

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 96-11367
Exam Date: 08/14/2023

1. Current Owner:
CALVIN TRUST 227 PERCH BAY LN SANDPOINT ID 83864-8838
2. Accompanied by: David Calvin
Phone No: 208-255-2342
Address: Same as above
Relationship to permit Holder: Trustee of Calvin Trust

3. **SOURCE:**
LAKE PEND OREILLE

Tributary
PEND OREILLE 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
96-8953	Lake Pend Oreille	Municipal	License with Notice of Claim filed in CFPRBA
96-11472	Groundwater	Domestic	Notice of Claim filed in CFPRBA

Comments: Licensed Rights 96-8953 & 96-7011 are owned by Oden Water Assn, who operates a municipal water system with a service area which overlaps this Permit's irrigation POU. The applicant is not served water by the municipal water system and there is no concern for overlap between 96-8953 & 96-11367.

The applicant has filed a beneficial use Notice of Claim 96-11472 for his private groundwater well used for domestic purposes on the property. The groundwater system is separate from this Permit's surface water system and proposes a different water use than irrigation; there is no concern for overlap between 96-11472 & 96-11367. Condition 928 is not recommended for licensing this permit.

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

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

LAKE PEND OREILLE NE¼ SE¼, Sec. 10, Twp 57N, Rge 01W, B.M. BONNER County

Method of Determination: GPS; POD is a screened intake with pump located at -116°25.2025, 48°18.0006.

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	01W	10													0.6				0.6

Total Acres: 0.6

Method of Determination: Beneficial use field examination 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
SPRINKLER PUMP	DRUMMOND	1	371792012		3/4 INCH GARDEN HOSE DISCHARGE PORT

D. FLOW MEASUREMENTS

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date
5-GAL BUCKET MEASUREMENT						

2. Measurements: Three 5-gallon bucket tests were completed from a hose connected to the pump, with an average of three resulting in a diversion rate of 5 gal / 32.37 sec x 60 sec/min = 9.27 gpm = **0.02 cfs**, considering department rounding standards.

E. FLOW CALCULATIONS

Measured Method: 5-GAL Bucket Test = (5 gal / 32.75 sec) x 60 sec/min = 9.16 gpm
 = (5 gal / 31.89 sec) x 60 sec/min = 9.41 gpm
 = (5 gal / 32.43 sec) x 60 sec/min = 9.25 gpm

Average of 3ea 5-GAL Bucket Tests = (9.16 gpm + 9.41 gpm + 9.25 gpm) / 3 = 9.27 gpm = 0.02 cfs considering department rounding standards.

F. VOLUME CALCULATIONS

1. Volume Calculations for irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 0.6 \text{ ac} \times 3.0 \text{ afa} = 1.8 \text{ af}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.02 \text{ cfs} \times 214\text{-days} \times 1.9835 = 8.5 \text{ af}$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = \mathbf{1.8 \text{ af}}$$

2. Volume Calculations for Other Uses: None

G. NARRATIVE/REMARKS/COMMENTS

Field exam performed on 8/14/2023 with the applicant, David Calving - Trustee, showed water being diverted from Lake Pend Oreille for irrigation purposes. At the POD, the applicant's diverting works include a 1 HP Drummond sprinkler pump with screened intake line in lake mounted to the applicant's dock. The pump specifications illustrate a 1,075 gallon per hour max flow rate at 0 ft. I performed three 5-gal bucket measurements from a 100 ft 3/4 inch garden hose which derived an

average diversion rate of 9.3 gpm or 0.02 cfs considering department rounding standards. Although the department standard authorizes 0.03 cfs for small scale irrigation per acre, the applicant is limited by the pump performance observed at time of field exam for license recommendation, **or 0.02 cfs**.

The irrigation POU was walked with Mr. Calvin, who asserts that due to health issues he hadn't watered as much as normal for the past few years, primarily watering close to the house for ease of movement rotating the hose and sprinkler throughout the season of use. This is evidenced by the drier grass field along the road that the applicant asserts does get watered, just not as much as the rest of the lawn space. I used field maps to sketch out the irrigation acreage and ArcMap aerial imagery was used to accurately trace out the irrigation POU equaling 0.6 acres. This is slightly less than the permit approved, but the small garage and roadways were not included in the irrigation acreage. The annual volume recommended for licensing equals 0.6 ac x 3.0 afa = **1.8 af** annually, which is also recommended as the maximum diversion volume for licensing. Photographs illustrate the lawn and shrub watering not clearly identifiable by aerial imagery due to dense tree canopy on the parcel.

Condition 029 was removed from the permit during licensing review. Condition X31 was revised to reflect accurate diversion rate/volume designated during licensing review. All other conditions on the permit shall be carried forward to licensing. Overlapping water right concerns have been discussed above on page 1 of the report, and there are no additional overlap concerns toward licensing this right.

Have conditions of permit approval been met? X Yes No

H. RECOMMENDATIONS

1. Recommended Amounts

<u>Beneficial Use</u>	<u>Period of Use</u>	<u>Rate of Diversion</u>	<u>Annual Volume</u>
IRRIGATION	04/01 to 10/31	0.02 CFS	1.8 AF
<u>Totals:</u>		0.02 CFS	1.8 AF

2. Recommended Amendments

 Change P.D. as reflected above Add P.D. as reflected above X None
 Change P.U. as reflected above Add P.U. as reflected above X None

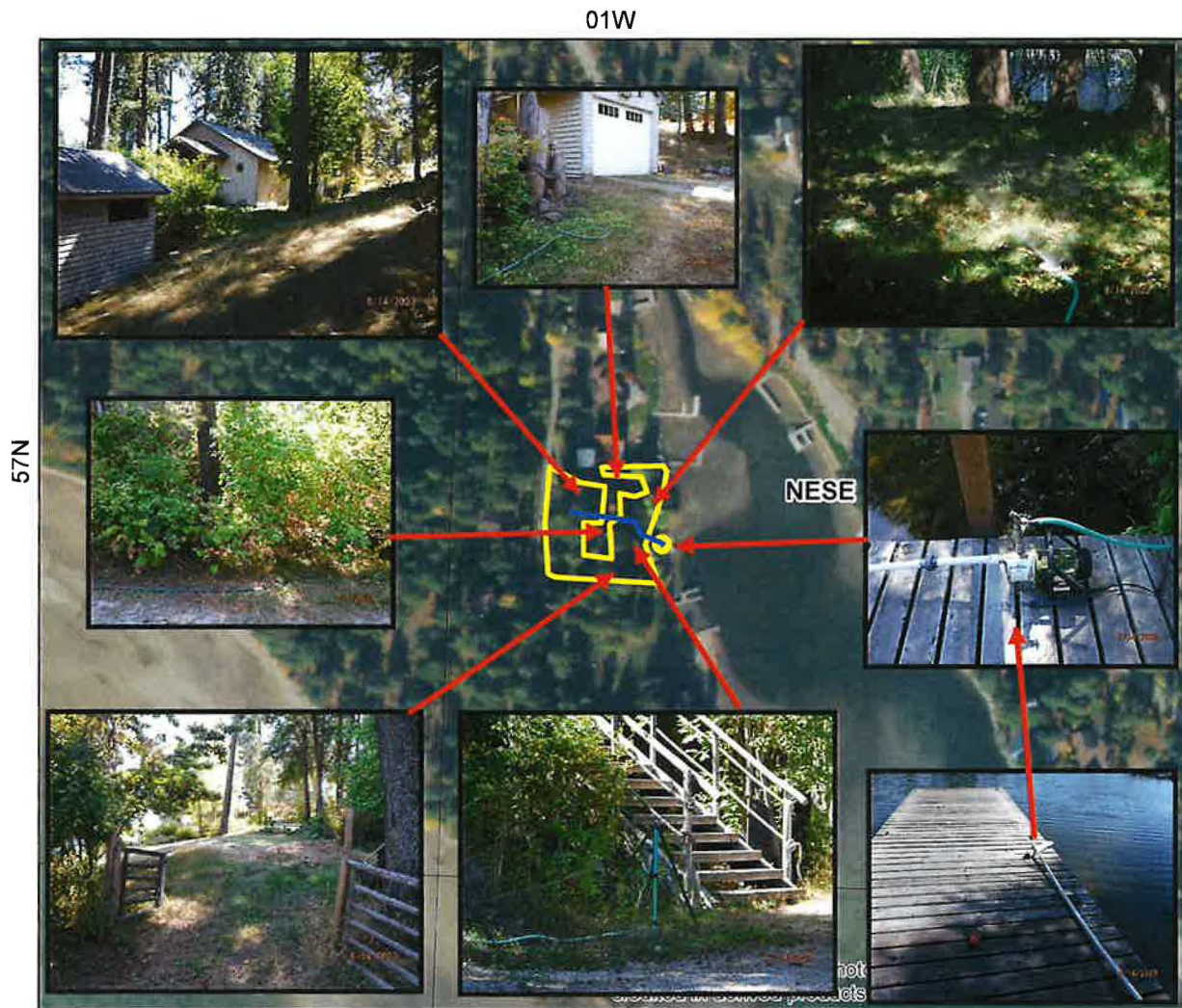
I. AUTHENTICATION

Luke Bates -

Field Examiner's Name *JWB* Date 1/3/2024
 Reviewer *Chris Belf* Date 6/7/2024

State of Idaho
Department of Water Resources
Attachment to Field Exam
96-11367

This map depicts the IRRIGATION system diagram.



0 0.035 0.07 0.14 Miles

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



96-11367

IRRIGATION PUMP SPECIFICATIONS



First in Customer Satisfaction

1 HP
NON-SUBMERSIBLE
SPRINKLER PUMP

2x FASTER PUMPING

BRUSHLESS MOTOR PROVIDES MAINTENANCE FREE OPERATION

CAN POWER TWO SPRINKLER HEADS AT ONE TIME FOR MAXIMUM VERSATILITY

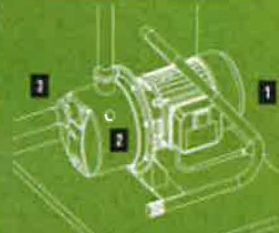
CAPABLE OF 20 FT SUCTION LIFT FOR FAST AND THOROUGH SUCTION

ROBUST STAINLESS STEEL PUMP HOUSING FOR LONGER LIFE



120 VOLT ELECTRIC MOTOR

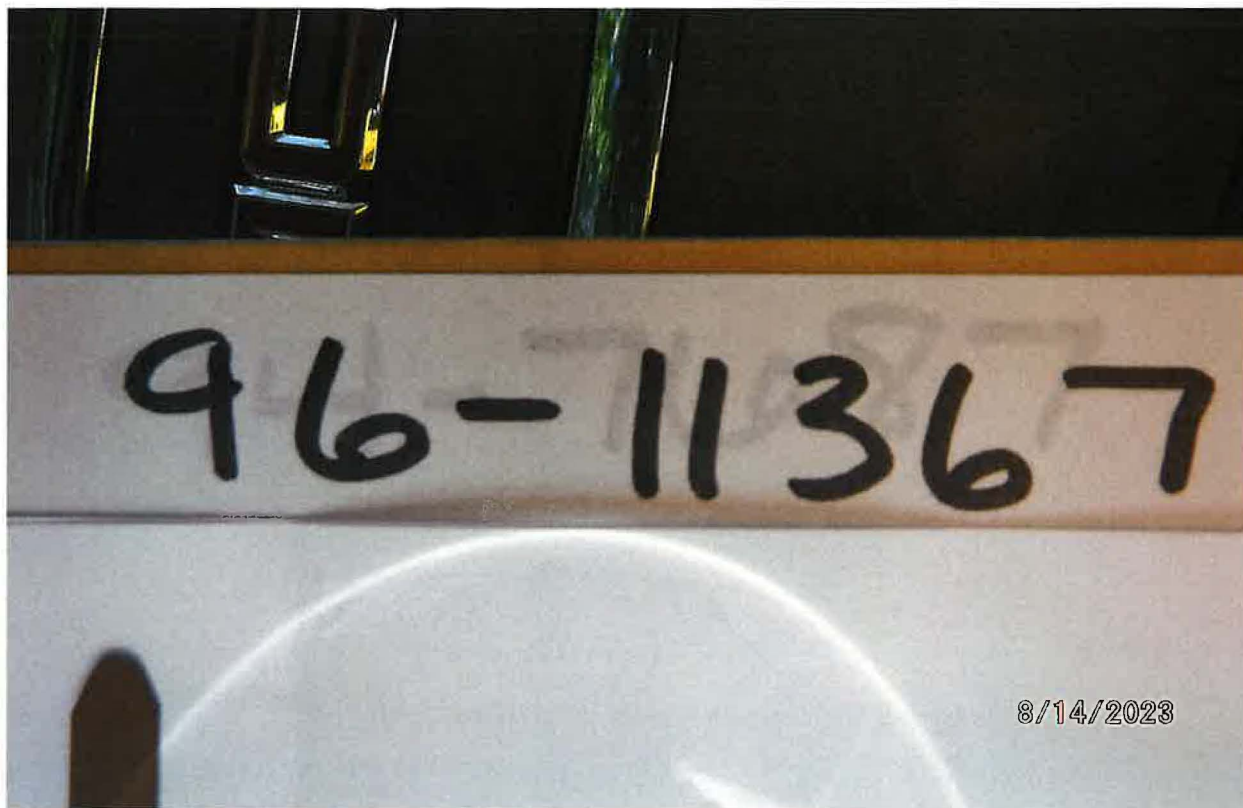
	FOR CLEAR WATER
1075	GALLONS PER HOUR MAX FLOW AT 0 FT
3/4"	GARDEN HOSE THREAD DISCHARGE PORT
70	PSIG MAXIMUM HEAD LIFT AT 0 GPM



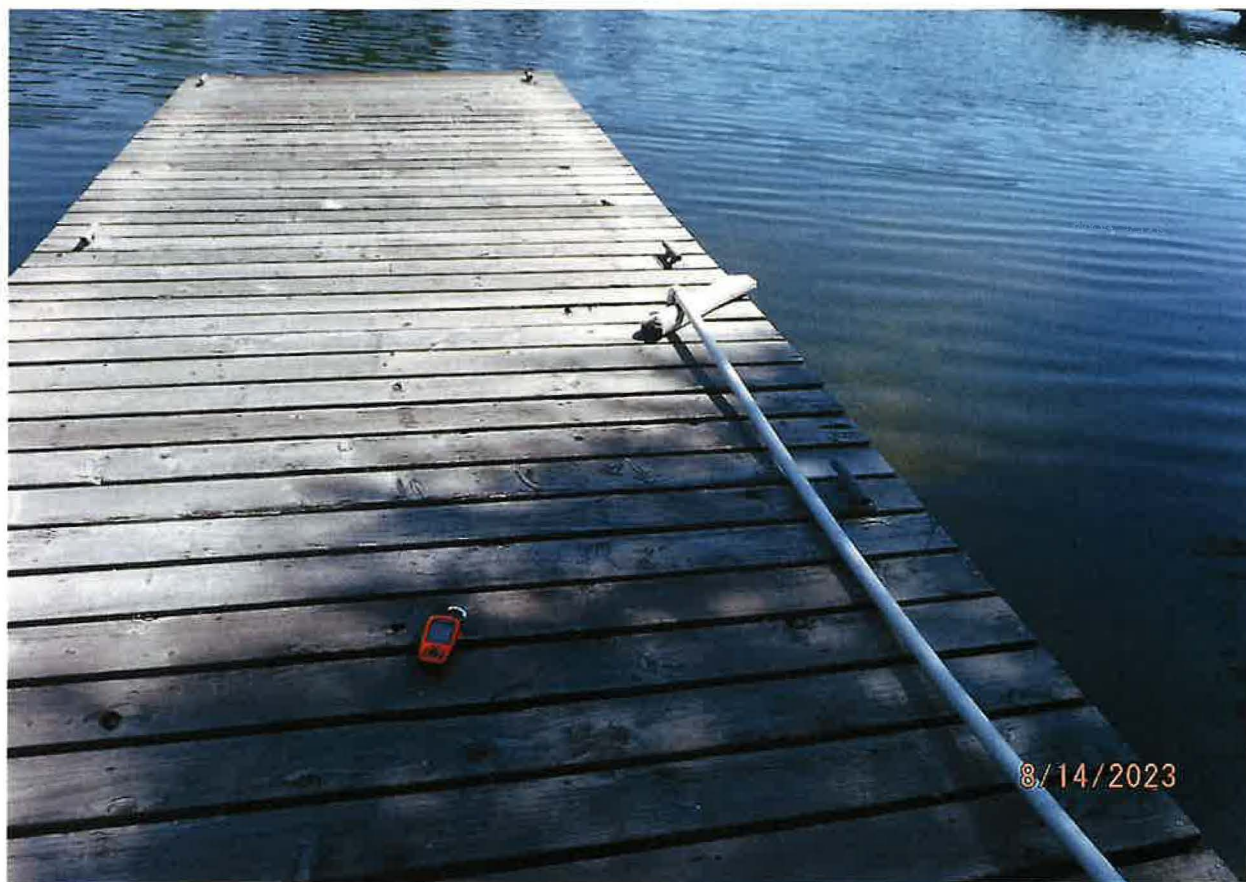
EASY DIY INSTALLATION

1. GFCI PROTECTED OUTLET
2. HEAVY DUTY NON-COLLAPSIBLE INTAKE HOSE
3. 3/4" GARDEN HOSE

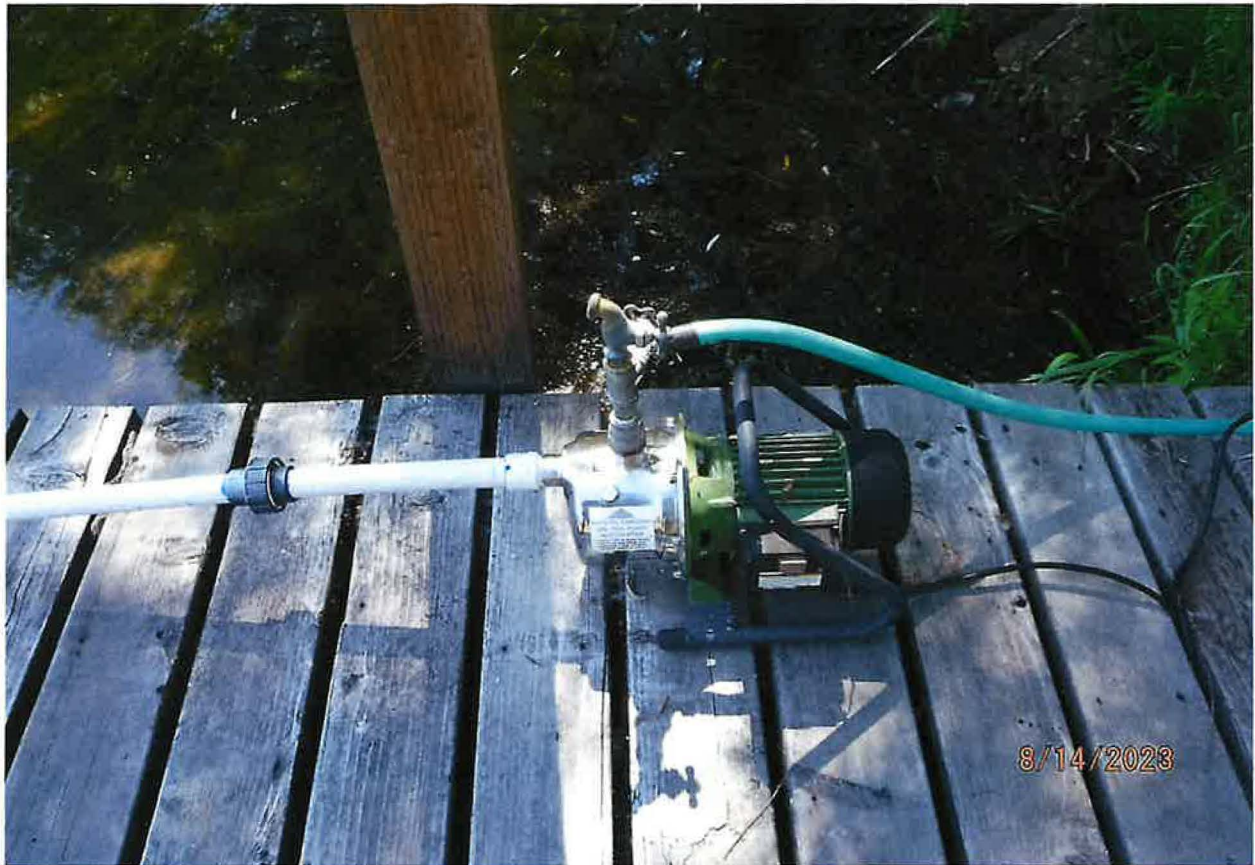
*Based on Water America's National Water Gardening product



BENEFICIAL USE FIELD EXAM DATE 8/14/2023



POD – SCREENED INTAKE PIPE ROUTED FROM DOCK



DIVERTING WORK USES A DRUMMOND BRAND SPRINKLER PUMP – S/N 371792012.





IRRIGATION POU – HOSE AND ASSORTED SPRINKLERS USED TO WATER LAWN, LANDSCAPE, & BERRIES.





IRRIGATION POU





IRRIGATION POU



IRRIGATION POU – BERRY BUSHES



IRRIGATION POU



IRRIGATION POU