

MEMORANDUM

TO: Water Right File 75-14863 & 75-14865
FROM: Brian Normandeau – Associate Engineer
DATE: June 22, 2020
SUBJECT: Licensing Review of Water Rights 75-14863 & 75-14865

The Beneficial Use Field Reports for these rights were prepared by Certified Water Right Examiner Patrick Naylor of Rocky Mountain Environmental Associates. The following is my evaluation and recommendations for licensing based on the provided reports.

Diversion Rate:

The field reports included both an open discharge capacity measurement, and a calculation based on the maximum number of sprinkler heads in operation at one time. Permit 75-14863 has a permitted diversion rate of 0.10 cfs. Based on the information provided in the field report, the recommended rate for licensing remains at 0.10 cfs. Permit 75-14865 has a permitted diversion rate of 0.09 cfs. Based on the information provided in the field report, the recommended rate for licensing is reduced to 0.08 cfs.

Diversion Volume:

Neither permit had an assigned volume restriction. The field reports included calculations for volume based on rate, and the generic irrigation requirement of 3.5 acre-feet/acre. The volumes using the irrigation requirement is recommended for licensing; which corresponds to 17.5 acre-feet for 75-14863, and 9.1 acre-feet for 75-14865.

Point of Diversion and Place of Use:

The point of diversion and place of use had to be amended for both permits due to minor changes that were made during development of the water rights. The permit holder, Ruth Anderson, submitted Applications for Amendment for both permits along with the appropriate fees. The irrigated acreage remained the same for 75-14863, and 75-14865 was reduced from 3.0 acres to 2.6 acres.

Overlap:

The place of use for 75-14863 is overlapped with permits 75-14861 & 75-14862, which have not been developed at this time. There is a combined limit established for the irrigation provided by these three rights. Right 75-10935 is a domestic right that overlaps the place of use for 75-14863. It appears this right is no longer associated with the parcel covered by 75-14863 due to changes in property ownership.

Conditions:

Conditions 26A and 029 are dropped at licensing, as they were adequately satisfied in the development of the irrigation systems. 01H becomes licensing condition R02.

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

RECEIVED
NOV 25 2019
Department of Water Resources
Eastern Region

A Beneficial Use Field Report is prepared by a water right examiner as the result of an examination to clearly confirm and establish the extent of the beneficial use of water established in connection with a permit during the development period authorized by the permit and any extensions of time previously approved.

A. GENERAL INFORMATIONPermit No. 75-14865

1. Owner Ruth Andersen Phone No. 801-573-4368
Current address 14 Beehaven Ln, Salmon, ID 83467-5029
2. Examiner's name Patrick N Naylor EXAM DATE 9/18/2019
3. Accompanied by Ruth Andersen Email sageranchllc@msn.com
Address Same
- Relationship to permit holder Same Phone No. same
4. Source Salmon River tributary to Snake River

B. OVERLAP REVIEW

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

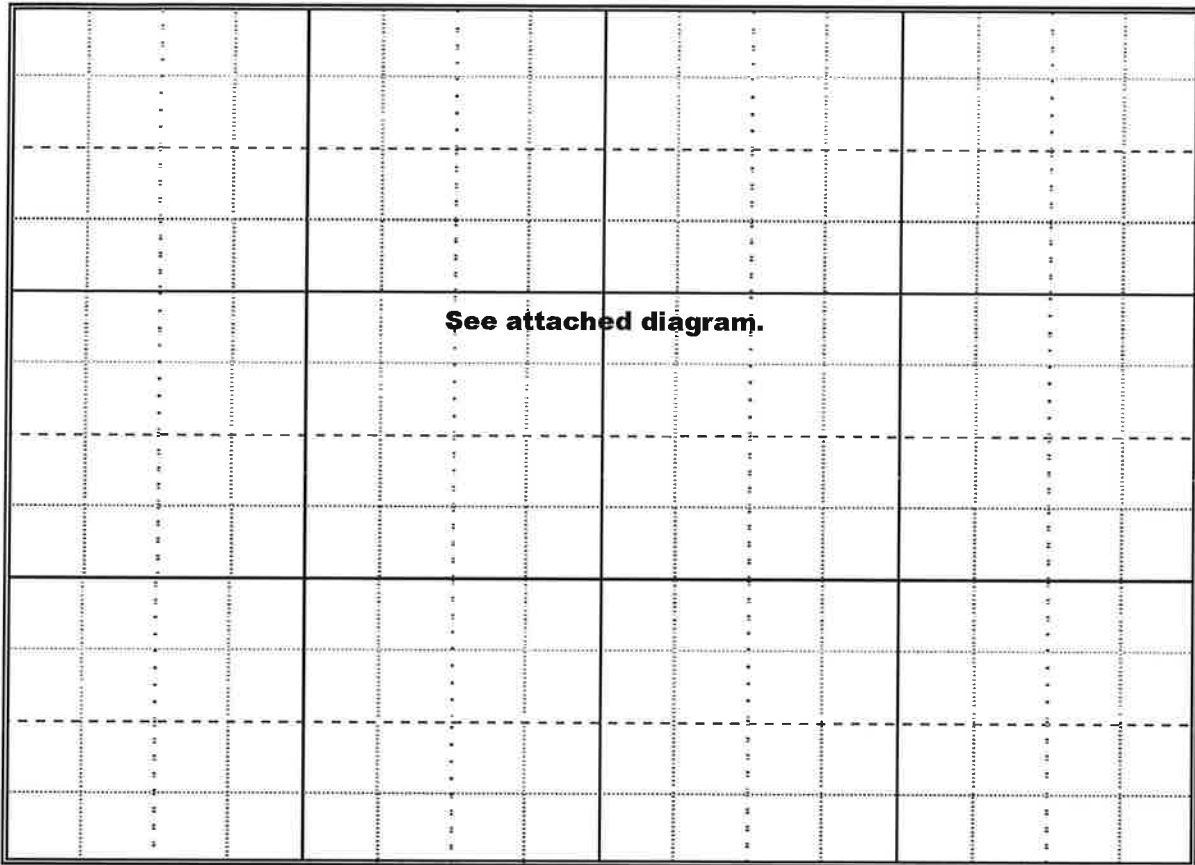
C. DIVERSION AND DELIVERY SYSTEM**1. Point(s) of Diversion:**

Ident. No.	Gov't Lot	1/4	1/4	1/4	Sec	Twp	Rge	County	Method of Determination/Remarks
			NW	SE	34	19N	21E	LEMHI	On-site inspection & aerial

2. Place(s) of Use: Method of determination on-site inspection & aerial

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
19N	21E	34														0.4	1.2		1.6
																L5	L8		
		34														0.7	0.3		1.0
																			2.6

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" = _____

- ☒ 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

4.

Well or Diversion Identification No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
Salmon Rv Pump	Baldor JML1406T	3	36G095-0115G1	Berkeley LTH-3	3 in.

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

D. FLOW MEASUREMENTS

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date
32 gallon drum and stop watch						

2. **Measurements:** _____

Measured 5 times using a 32 gallon drum (1) 32 gal/16.44 sec (2) 32 gal/16.00 sec (3) 32 gal/16.11 sec (4) 32 gal/16.28 sec (5) 32 gal/16.34 sec

E. NARRATIVE/REMARKS/COMMENTS

The irrigation system has a 3" aluminum intake in the Salmon River with a pump and motor connected to a 3" aluminum mainline. A 3" by 12" stainless steel screen is fitted to the end of the intake. Ten lateral connections stem off the mainline across the property, as shown in the attached maps. Nine of the connections are 1.5" pipe with 1-6 sprinkler heads per line. Each head requires 5 gpm. One connection off the mainline is for a garden hose for irrigating the areas near the house and garage.

A natural spring flows from the property and has created small ponds on the southeast side near the road. The north pond has been mostly filled in and a drainage pipe helps to control overflow on the property. An irrigation line from the mainline runs parallel to the pond on the northwest side to irrigate grass and to establish new grass. Originally, the place of use included the area of the pond as part of the acreage. However, the irrigation system does not include the ponds, therefore they will be excluded from the place of use.

When irrigating, only 8 sprinkler heads are operated at a time at 50 psi.

8 heads x 5 gpm = a total diversion of 40 gpm (0.089 cfs)

Has the permit holder met all conditions of permit approval, including any mitigation requirements and/or measuring device installation requirements? ☒ Yes ☐ No If no, what must be done to meet the permit requirements?

Conditions of Approval met: 1) a fish screen was installed at the point of intake. 2) the right holder has installed a straight length of conduit or ditch for the purposes of measuring flow 3) A lockable device is installed 4) right holder meets authorized diversion rate and acres.

F. FLOW CALCULATIONS☐ Additional computation sheets attached

Measured Method:

Measured five times using 32 gallon drum. Drum filled in 1) 16.44 s 2) 16.00 s 3) 16.11 s 4) 16.28 s 5) 16.34 s for an average fill time of 16.23 sec
 $32 \text{ gal}/16.23 \text{ sec} = 1.97 \text{ gal/sec}$ $1.97 \text{ gpm} \times 60 \text{ sec/min} = 118.3 \text{ gpm}$

Pump capacity was measured at 118.27 gpm, or 0.27 cfs

Operates simultaneously 8 heads at 5 gpm = 40 gpm or 0.09 cfs

 $2.6 \text{ acres} \times 0.03 \text{ cfs/ac} = 0.078 \text{ cfs}$ rounded to 0.08 cfs

Recommend a limit of 0.08 cfs

G. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 2.6 \text{ ac} \times 3.5 \text{ afa/ac} = 9.1 \text{ afa}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation Season}) \times 1.9835 = 0.08 \text{ cfs} \times 214 \text{ days} \times 1.9835 = 34 \text{ afa}$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = 9.1 \text{ afa}$$

2. Volume Calculations for Other Uses:

NA

H. RECOMMENDATIONS

1. Recommended Amounts

Beneficial Use	Period of Use From To		Rate of Diversion Q (cfs)	Annual Volume V (afa)
Irrigation	4/01	10/31	0.08 cfs	9.1 afa
Totals:			0.08 cfs	9.1 afa

2. Recommended Amendments

☒ Change P.D. as reflected on page 1☐ Add P.D. as reflected on page 1☐ None☒ Change P.U. as reflected on page 1☐ Add P.U. as reflected on page 1☐ Other**I. AUTHENTICATION**

Field Examiner's Signature

Patrick N. Naylor

Date

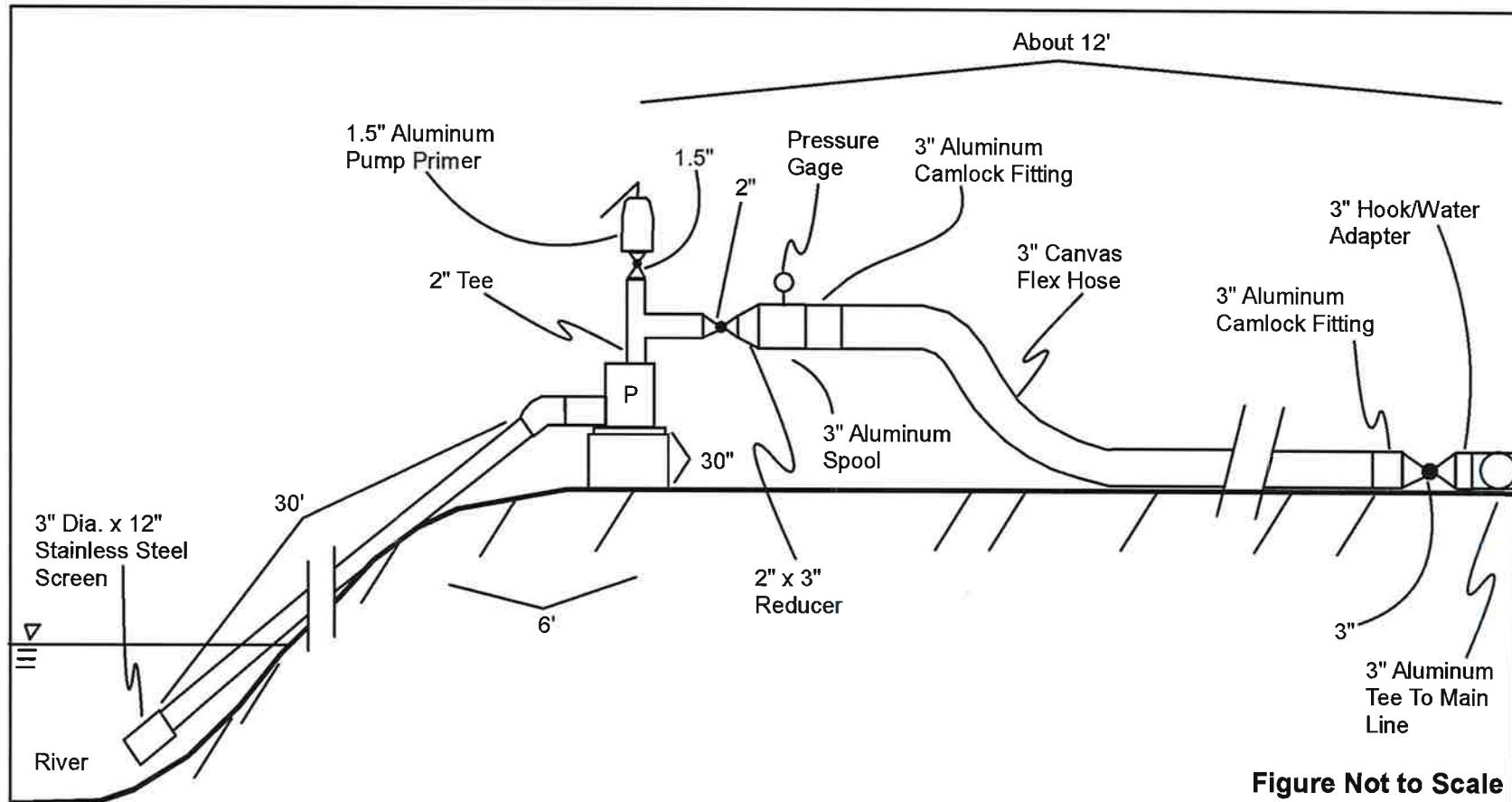
11/18/14

Reviewer

Date



11/18/14



Ground Level



Brass Ball Valve
(See Figure for Size)



Rocky Mountain
ENVIRONMENTAL
ASSOCIATES, INC.

Delivery System Diagram for Permit 75-14865

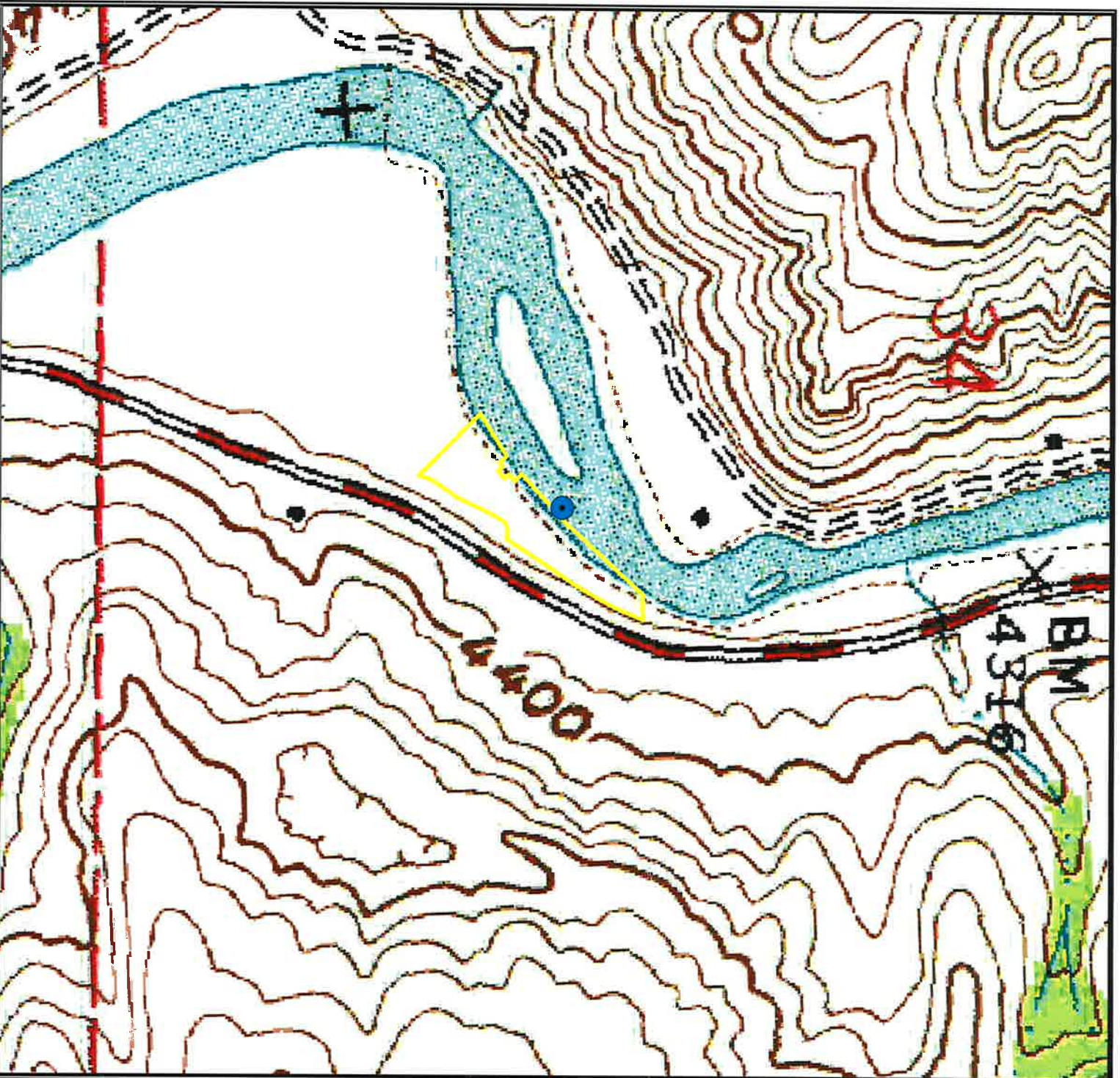
5 Peacock Ln
Salmon, Idaho

Ruth Anderson
Water Rights
Project Manager: Patrick Naylor

Date: 10/24/2019

Project #: 19-0151

Drawn by: JP



● Point of Diversion

□ Place of Use

0 70 140 280 420 560 Feet

**USGS Goldbug Ridge Quadrangle 1:24,000
Permit 75-14865**

**5 Peacock Ln
Salmon, Idaho**



**Ruth Anderson
Water Rights
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2017 Aerial Photography

- | | | | |
|---|--------------------|---|----------------|
|  | Point of Diversion |  | 1.5" Poly Hose |
|  | Sprinkler Head |  | Place of Use |
|  | Lateral T |  | Twp & Rng |
|  | Water Hose |  | Section |
|  | 3" Aluminum Pipe |  | QQ |



Field Examination Map -- Permit 75-14865

5 Peacock Ln
Salmon, Idaho

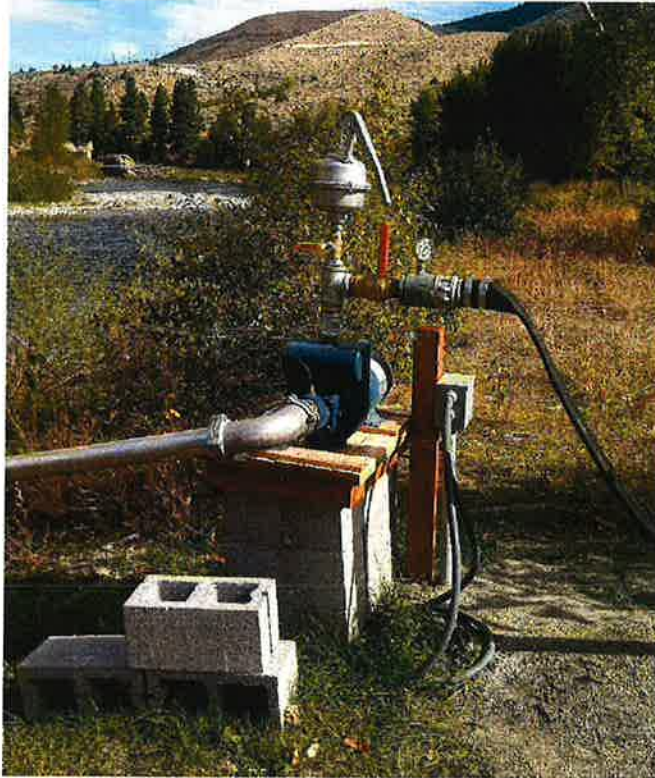


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Photos of Diversion and System

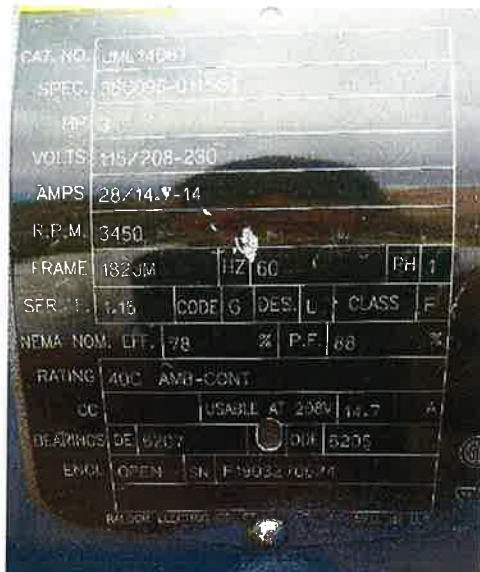
Full Pump Assembly



Pump Plate



Motor Plate



Intake Screen



Intake in River



Sprinklers in Use on north end of Place of Use



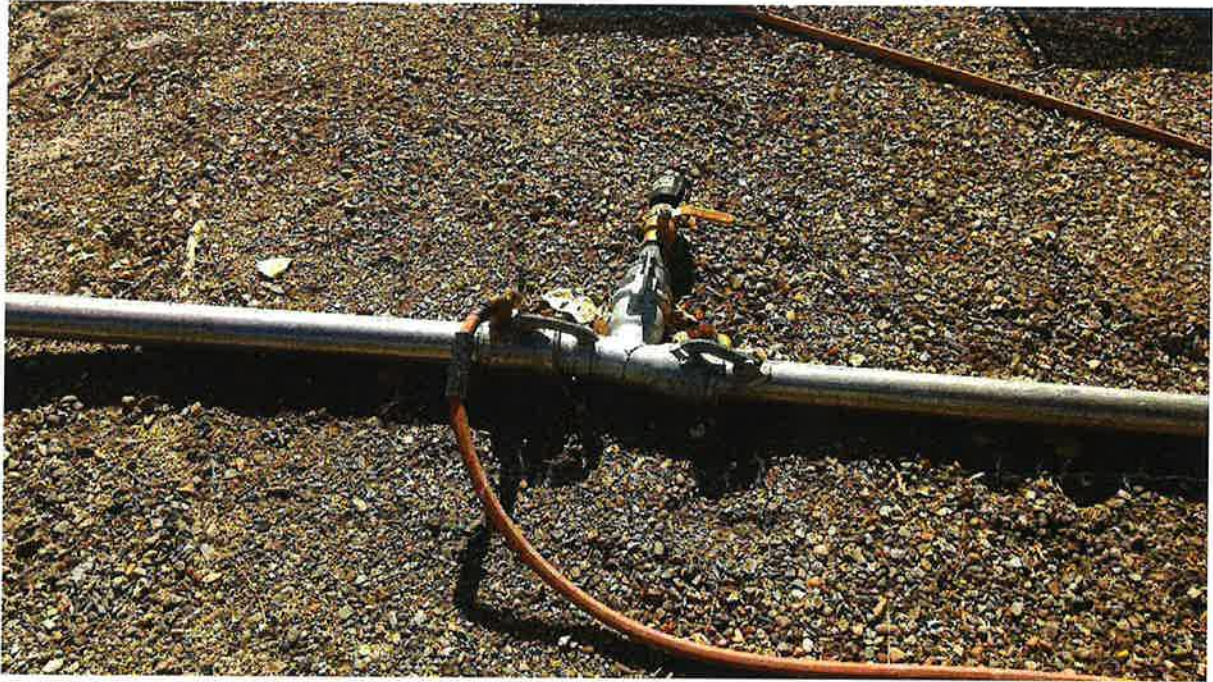
Sprinklers at South End of mainline



Lateral in central Place of Use just north of the house and garage



3 in x 1.5 in Lateral Tee



East side by Pond Looking Northeast



South Place of Use



Pond area looking Northwest



Pond area looking Southwest



Pond outlet

