

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 96-9797
Exam Date: 04/20/2021

1. Current Owner:
JOHN SNYDER 25964 HIGHWAY 2 SANDPOINT ID 83864-6583
2. Accompanied by: John Snyder
Phone No: 208-255-2888
Address: Same as above
Relationship to permit Holder: Permit Holder

3. **SOURCE:**
PEND OREILLE RIVER

Tributary
COLUMBIA RIVER

Method of Determination: Arcmap and DRG.

B. OVERLAP REVIEW

1. Other water rights with the same place of use: YES Overlap

Water Right No.	Source	Purpose of Use	Basis
96-2222	PEND OREILLE RIVER	IRRIGATION	LICENSE
96-2246	PEND OREILLE RIVER	IRRIGATION	LICENSE
96-8961	PEND OREILLE RIVER	IRRIGATION	LICENSE

Comments: Three licensed rights 96-2222, 96-2246, and 96-8961 have the same source and beneficial use (irrigation) as this right and overlap the POU. Each of the three rights listed above are not associated with this right, and their respective irrigation POUs are located in different parcels than this right's POU (96-222 and 96-8961), or the irrigation POU is not able to be determined referencing the backfile (96-2246). None of the three rights listed above pose a concern for overlap with this water right.

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

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

PEND OREILLE RIVER NW¼ NE¼, Sec. 32, Twp 57N, Rge 02W, B.M. BONNER County

Method of Determination: GPS. POD is located at -116°35.9, 48°15.087.

PLACE OF USE: IRRIGATION

Twp	Rng	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
57N	02W	29															0.8 L2		0.8
57N	02W	32		0.3 L1															0.3

Total Acres: 1.1

Method of Determination: Field exam and Arcmap aerial imagery.

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.

Well or Diversion ID No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
SUBMERSIBLE PUMP – 25 GPM CAPACITY	GRUNDFOS				

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-office exam.

E. FLOW CALCULATIONS

Flow measurement not required as per IDAPA RULE 37.03.02.035.01.r.iii.

F. DIVERSION RATES

The diversion rate for this irrigation right is limited to 0.04 CFS or 18.0 GPM.

G. VOLUME CALCULATIONS

This right uses a surface water source, and does not receive an annual volume nor maximum diversion volume.

H. NARRATIVE/REMARKS/COMMENTS

This permit qualifies for an in-office field examination. A drive by was performed on 4/20/2021 with the applicant, John Snyder, to GPS locate the POD and verify irrigation on the property. Photographs were taken to show the irrigation and POD.

The permit was authorized for 0.05 cfs based on 1.3 acres of irrigation applied for. Following the exam, Arcmap aerial imagery was used to accurately trace out irrigation occurring at the POU, resulting in 1.15 acres; corresponding diversion rate equals 1.15×0.03 cfs per acre = **0.04 cfs** considering department rounding standards, which is recommended for licensing purposes. At the POD, there is a decade old small Grundfos submersible pump installed

along a deck. Mr. Snyder asserts the pump installed has a 25 GPM maximum pump capacity, but that he did not receive any pump information regarding the install that occurred over a decade ago.

At the irrigation POU, I identified a pressurized sprinkler system with 13 separate zones. The system uses Toro 570 MPR+ sprinkler nozzles, with 12 foot radius, and 90 degree / 180 degree / 360 degree assorted sizes configured to each of the 13 zones. The 360 degree Toro 570 MPR+ nozzle has a flow capacity of 1.92 GPM at 30-40 PSI. The 180 degree nozzle produces 0.96 GPM, and the 90 degree nozzle produces 0.48 GPM. It is reasonable to assume the pump installed in the applicant's system does not exceed 40 PSI, or the system would be ruining sprinkler heads annually. Due to the composition of the applicant's sprinkler system, which cycles between zones during the irrigation season, the flow rate recommended for licensing of 0.04 cfs or 18 GPM is sufficient to operate the sprinkler system efficiently without concern for over diversion from the small pump installed in the irrigation system. The surface water source used for irrigation purposes does not receive volume metrics, but is limited to 3.0 AF per acre.

Condition 029 was removed from the permit during licensing review. All other conditions on the permit will be carried forward to licensing. Overlap concerns: Three licensed rights 96-2222, 96-2246, and 96-8961 have the same source and beneficial use (irrigation) as this right and overlap the POU. Each of the three rights listed above are not associated with this right, and their respective irrigation POUs are located in different parcels than this right's POU (96-222 and 96-8961), or the irrigation POU is not able to be determined referencing the backfile (96-2246). None of the three rights listed above pose a concern for overlap with this water right. There are no additional concerns of overlap for this right.

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

H. RECOMMENDATIONS

1. Recommended Amounts

Beneficial Use	Period of Use	Rate of Diversion
IRRIGATION	04/01 to 10/31	0.04 CFS

Totals: 0.04 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 ☒ None

I. AUTHENTICATION

Luke Bates - Water Resource Agent

Field Examiner's Name  Date 4/21/2021

Reviewer  Date 4/27/2021

State of Idaho
Department of Water Resources
Attachment to Field Exam
96-9797

IRRIGATION system diagram.



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

0 0.035 0.07 0.14 Miles



570 MPR+ Nozzle 90°, 12 ft (3.7 m) (53862)

 Buy Online

- Built-In Pressure Compensating Device eliminates fogging and misting, saving water
- Matched precipitation rate (MPR) ensures even water distribution — any pattern, any radius
- Easily installs onto any Toro spray or shrub sprinkler
- 12' spray radius, quarter circle pattern



Overview

Specifications

Flow

0.48 GPM @ 30-40 PSI

Optim. Operating Pressure

30-40 PSI

Radius

12'

Thread

Male

Nozzle Trajectory

23 degree

Recommended Operating Pressure

20-70 PSI

Pattern

90-degrees (Quarter Circle)

570 MPR+ Nozzle 180°, 12 ft (3.7 m) (53863)

 Buy Online

- Built-In Pressure Compensating Device eliminates fogging and misting, saving water
- Matched precipitation rate (MPR) ensures even water distribution — any pattern, any radius
- Easily installs onto any Toro spray or shrub sprinkler
- 12' spray radius, half circle pattern



Overview

Specifications

Flow

0.96 GPM @ 30-40 PSI

Optim. Operating Pressure

30-40 PSI

Radius

12'

Thread

Male

Nozzle Trajectory

23 degree

Recommended Operating Pressure

20-70 PSI

Pattern

180-degrees (Half Circle)

570 MPR+ Nozzle 360°, 12 ft (3.7 m) (53864)

 Buy Online

- Built-In Pressure Compensating Device eliminates fogging and misting, saving water
- Matched precipitation rate (MPR) ensures even water distribution — any pattern, any radius
- Easily installs onto any Toro spray or shrub sprinkler
- 12' spray radius, full circle pattern



Overview

Specifications

Flow

1.92 GPM @ 30-40 PSI

Optim. Operating Pressure

30-40 PSI

Radius

12'

Thread

Male

Nozzle Trajectory

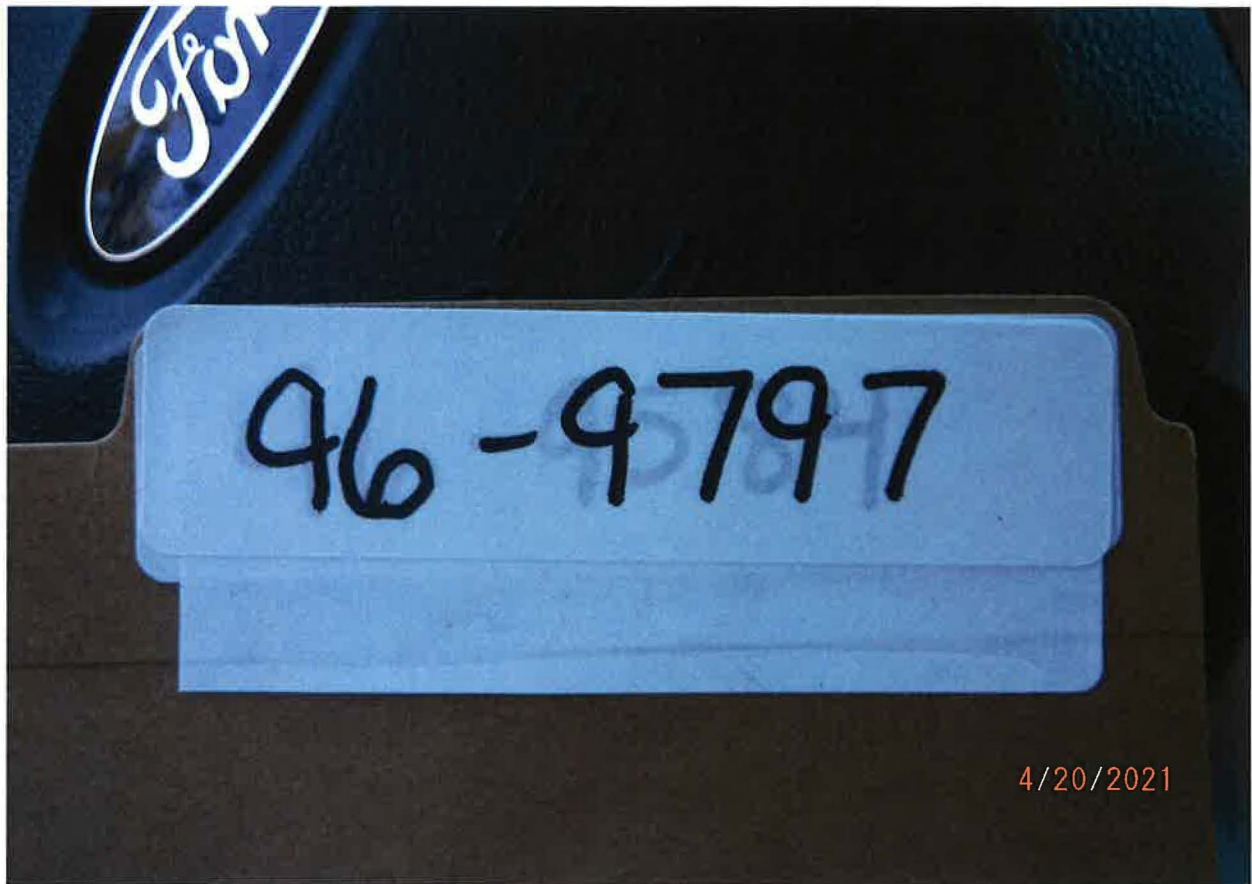
23 degree

Recommended Operating Pressure

20-70 PSI

Pattern

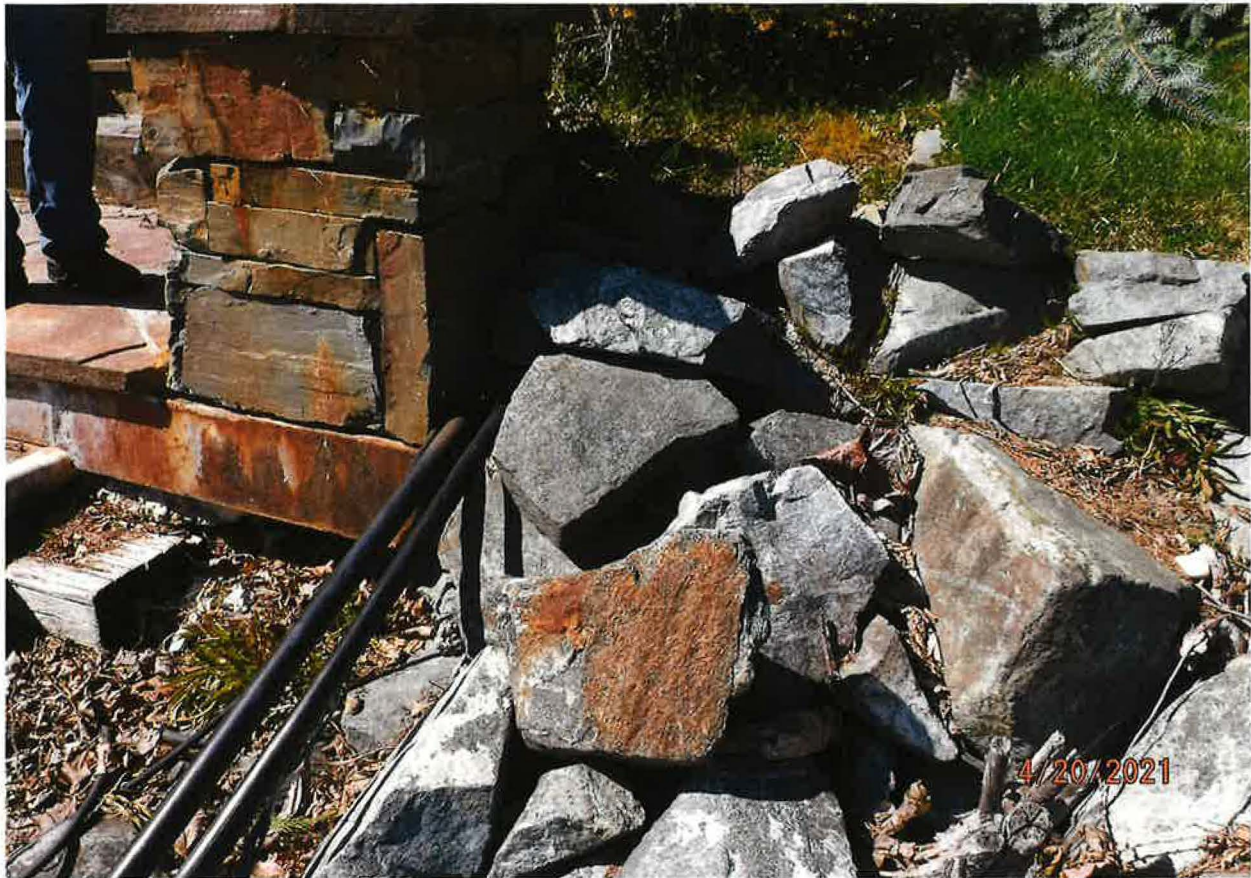
360-degrees (Full Circle)



FIELD EXAM DATE – 4/20/2021



POD – SCREENED INTAKE PIPE WITH 25 GPM GRUNDFOS SUBMERSIBLE PUMP IN RIVER



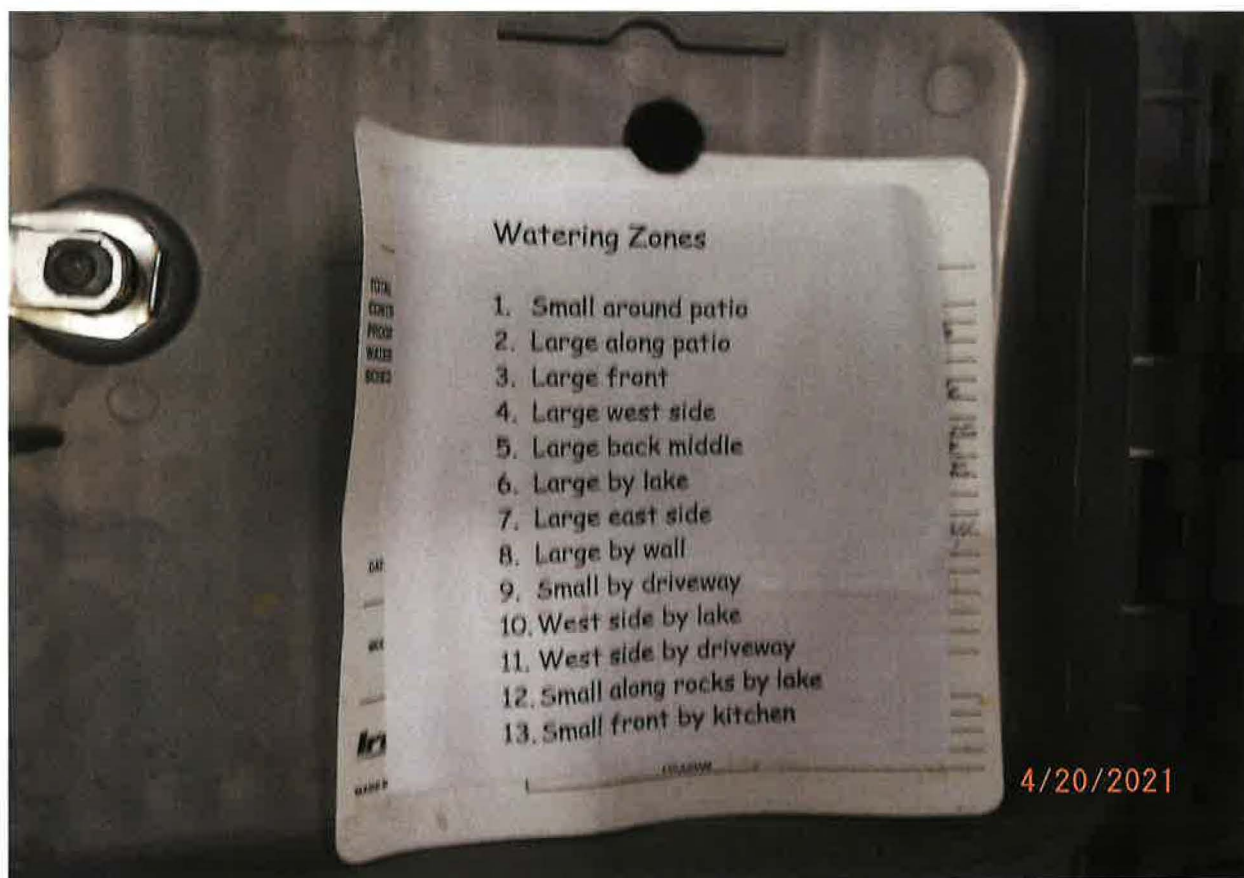
WATER CONVEYANCE SYSTEM – 1 INCH MAIN LINE TO PRESSURIZED IRRIGATION SYSTEM



EXAMPLE PRESSURIZED IRRIGATION SYSTEM SPRINKLER HEAD



IRRITROL SPRINKLER CONTROL PANEL



IRRIGATION SYSTEM – 13 ZONES



IRRIGATION POU





IRRIGATION POU





IRRIGATION POU





IRRIGATION POU

