	420.4	0.94	2.5

E. FLOW CALCULATIONS

____ Additional Computation Sheets Attached

Measured Method: Ultrasonic flow meter:

Measurement (11/9/2005):

$$1.29 \text{ cfs} + 0.94 \text{ cfs} = 2.23 \text{ cfs}$$

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation: N/A

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) =$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 =$$

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

2. Volume Calculations for Other Uses: Domestic In-House Use Only:

[43 home sites + 12 Condominiums (6 duplex condominiums)] x 0.6 AF = 33 AFA

G. NARRATIVE/REMARKS/COMMENTS

On 9/1/2015 I met with Kathy Pruett to conduct an on-site inspection of the 2 subdivisions provided water under this permit.

The first subdivision is completely developed with 6 duplex condominiums (12 family dwellings) and all 12 units are privately owned and occupied on a year round basis. This lot was developed as an affordable housing site and has changed ownership multiple times, but is currently managed by The Village Green at the Valley Club H.O.A. Inc. All irrigation on this lot is provided under water right 37-22753, a 0.030 cfs Big Wood River right for 1.4 acres with a priority date of 5/1/1881. The residents are only allowed to use domestic water under this permit in-house as that was a stipulation of a contractual agreement between the owners of the wells and delivery system (Valley Club) and the HOA. Mrs. Pruett indicated the covenants, conditions and restrictions (CC&Rs) for both subdivisions don't allow homeowners to install exterior hose bibs, but do allow them to install hydrants on the irrigation system for small gardens if desired (no gardens currently present at this development). Condition 132 on the permit indicates 12 "community housing units" were originally permitted. According to Mrs. Pruett, only half of the units were developed because the original developer went into foreclosure. Blaine County was ultimately gifted two undeveloped lots to construct the 6 remaining community housing units. So far, no effort has been made towards developing the lots. One of the undeveloped lots overlapped into the NWNE of Sec. 29 of Twp 03N Rge 18E and was included as part of the POU on the permit. Since there was no development in that tract, the NWNE was dropped from the POU on the license.

At the other subdivision, located in the NENE and SENE of Sec. 29 of Twp 03N Rge 18E, there are 43 separate home sites. Homes have been constructed on 17 of the lots. Infrastructure is present on all lots to provide power, telecommunications, sewer and fresh water (water meter hook ups are plumbed in). Homes are constructed after the purchaser selects a floor plan and landscaping options. Three of the lots that were recently purchased are currently starting construction. All irrigation on this subdivision is provided under water right 37-22752, a 0.340 cfs Big Wood River right for 17.0 acres with a priority date of 5/1/1881. Again, all domestic use is in-house only and any exterior water use is provided from the irrigation rights.

I'm relying on flow rate measurement data collected from a previous beneficial use field exam by IDWR staff, for water rights 37-8810 and 37-8613A, performed on 11/09/2005 (during the beneficial use development period for this water right) and utilize the same two wells as this right. The exam measured a combined flow rate of 2.23 cfs from the wells. Mrs. Pruett, stated that the developer told her that there have been no modifications made to the wells or the main water delivery system since it was constructed. This measurement indicates the system is capable of delivering the 0.74 cfs requested under this permit.

The system also provides water for the following water rights: 37-4F (0.09 cfs; 3.5 af irrigation); 37-8810 (0.40 cfs, 4.8 af domestic; 2.23 cfs fire protection); 37-8613A (0.98 cfs, 171.5 af irrigation; 0.50 cfs, 58.8 af domestic; 1.48 cfs, 230.3 af combined) and 37-22252 (0.52 cfs, 75.4 af irrigation). Excluding fire protection, the combined flow rate for all of the rights would be 3.23 cfs. However, if one looks at the flow rates for irrigation separately from the domestic use and considers the system design, it appears there is likely sufficient water available to meet demand. All domestic water is diverted to a 100,000 gallon tank prior to being diverted for domestic use. If all authorized irrigation flow (1.59 cfs) is being diverted for irrigation, there is still a minimum of 0.64 cfs available for diversion to the storage tank when operating the wells at maximum capacity during the irrigation season. Since the combined flow rate of all water rights exceeds the system's capacity to satisfy all rights simultaneously, delivering the requested amount of 0.74 cfs and satisfying the other rights is simply a matter of timing the diversions from the wells. By timing the diversions, this system is capable of satisfying all flow rates and volumes authorized from this system including the 0.74 cfs requested under this permit.

Conditions 070 and 065 on the permit indicate that irrigation under this permit is supplemental to surface water irrigation. Since this domestic use was developed as in-house only and there is no irrigation provided under this right, those conditions have been dropped from the license. Additionally, as the domestic use is in-house only, I recommend a volume 0.6 af per household: 0.6 af x 55 dwellings = 33.0 af

Recommend licensing 0.74 cfs and 33.0 AF for domestic use. License will be conditioned to allow in-house use only and there will be a combined limit condition limiting the rate to 2.23 cfs for all rights diverted from the system.

Have conditions of permit approval been met? ☒ Yes ☐ No

H. RECOMMENDATIONS**1. Recommended Amounts**

<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>DIVERSION RATE</u>	<u>ANNUAL VOLUME</u>
DOMESTIC	01/01 to 12/31	0.740 CFS	33.00 AF
<u>Totals:</u>		0.740 CFS	33.00 AF

2. Recommended Amendments

☐ Change P.D. as reflected above ☐ Add P.D. as reflected above ☒ None

☐ Change P.U. as reflected above ☐ Add P.U. as reflected above ☐ Other

I. AUTHENTICATION

Field Examiner's Name Bill Miller Date 9-15-2015

Reviewer [Signature] Date 10/5/15



Figure 1: Affordable Housing Condominiums



Figure 2: Pump House for Well #1



Figure 3: Well #2



Figure 4: Water Meter Cover



Figure 5: Plumbing for Water Meter (from supply and to stub out)



Figure 6: Power, telecommunications hookups and 1 of 7 fire hydrants

System Diagram

