

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 63-31568

Exam Date: 6/5/2012

1. Current Owner: AUTUMN LEAF OWNERS ASSN INC
12361 W BOWMONT ST
BOISE ID 83713
(208)376-6168
2. Accompanied by: Jake Jacobsen
Phone No: (208) 376-6168
Address: 12361 W. Bowmont Street, Boise, ID 83713
Relationship to Permit Holder: Association Representative

3. SOURCE TRIBUTARY
GROUND WATER

B. OVERLAP REVIEW

1. Other water rights with the same place of use: None
2. Other water rights with the same point of diversion: None

C. DIVERSION AND DELIVERY SYSTEM**1. LOCATION OF POINT(S) OF DIVERSION:**

GROUND WATER NW1/4NE1/4SE1/4 Sec. 4, Twp 03N, Rge 01E, B.M.
ADA County

Method of Determination: Arc Map (Aerial Photo); GPS Location N1383254, E2311308 Garmin GPS III Plus; Datum NAD83

2.

PLACE OF USE: DOMESTIC

Tw	Rge	Sec	NE				NW				SW				SE				
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	Totals
03N	01E	4													X				

Method of Determination: Arc Map (Aerial 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

Method of Determination: Arc Map (Aerial Map)

4.

<u>Well or Diversion</u> <u>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</u> <u>Size</u>
D0050531_____	_____	7.5_	04A19050029_	Berkley_____	M11344 / 3" PVC_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

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

D. FLOW MEASUREMENTS (N/A) – Pressurized irrigation system with pop-up sprinklers in residential lots.

1.

<u>Measurement</u> <u>Equipment</u>	<u>Type</u>	<u>Make</u>	<u>Model No.</u>	<u>Serial No.</u>	<u>Size</u>	<u>Calib. Date</u>
None_____	N/A_____	N/A_____	N/A_____	N/A_____	N/A_____	N/A_____
_____	_____	_____	_____	_____	_____	_____

2. Measurements: No field measurement. Pressurized irrigation system with pop-up sprinklers in residential lots.

E. FLOW CALCULATIONS

_____Additional Computation Sheets Attached

Measured Method (Theoretical HP):

$$Q = 8.8 \times e \times \text{hp}/z + (2.31 \times p)$$

$$Q = 8.8 \times 0.7 \times 7.5/90 + (2.31 \times 65)$$

$$Q = 46.2/240.15 = 0.19 \text{ cfs}$$

$$Q(\text{permit}) = 0.11 \text{ cfs} < Q(\text{theoretical}) = 0.19 \text{ cfs}$$

e = 0.7 (pumping efficiency)
 Hp = 7.5 (horsepower)
 Z = 90' (Pump level per representative)
 P = 65 psi (VFD measured operating pressure)

Measured Method (Well Log Pump Test):

$$Q = 60 \text{ gpm} = 0.13 \text{ cfs for 1-hour well capacity test}$$

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 3.6 \text{ ac} \times 4.5 = 16.2 \text{ afa}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.110 \times 260 \times 1.9835 = 56.7 \text{ afa}$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = 16.2 \text{ afa}$$

2. Volume Calculations for Other Uses:

G. NARRATIVE/REMARKS/COMMENTS

A double-cased well (12" & 8" casings), diverts ground water to 24 homes within the Autumn Leaf Subdivision for irrigation of lawns and landscaping. Subdivision common areas are irrigated by the United Water Idaho potable water system serving the development. The double-cased well is a replacement well for the original well which was abandoned due to noncompliance with the IDWR well construction standards. The requirement for installing a double-cased well may be due to the close proximity of a sewage lift station, which is located within the same common area landscape lot as the irrigation well.

The mechanical and pump control equipment are located underground in a 6' x 8' x 6' concrete vault. The abandoned irrigation well is located in the vault. The mechanical and control equipment in the vault includes the pump control panel, VFD pump controller, and phase converter.

Ground water is discharged through a 3" PVC mainline from the concrete vault to 3" PVC mainlines located near the rear lot lines of the residential lots. Watering schedules per lot vary between 2 – 3 days per week.

Verification of the total acreage for irrigation within the residential lots was determined by calculating the approximate lawn and landscaping areas within two sample lots. The average irrigable area of the two lots was approximately 0.15 ac. Based on irrigation of the 24 residential lots in the Autumn Leaf Subdivision, the approximate total acreage of irrigable land is 3.6 acres (24 x 0.15 = 3.6).

RATE &/OR STORAGE RECOMMENDED FOR LICENSING

Description	Rate of Flow (cfs)		Storage (af)
Permit Amount	0.11	&/or	
Beneficial Use Limit	0.11	&/or	
System Measurement	0.19(Theoretical)	&/or	
Proof Fee Amount	0.11	&/or	
Recommended Amount	0.11		

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	0.110 CFS	16.2 AFA
<u>Totals:</u>		0.110 CFS	

2. Recommended Amendments

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

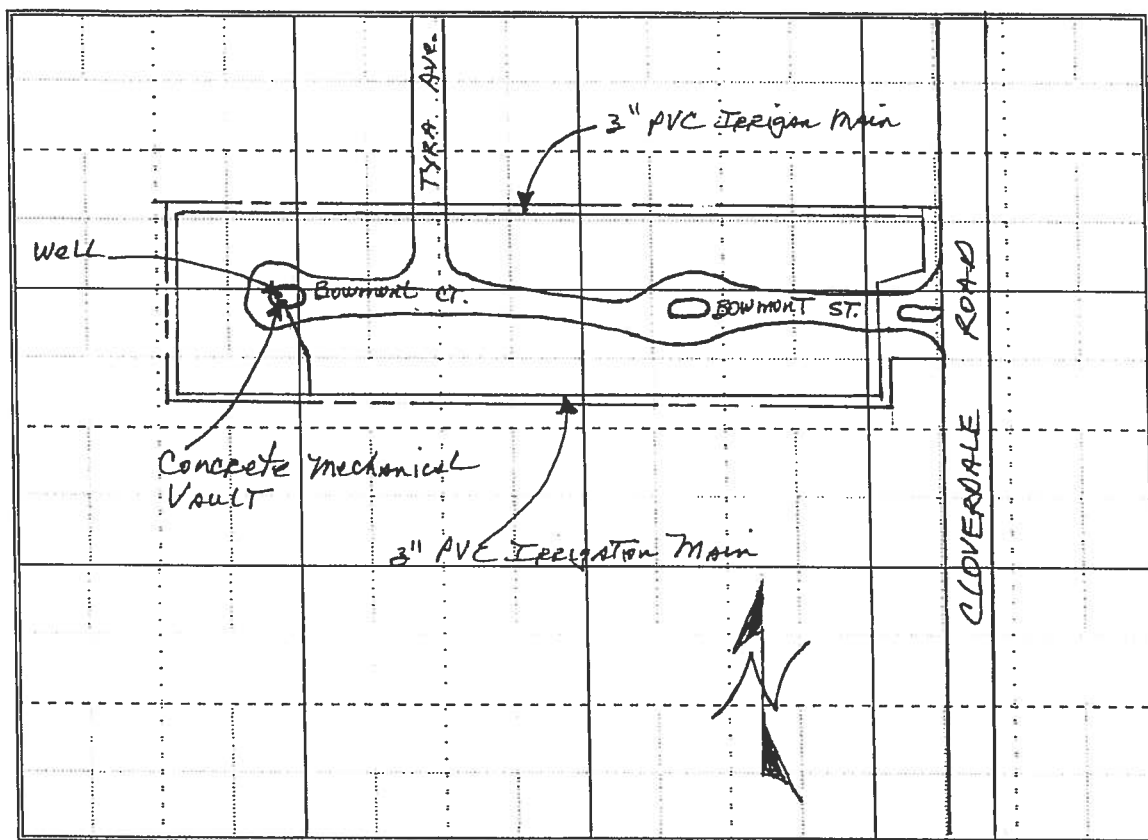
☐ Change P.U. as reflected above ☐ Add P.U. as reflected above ☐ Other

I. AUTHENTICATION

Field Examiner's Name Rick Collingwood Date 7-2-12

Reviewer _____ Date _____

3. **Delivery System Diagram:** Indicate all major components and distances between components. Indicate weir size/ditch size/pipe diameter (inside), as applicable. Use the space provided or ☐ see attached.



Scale: 1" = 300

- ☐ Copy of USGS Quadrangle attached showing location(s) of point(s) of diversion and place(s) of use (required)
☒ Aerial photo attached (required for irrigation of 10+ acres)
☒ Photo of diversion and system attached

63-31568



T03N., R01E., SEC. 4

**IDAHO DEPARTMENT OF WATER RESOURCES
FIELD EXAMINERS
WELL INSPECTION FORM**

1. IDENTIFICATION # 00050531 (Tag #, etc.)

OTHER APPLICABLE # _____ (Water right #, etc.)

2. OWNER Autumn Leaf Owners Assn., Inc. Phone (208) 376-6168

Address 12361 W. Bawmont ST. City Boise

State ID Zip 83713 Email _____

3. WELL LOCATION (GPS required in Degrees Decimal Minutes – use PLS if GPS not available)

Lat. N 1383254 Long. E. 2311308

Twp 03N Rge 01E Sec 4 $\frac{1}{4}$ NE $\frac{1}{4}$ SE

4. WELL CONSTRUCTION ☒ Well log attached ☐ Well log not found

Any obvious construction problems that may be a source for contamination or waste? ☐ Yes ☒ No

If yes, describe below &/or see attached (list any that apply): ☐ Photos ☐ Diagram ☐ Other

5. HYDROLOGIC INFORMATION

Static water if measured (well log)
26 ft.

Water temperature if measured _____ °F

Flowing artesian ☐ Yes ☒ No

Pressure if measured 65 psi
(VFD) psi

NOTES _____

INSPECTED BY Rick Collingwood DATE 5-29-12

FIELD EXAM PHOTOS

Water Right Permit: 63-31568

Field Exam Date: 5-29-12

PLS: NE1/4, SE1/4 Section 4, T.03N, R.01E.

Field Examiner: RC



Point of Diversion located in common lot. Double-cased (12" & 8") well. Spigot and backflow preventer in background are components of the United Water Idaho potable system to irrigate common area lots.



Steel lid to subsurface concrete vault which houses the mechanical and control equipment for the pressurized irrigation system, and the abandoned well.



Place of use. View northeast of typical pop-up sprinkler system within residential lots.