

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 36-15712

Exam Date: 02/02/2012

1. Current Owner: UNIVERSITY OF IDAHO REGENTS
C/O REAL ESTATE OFFICER
ADMINISTRATIVE AFFAIRS
PO BOX 443162
MOSCOW ID 83844-3162
2. Accompanied by: Dr. Ron Hardy
Phone No: 208-837-9096
Address: 3059 F. National Fish Hatchery Rd, Hagerman ID 83332
Relationship to Permit Holder: Director of the Aquaculture Research Institute

3. **SOURCE**

GROUND WATER

B. OVERLAP REVIEW

1. Other water rights with the same place of use: 36-8750 (Domestic; 0.040 cfs; 3.2 AF; USDI Fish & Wildlife Service)
2. Other water rights with the same point of diversion: None

C. DIVERSION AND DELIVERY SYSTEM1. **LOCATION OF POINT(S) OF DIVERSION:**

GROUND WATER SE1/4NW1/4SE1/4 Sec. 6, Twp 08S, Rge 14E, B.M.
GOODING County

Method of Determination: Waypoints were collected with a Garmin GPS map 76S receiver and downloaded into an ArcMap shapefile that corresponds with 2009 aerial photography and verified the point of diversion to be in Twp 08S Rge 14E S 06 SENWSE¼. See attached map.

2.

PLACE OF USE: DOMESTIC

Twp Rge Sec	NE				NW				SW				SE				Totals
	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
08S 14E 6														X			

Method of Determination: Waypoints were collected with a Garmin GPS map 76S receiver and downloaded into an ArcMap shapefile that corresponds with 2009 aerial photography and verified the place of use to be in Twp 08S Rge 14E S 06 NWSE¼. 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</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>
<u>ID No.</u> D0030119		5 Hp			

D. FLOW MEASUREMENTS N/A

E. FLOW CALCULATIONS

☐ Additional Computation Sheets Attached

Measured Method: Theoretical yield:

$$Q = \frac{8.8 \times (Hp) \times (Eff)}{H}$$

Where: Hp = 5 Hp (per Elsing Well Drilling Co. records)

Eff = efficiency = 70% assumed

H = total head = pumping level = (2.31 x system pressure)
 assume pumping level of 231 feet (based on Elsing Well Drilling Co. records)
 assume system pressure = 30 psi

$$H = 231 + (30 \times 2.31) = 300.3$$

$$Q = \frac{8.8 \times 5 \times .70}{300.3} = 0.1 \text{ cfs}$$

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation: N/A

2. Volume Calculations for Other Uses: Domestic volume calculated by fixtures:

Use	Wet Lab (5 Employees)	Research Facility (40 Employees)	Dormitory (Average 4 Employees/year round)	Water Consumption	Total Gallons per Day
Toilets	1	6	2	5	5 x 45 Emp x 3 times daily = 675
Lavatory Sinks	1	4	0	2.5	2.5 x 45 Emp x 3 times daily = 337.5
Kitchen Sink	0	0	1	15	15 x 4 Emp = 60
Vacuum Hoods with spigot	0	6	0	20	20 x 10 Emp = 200*
Drinking Fountains	1	4	0	.25	.25 x 45 EMP = 22.5
Eyewash/Shower	2	6	0	35	70 (gl per year)**
Janitor Sink	1	1	0	20	20 x 2 fixtures = 40
Dishwasher	0	1	1	20	120***
Washing Machine	0	0	2	50	50 x 2 daily uses = 100
Bathtub/Shower	0	0	2	50	50 x 4 Emp = 200
Lab Sink	2	10	0	6	12 sinks x 6 gl x 10 Emp = 720*

$$((2475 \times 365) + 70)/325850 = \underline{\underline{2.77 \text{ AFA}}}$$

*Based on an average 10 employees daily use (per Dr. Hardy)

**Emergency use calculated at twice a year

*** Research Facility uses dishwasher up to 4 times daily/dormitory 1 time (per Dr. Hardy)

G. NARRATIVE/REMARKS/COMMENTS

Permit 47-15712 was permitted for the diversion of up to 0.04 cfs, 2,500 gallons per day, for domestic use in 4 buildings used for aquaculture research and offices.

Application for permit 47-15712 submitted by The University of Idaho, was submitted August 6, 2001 and proof of Beneficial Use was submitted October 6, 2004.

According to Dr. Ron Hardy, Director of the Aquaculture Research Institute, when the University of Idaho obtained the lands for the research center at the national fish hatchery from the US Department of the Interior Fish and Wildlife Service, the University agreed to provide a domestic well with a recorded water right for employee uses at the facility. Water for irrigation and aquaculture research is provided from existing surface water rights held by the US Fish and Wildlife Service. Overlap analysis indicates there is a domestic ground water right 37-8750, that provides water for employee and visitor use at the U.S. Fish and Wildlife facilities located on grounds that overlap the NWSE¼.

A volume analysis was completed by inventory of the fixtures at the facility. A volume of 2.77 AFA was calculated based on potential daily use at the facility (see section F part 2). The well services 4 buildings at the site: a research center; 2 wet labs; and a dormitory. The facility employs 41 fulltime staff and an average of 4 graduate/PhD students.

A theoretical yield calculation indicates the well is capable of producing 0.1 cfs.

Recommend permitting 0.04 cfs and a volume of 2.8 AFA.

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	0.040 CFS	2.8 AFA
<u>Totals:</u>		0.040 CFS	2.8 AFA

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 Mott Date 2-6-2012

Reviewer Chad Merritt Date 2/15/2012



Figure 1: Domestic Well



Figure 2: Main Laboratory and Offices



Figure 3: Front Entrance to Wet Labs



Figure 4: Six Bedroom, Two Bath Dormitory

State of Idaho
Department of Water Resources
Water Right License

36-15712

Water Service Area Boundary for University Of Idaho Regents

R14E

T08S



0 0.04 0.08 0.16 Miles

- Point of Diversion
- Place Of Use Boundary
- Townships
- PLS Sections
- Quarter Quarters



36-15712 System Diagram

