

STATE OF IDAHO  
DEPARTMENT OF WATER RESOURCES  
**IN-OFFICE REVIEW/BENEFICIAL USE FIELD REPORT**

**A. GENERAL INFORMATION**Permit No: 91-8028Exam Date: 9/8/2020

1. Does this qualify for an in-office field exam (IDAPA 37.03.02.035.01.r)? X Y N
- Irrigation of 5 acres or less
  - Storage of up to 14.6 AF for stockwater purposes only
  - Any use other than irrigation or storage, if the combined diversion rate is 0.24 cfs or less
  - Other < >

2. Current Owner: Name: David and Carol Valliant  
Owner of Record Correct? X Y N  
Address of Record Correct? Y N  
If No: Address

The Department's tax parcel data shows the property for the place of use is in the ownership of the David L. Valiant.

3. Beneficial Use Fees have been paid: X Y N Receipt No: N/A

4. **SOURCE****TRIBUTARY**

Saint Joe River

Coeur D Alene Lake

Method of Determination: GIS and Tax Parcel DataChange in Source: Y X N**B. OVERLAP REVIEW**

1. Other water rights with the same place of use: NO Overlap

| Water Right No. | Source | Purpose of Use | Basis |
|-----------------|--------|----------------|-------|
|                 |        |                |       |
|                 |        |                |       |

Comments: There are no overlapping rights for this place of use. There are water rights for the neighbor's property two parcels to the west, and another permit on the neighbor's property two parcels to the east.

2. Other water rights with the same point of diversion: NO Overlap

| Water Right No. | Source | Purpose of Use | Basis |
|-----------------|--------|----------------|-------|
|                 |        |                |       |
|                 |        |                |       |

Comments: There are no overlapping rights for this place of use. There are water rights for the neighbor's property two parcels to the west, and another permit on the neighbor's property two parcels to the east.

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

| Source     | Govt. Lot | ¼ | ¼  | ¼  | Sec. | Twp. | Rge. |      | County  |
|------------|-----------|---|----|----|------|------|------|------|---------|
| River Pump | 4         |   | NW | SW | 14   | 46N  | 1W   | B.M. | BENEWAH |
|            |           |   |    |    |      |      |      | B.M. |         |
|            |           |   |    |    |      |      |      | B.M. |         |

Method of Determination: GIS and Tax Lot data.

Change in POD?   X     N   Amendment Required?   X     N  2. **PLACE OF USE:** Use: Irrigation

| TWP           | RGE | Sec   | NE |    |    |    | NW |    |    |    | SW |     |     |    | SE |    |    |    | Totals |
|---------------|-----|-------|----|----|----|----|----|----|----|----|----|-----|-----|----|----|----|----|----|--------|
|               |     |       | NE | NW | SW | SE | NE | NW | SW | SE | NE | NW  | SW  | SE | NE | NW | SW | SE |        |
| 46n           | 1w  | 14    |    |    |    |    |    |    |    |    |    | .2  | .6  |    |    |    |    |    | 0.8    |
|               |     | Lot # |    |    |    |    |    |    |    |    |    | L-4 | L-4 |    |    |    |    |    |        |
| Total Acres = |     |       |    |    |    |    |    |    |    |    |    |     |     |    |    |    |    |    | 0.8    |

Method of Determination: GIS and Tax Lot Data2. **PLACE OF USE:** 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 |        |
| 46n           | 1w  | 14    |    |    |    |    |    |    |    |    |    | D   | D   |    |    |    |    |    |        |
|               |     | Lot # |    |    |    |    |    |    |    |    |    | L-4 | L-4 |    |    |    |    |    |        |
| Total Acres = |     |       |    |    |    |    |    |    |    |    |    |     |     |    |    |    |    |    |        |

Method of Determination: GIS and Tax Lot DataChange in POU?   X     N   Amendment Required?   X     N     Delivery System Diagram Attached (required). Indicate all major components and distances between components.

Indicate weir size/pipe as applicable.

  X   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 |
|------------------------------------------|------------|----|------------------|-----------|-----------------------------------|
| River Pump                               | Unknown    | 1  | Unknown          | Unknown   | Unknown                           |
|                                          |            |    |                  |           |                                   |

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

**PLEASE NOTE:** The permit holder stated in the application for permit that the pump they planned to use is a 1 Hp pump.**D. FLOW MEASUREMENTS**

| 1. Measurement Equipment | Type | Make | Model No. | Serial No. | Size | Calib. Date |
|--------------------------|------|------|-----------|------------|------|-------------|
| NONE                     |      |      |           |            |      |             |
|                          |      |      |           |            |      |             |

2. Measurements: No measurement is required for an in-house exam, but I did perform an theoretical calculation based on the 1 Hp pump referred to in the application for permit.

**E. FLOW CALCULATIONS**

\_\_\_Additional Computation Sheets Attached

Measured Method:

The application for permit states that the permit holder plans to use a 1 Hp pump. Based on the contour lines in ArcMap and standard pressures, an estimate was performed based on this information

**Pump Capacity Based on Theoretical = 0.05 cfs**

**Administrative Memo #22 for domestic = 0.04 cfs for domestic use**

**Administrative Memo #17 for Irrigation = 0.8 acres X 0.03 cfs = 0.024 cfs**

**Permit Allowed Domestic = 0.04 cfs**

**Permit Allowed Irrigation = 0.02 cfs**

**Permit Allowed a Total of = 0.04 cfs**

**I am recommending a diversion rate of 0.04 cfs for domestic, 0.02 cfs for irrigation, and a total diversion rate of 0.04 cfs as recommended in the permit.**

**F. VOLUME CALCULATIONS**

## 1. Volume Calculations for Irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 0.8 \text{ acres} \times 3 \text{ af} = 2.4 \text{ af}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.02 \times 231 \text{ days} \times 1.9835 = 9.2 \text{ af}$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = 2.4 \text{ af}$$

**Please Note: This is a surface water right, so no volume will be included on the water right license.**

## 2. Volume Calculations for Other Uses:

I am required to fall back on the standard for domestic use set forth by Administrative Processing Memo #22. I am recommending a diversion volume of 0.6 af. The yard irrigation is covered under the irrigation component.

**G. PURPOSE OF USE**

Irrigation   X   Y    N # Stock            Domestic # of Homes   1  

Other: < >

Change in Purpose of Use?    Y    N

Method of Determination: Taxlot data and conversations with owner.

If Yes: From Use            To Use            Amount            CFS            AFA           

**H. NARRATIVE/REMARKS/COMMENTS**

This permit qualifies for an in-house examination. The water from this permit is diverted from the Saint Joe River. The water is diverted to an RV unit, which can clearly be seen in the 2019 aerial imagery. The 2020 Sentinel imagery clearly shows the parcel is clearly irrigated. When looking through the Sentinel images, it is clear there are various lots that are not irrigated.

The Permit holder marked on the proof of beneficial use statement that he had installed the fish screen required by the permit conditions.

The place of use for the domestic use in the permit is described as Government Lot 4 (NWSW) in Section 12, Township 46 North, Range 1 West. The domestic use is for an RV that can be parked anywhere within the tax parcel. The tax parcel is in Government Lot 4 (NWSW and the SWSW) in Section 12, Township 46 North, Range 1 West. Therefore, I correct the legal description of the domestic use to include the entire parcel and the updated 40 acre tract designations. Since all of the parcel is in Government Lot 4, and Government lot 4 is the actual legal description, no amendment is necessary.

Conditions X15, 227, and 004 should be carried forward to licensing. Condition 132 should be carried forward to the license, but we should change 1 RV to 1 Home per Department Standards. Condition R66 should be changed to X31 with a diversion rate of 0.02 cfs and 2.4 af. Condition X60 should be carried forward to licensing, and X59 should be added to it. The remainder of the conditions on the permit should be removed at licensing.

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

## I. RECOMMENDATIONS

### 1. Recommended Amounts

| BENEFICIAL USE | PERIOD OF USE  | DIVERSION RATE | ANNUAL VOLUME |
|----------------|----------------|----------------|---------------|
| Domestic       | 01/01 to 12/31 | 0.04 CFS       | 0.6 AFA       |
| Irrigation     | 03/15 to 10/31 | 0.02 CFS       |               |

Totals: 0.04 CFS

**Please Note:** This is a surface water right, so no volume will be included on the water right license.

### 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 ☒ None

Other: < >

## J. AUTHENTICATION – DANIEL A. NELSON – WATER RIGHT ANALYST 3

Field Examiner's Name



Date

9-18-20

Reviewer

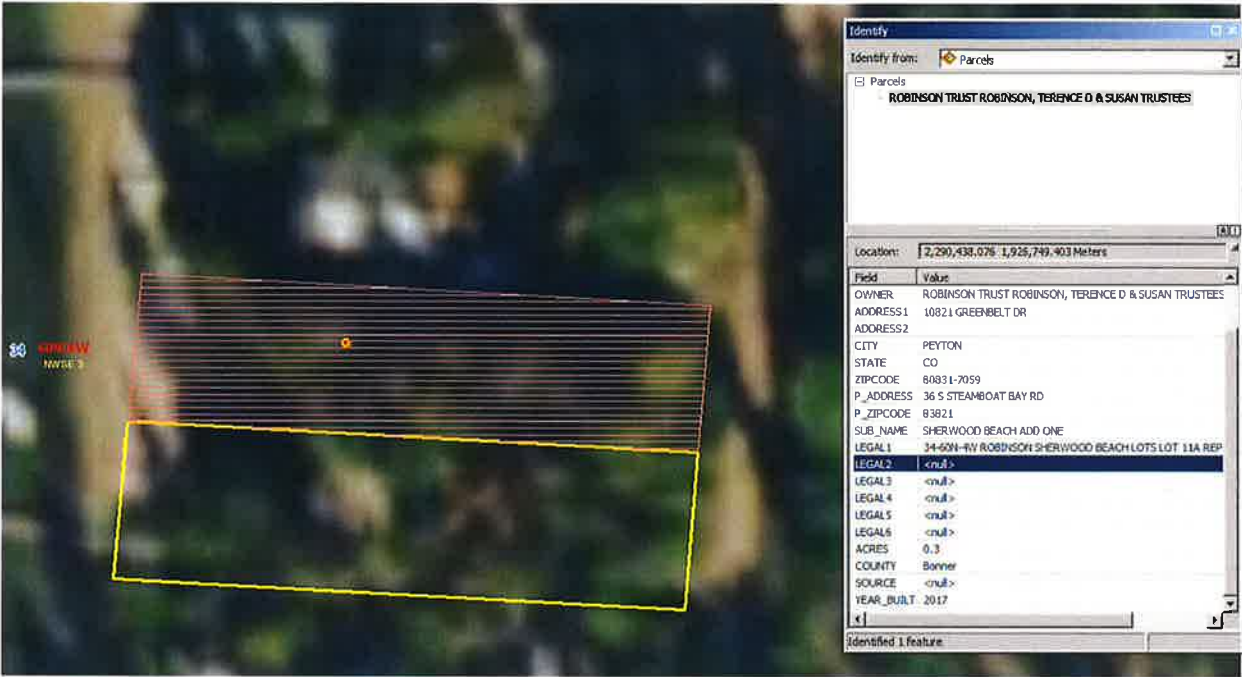


Date

09/18/20

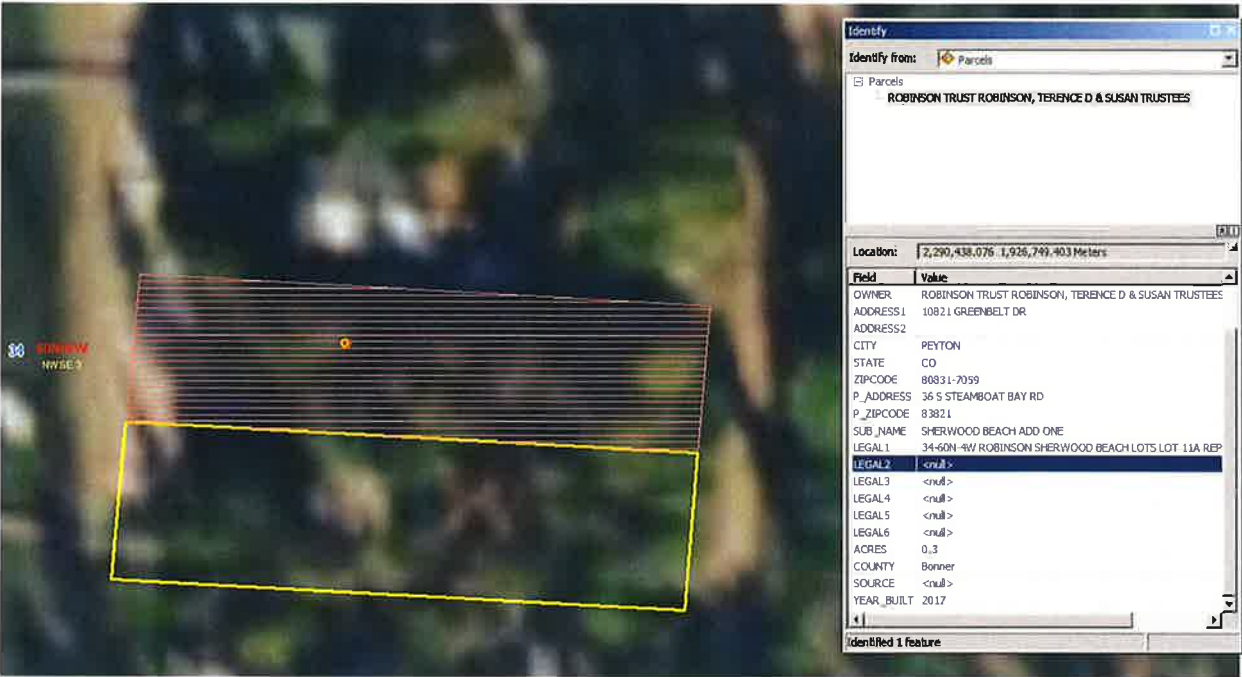
Field Exam Map:

The yellow border shows the parcel for this permit and the orange dot shows the shared well with water right 95-7557. The red hatched border shows the place of use for water right 95-7557. The Tax Parcel information shows the home was constructed in 2017 for the property (yellow border) associated with this permit.



Field Exam Map:

The yellow border shows the parcel for this permit and the orange dot shows the shared well with water right 95-7557. The red hatched border shows the place of use for water right 95-7557. The Tax Parcel information shows the home was constructed in 2017 for the property (yellow border) associated with this permit.



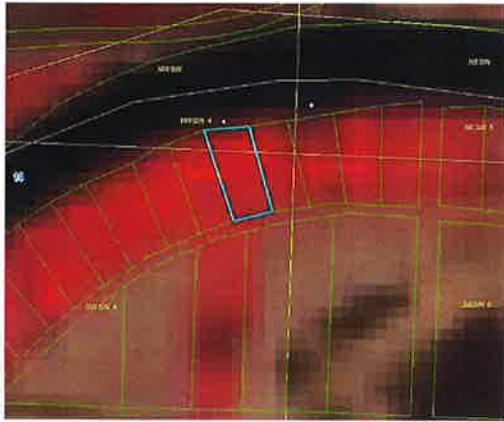
## Permit 91-8028 – Field Exam Map

The 2019 imagery below shows the 0.8 af of irrigation and the trailer parked on the property. The yellow border shows the irrigation place of use, and the yellow point shows the point of diversion. The Domestic place of use will be the tax parcel border shown in green.

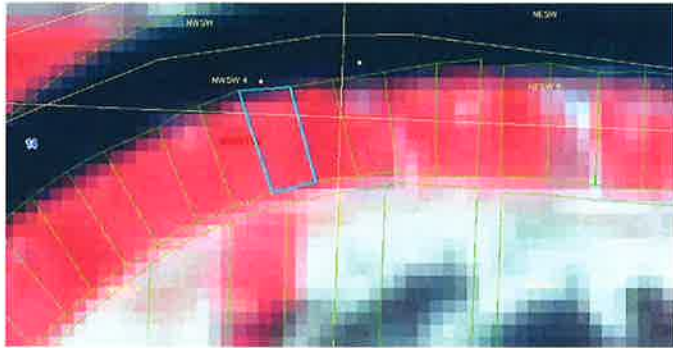


# Permit 91-8028 – Sentinel Maps

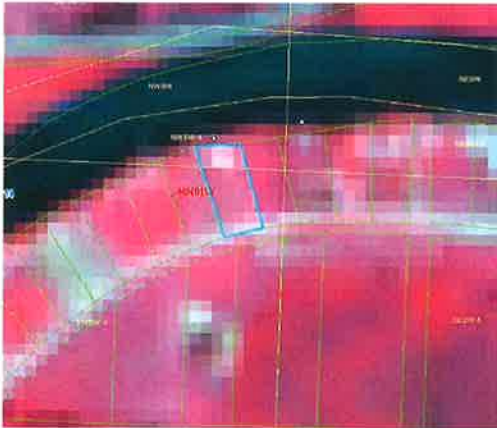
4/21/2020 Sentinel Image



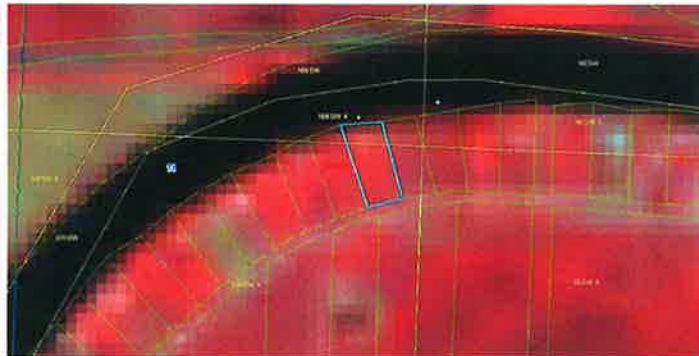
5/9/2020 Sentinel Image



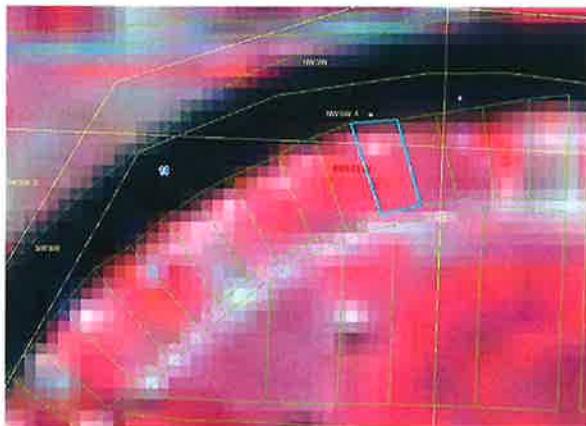
7/13/2020 Sentinel Imagery



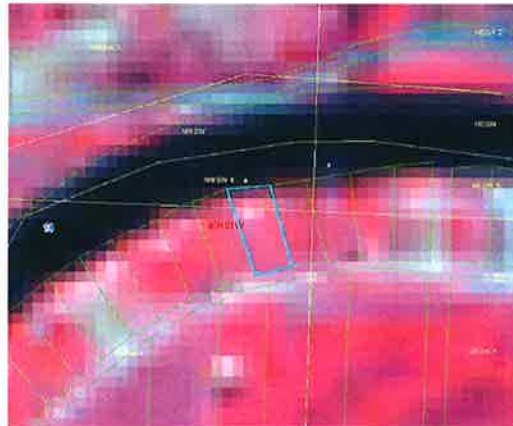
7/20/2020 Sentinel Imagery



8/4/2020 Sentinel imagery



8/14/2020 Sentinel Imagery



# THEORETICAL HORSEPOWER EQUATION WORKSHEET (cjh 1/92)

Water Right No.: 91-8028  
 Reviewer: Dan Nelson  
 Date of Review: 9/8/2020

P/D No.:

PUMP HORSEPOWER  
 BOOSTER HORSEPOWER

PUMPING LEVEL

DISCHARGE PRESSURE

RATE OF FLOW (cfs)

| Scenario 1 |
|------------|
|            |
| 1          |
| 0          |
|            |
| 20         |
|            |
| 40         |
|            |
| 0.05       |
| 25         |

| Scenario 2 |
|------------|
|            |
| 1          |
| 0          |
|            |
| 20         |
|            |
| 50         |
|            |
| 0.05       |
| 20         |

| Scenario 2 |
|------------|
|            |
| 1          |
| 0          |
|            |
| 20         |
|            |
| 60         |
|            |
| 0.04       |
| 17         |

Average  
 0.05  
 22.50

The above calculates the formula =

$$Q = \frac{8.8 * (\text{Efficiency}) * \text{hp}}{\text{depth to water} + 2.31 * (\text{psi}) + \text{friction}}$$

Assumptions: %70 efficiency  
 No Friction

## Examiners Notes:

There was very little information on this system. I estimated the lift using the maximum 20 feet of lift, since this would be the maximum possible lift. I used the standard for domestic uses of 40 psi to 60 psi. Using these maximum parameters the 1 Hp pump the owner stated in the application for permit was the size of the pump being used, I determined that this system could deliver between 0.04 cfs to 0.05 cfs. This diversion rate is the same size if not larger than what was authorized by the permit. Therefore, I believe this system can easily produce the 0.04 cfs requested in the permit.