STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 65-23783
Exam Date: 1/16/2020

1. **Current Owner:**

SLO PROPERTIES LLC
62819 LOWER COVE RD
COVE, OR 97824-8416
(541) 910-5247

2. **Accompanied by**:

Luke Barreto, Manager
SLO Properties, LLC
Barreto Manufacturing, Inc.

Ryan, Employee
Barreto Manufacturing, Inc.

3. **Source:** Payette River **Tributary:** Snake River

Method of Determination: Field Examination

B. OVERLAP REVIEW

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

Water Right No.	Source	Purpose of Use	Basis
65-2622	Payette River	Industrial Storage	Decreed
65-2706	Payette River	Industrial	Decreed
65-7040	Groundwater	Municipal	Decreed
65-7505	Groundwater	Municipal	Decreed
65-7769	Payette River	Municipal	Decreed

Comments: There are multiple POUs within the same QQ, but only those in the table above overlap the SLO Properties, LLC property.

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

Water Right No.	Source	Purpose of Use	Basis
65-23768	Payette River	Fire Protection	Permit
65-10886	Payette River	Irrigation	Decreed
65-12563	Payette River	Power	License
65-2622	Payette River	Industrial Storage, Industrial from Storage, Diversion to Storage	Decreed
65-2684	Payette River	Irrigation	Decreed
65-2706	Payette River	Industrial	Decreed
65-2734	Payette River	Irrigation	Decreed
65-7635	Payette River	Irrigation	Decreed
65-7953	Payette River	Irrigation, Stock water	Decreed
65-8532	Payette River	Irrigation	Decreed
65-9015	Payette River	Irrigation	Decreed
65-9015A	Payette River	Irrigation	Decreed
65-10842	Payette River	Domestic	Decreed
65-22273	Payette River	Irrigation	Decreed
65-22274	Payette River	Irrigation	Decreed

Comments: There are multiple diversions along the Boise Cascade Power Canal diversion from the Payette River from which this permit diverts.

C. DIVERSION AND DELIVERY SYSTEM

1. **Point(s) of Diversion:**

PAYETTE RIVER SW ¼ SW ¼, L5 Sec. 26, Twp 07N, Rge 02E, B.M. Boise County

Method of Determination: Field examination

2. Place of Use: **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	
07N	02E	26											1.4						1.4
07N	02E	27													0.5			0.6	1.1
																		Total Acres:	2.5

Method of Determination: Field examination, 2017 NAIP imagery, GIS

3. Supporting Documents:

X Delivery System Diagram Attached (required). Indicate all major components and distances between components. Indicate weir size/pipe as applicable.

X Map Attached Showing Location(s) of point(s) of diversion and place(s) of use (required). Scale must be 1:24,000 or greater.

X Aerial Photo Attached (required for irrigation of 10+ acres).

X Photo of Diversion and System Attached

4. Diversion Pumps

Well or Diversion ID No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
	Unknown	20		Unknown	6-321219-01

D. FLOW MEASUREMENTS

1. Equipment

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date

2. Measurement Description: No measurements were taken since the exam occurred in January and no irrigation was taking place. A theoretical calculation was used instead.

E. FLOW CALCULATIONS

X Additional Computation Sheets Attached

Measurements:

Administrative Processing Memo #17 indicates 0.03 cfs/acre for irrigation up to 5 acres.
Admin memo allows: 2.5 acres x (0.03cfs) = 0.08 cfs
Permit authorizes: 0.08 cfs
Capacity of the pump: ~~0.03~~ 0.78 cfs (see attached theoretical) *

* AG 3/11/2020

Recommend licensing 0.08 cfs for irrigation use.

F. VOLUME CALCULATIONS

1. Volume Calculations for irrigation:

$V_{I.R.}$ = (Acres Irrigated) x (Irrigation Requirement) = 2.5 x 4.5 = 11.25
$V_{D.R.}$ = [Diversion Rate (cfs)] x (Days in Irrigation season) x 1.9835 = 0.08 x 231 x 1.9835 = 36.7 AF
V = Smaller of $V_{I.R.}$ and $V_{D.R.}$ = 11.25

2. Volume Calculations for Other Uses: N/A

$V_{D.R.}$ = [Diversion Rate (cfs)] x (Days) x 1.9835 =

G. NARRATIVE/REMARKS/COMMENTS

The property on which this irrigation water is applied covers two parcels owned by SLO Properties, LLC and two parcels owned by Frank Barns. The pump house on the bank of the Boise Cascade Power Canal is located on the property of Frank Barns, although Luke Barreto stated that SLO Properties, LLC owns the pump house and equipment. The two parties seem to have an agreement in place, as Frank Barns has given written permission (in the file) to irrigate a portion of his land and access to the pump house is not a problem. The pump house has a lockable door and houses pumps for another water use (Fire Protection) as well as the irrigation pump. (Each water use has its own pump.)

Landscape irrigation takes place with pop-up sprinklers along the entrance road to the property from Highway 55 on strips of grass between the road and sidewalk. It arrives from the canal via underground pipes.

Additional irrigation takes place near the canal on Frank Barn's property and consists of a "Community Garden" of raised beds and other areas of landscape trees that were heeled in as saplings many years ago with the intent to plant on subdivided land. This did not happen and the tree are now overgrown. Irrigation of the raised beds is done with a hose. Irrigation of the trees is done with moveable irrigation pipe with sprinklers.

The pump used for irrigation has more than enough capacity (20 hp) to provide irrigation for 2.5 acres.

Have conditions of permit approval been met? __X__ Yes ____ No

H. RECOMMENDATIONS

1. Recommended Amounts

Beneficial Use	Period of Use	Rate of Diversion	Volume
IRRIGATION	3/15 to 10/31	0.08 CFS	
	Totals:	0.08 CFS	Volume not required for irrigation use of surface water

2. Recommended Amendments:

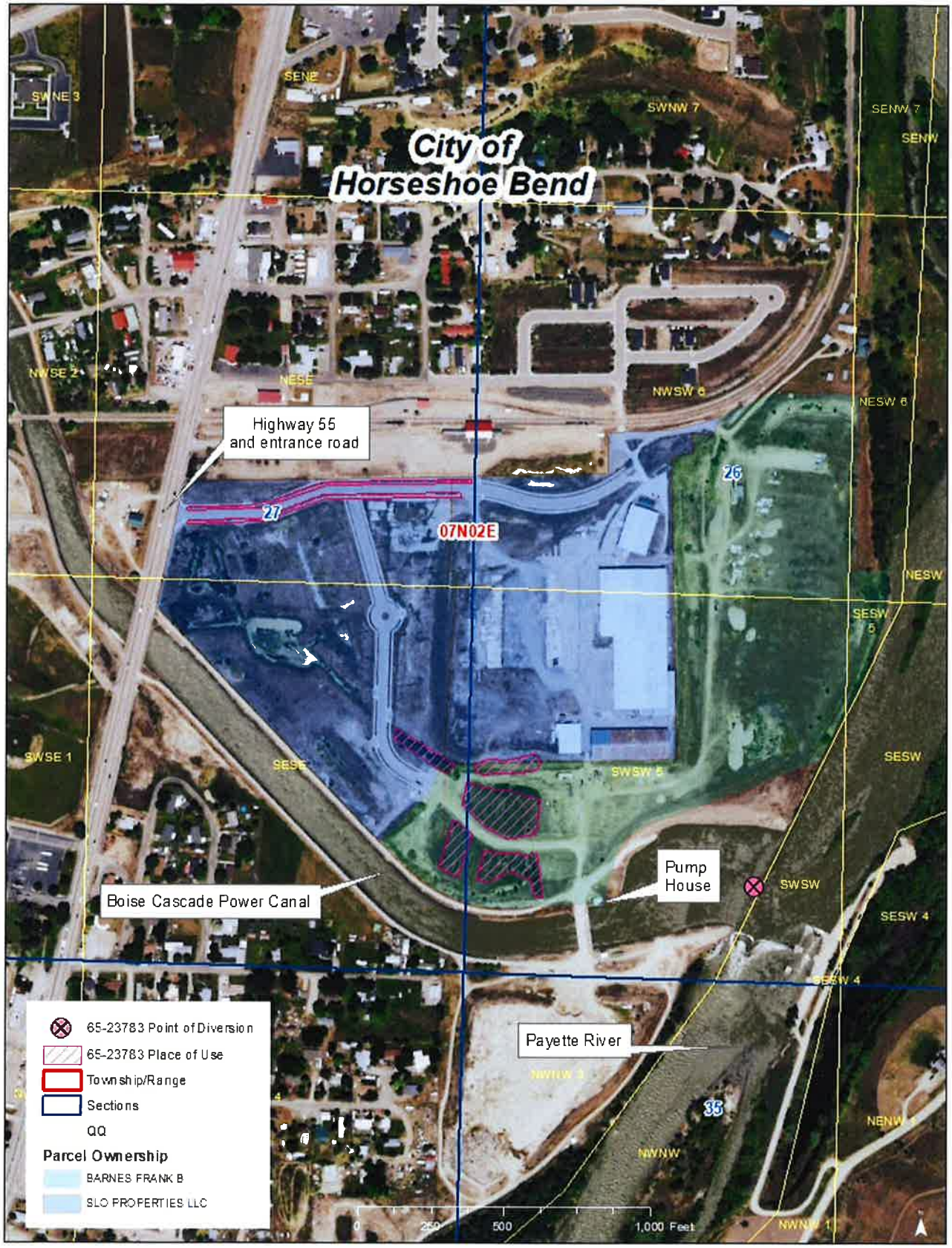
____ Change P.D. as reflected above ____ Add P.D. as reflected above __X__ None

____ Change P.U. as reflected above ____ Add P.U. as reflected above __X__ None

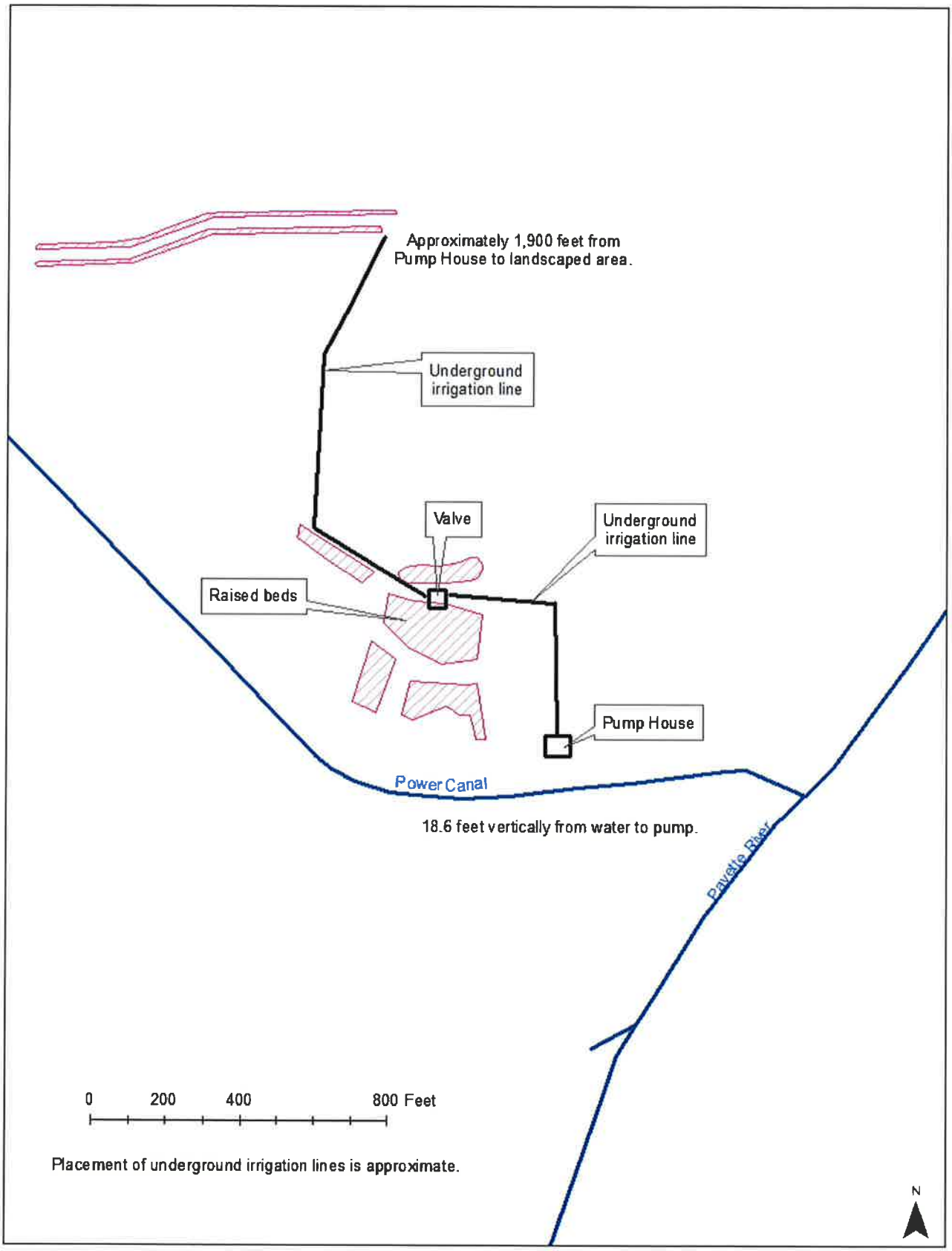
I. AUTHENTICATION

Field Examiner's Name Paula J Dillon Date 1/24/2020
Paula Dillon - GIS Analyst II

Reviewer Dan A Nelson Date 1-24-20
Dan Nelson, Water Right Analyst III

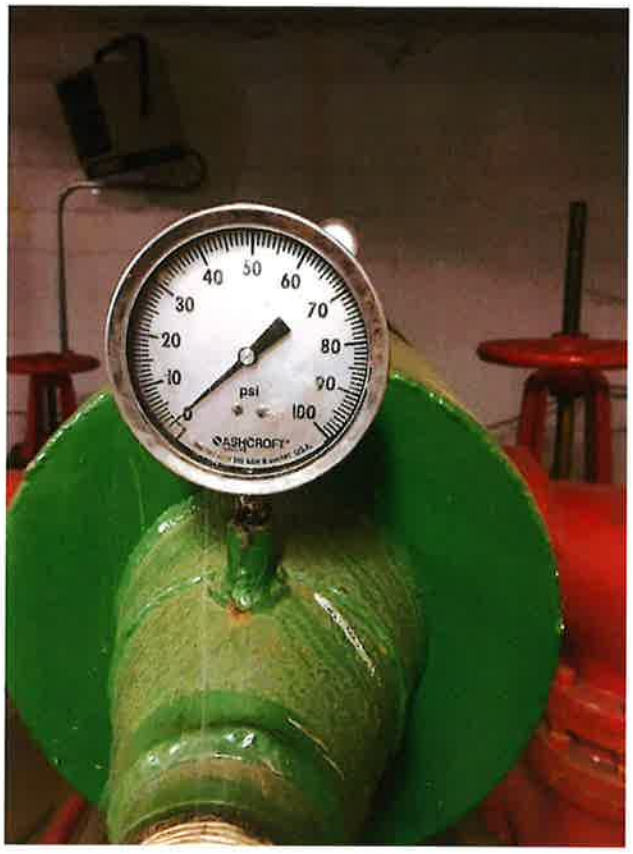

City of Horseshoe Bend
Highway 55 and entrance road
07N02E
Boise Cascade Power Canal
Pump House
Payette River
65-23783 Point of Diversion
65-23783 Place of Use
Township/Range
Sections
QQ
Parcel Ownership
BARNES FRANK B
SLO PROPERTIES LLC
0
250
500
1,000 Feet

System Diagram



Photos

Red irrigation pump is circled above.



Pressure gauge on sand trap.

Area of landscape trees.

Irrigation pipe going to the vicinity of the valve. Raised beds.

Hose and pipe going to the valve.

Valve is circled above. Raised beds are off to the right.

Close up of valve.

Landscaped grass strips on entrance road.

THEORETICAL HORSEPOWER EQUATION WORKSHEET (cjh 1/92)

Water Right No.: 96-9004
Reviewer: Paula Dillon
Date of Review: 1/16/2020

P/D No.:	Surface Pump
PUMP HORSEPOWER	20
BOOSTER HORSEPOWER	
PUMPING LEVEL	18.6
DISCHARGE PRESSURE	60
RATE OF FLOW (cfs)	0.78
	352

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

Assumptions: %70 efficiency.
No Friction

Examiners Notes: The discharge pressure is an estimate based on normal scenarios. Considering the horsepower of the pump and the long distance to the popup sprinklers for the landscape irrigation, a discharge pressure of 60 psi seems reasonable.