

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 65-22333
Exam Date: 08/05/2019

1. Current Owner:
JON C POWELL 214 E GROVE CREEK LN EAGLE ID 83616-7021
2. Accompanied by: Jon Powell
Phone No: 208-369-1200
Address: Same
Relationship to permit Holder: Same

3. **SOURCE:**
UNNAMED STREAM

Tributary
NORTH FORK PAYETTE RIVER

Method of Determination: Field Observation

B. OVERLAP REVIEW

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

Water Right No.	Source	Purpose of Use	Basis
N/A	N/A	N/A	N/A

Comments: No other water rights overlap

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

Water Right No.	Source	Purpose of Use	Basis
N/A	N/A	N/A	N/A

Comments: No other water rights overlap

C. DIVERSION AND DELIVERY SYSTEM

1. **LOCATION OF POINT(S) OF DIVERSION:**

UNNAMED STREAM SW¼ SE¼, Sec. 20, Twp 14N, Rge 03E, B.M. VALLEY County

Method of Determination: Field Observation, Handheld GPS (N 44°31.696', W 116°06.932'), ArcMap GIS tools.

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	
14N	03E	20															1.4		1.4

Total Acres: 1.4

Method of Determination: Field observation, Aerial Imagery, ArcMap GIS tools.

- 3.
- 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.
- N/A Aerial Photo Attached (required for irrigation of 10+ acres).
- x 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
N/A	Century	¾	13719J2	Munro	1-1/2"

D. FLOW MEASUREMENTS

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date
N/A	N/A	N/A	N/A	N/A	N/A	N/A

2. Measurements: Pump system not in place at time of the exam so diversion measurement was not possible.

E. FLOW CALCULATIONS

 x Additional Computation Sheets Attached

Measured Method: A theoretical calculation was used on this permit

Theoretical flow: 0.0.09 cfs

Permitted Flow: 0.05 cfs

B.U. Limit: 0.05 cfs

Recommended Flow: 0.05 cfs

F. VOLUME CALCULATIONS

1. Volume Calculations for irrigation: N/A because surface water source, per IDAPA 37.03.02.
2. Volume Calculations for Other Uses: N/A

G. NARRATIVE/REMARKS/COMMENTS

Field exam was completed by agent Justin Shearer on August 5, 2019 and was accompanied by permit holder Jon Powell. Jon Powell is the active owner and original applicant. The application for permit was submitted on February 5, 2001 and proof of beneficial use was submitted on April 6, 2001. Change in address for the permit was submitted August 16, 2019.

The Point of Diversion (POD) was confirmed to be in TWP 14N, Rge 03E, Sec. 20 SW¼SE¼. The water is diverted using a ¾hp Munro self-priming electric pump with 2" suction and 1-1/2" discharge. The pump diverts water from an unnamed stream using a 2" hose and discharges water using a 1-1/2" hose across the Place of Use (POU) as needed. Water right overlap did not discover any other water rights associated with the POD on the unnamed stream. No amendment required to

correct legal description of the POD.

The permit authorizes 0.05 cfs for irrigation purposes within the SW ¼ SE ¼, of TWP 14N, Rge 03E, Sec 20. Field observation, ArcMap tools, and aerial imagery were used to verify that the irrigation POU is approximately 1.4 acres. Powell is irrigating a combination of grasses and trees on the property. At the time of exam, Mr. Powell indicated that he irrigates on average 10 days out of the year. No amendment required to correct the legal description of the POU.

Pump and motor specs were obtained from the pumping apparatus; a ¾ hp Munro self-priming electric pump with 2" suction and 1-1/2" discharge. A measurement was unable to be obtained because the permit holder had sent the pump/motor in for maintenance. A range of discharge pressures were used based on expected system pressures (10-30 psi). Theoretical average flow rate is 0.04 cfs. Because the user flood irrigates with an open hose the pressure on the system should be low. Based on the ratings sheet, the pump carries the capacity to divert 33-63 gpm, or 0.07-0.14 cfs at low pressure. Thus, I am recommending a licensed rate of 0.05 cfs for irrigation purposes.

Condition 121 was replaced with condition 103 as per licensing standards. Condition x31 was removed because the recommended rate is no longer rounded up so that it exceeds greater than 0.03 cfs per acre by 0.005 cfs. Condition R05 was added to allow the right to be regulated by the watermaster of WD 65. Condition R66 was added to limit this right when combined with all other rights to no more than 0.03 cfs/acre and 3.0 afa per acre at the field headgate for irrigation of the place of use. The user complies with condition 01H by having a lockable control panel for power to the pump; 01H was replaced by R02.

Have conditions of permit approval been met? ☒ 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	04/15 to 10/31	0.05 CFS	

Totals: 0.05 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

Justin Shearer - Water Resource Agent, Senior

Field Examiner's Name Justin Shearer Date 9/16/20

Reviewer Patricia Kelley Date 9-16-2020

THEORETICAL HORSEPOWER EQUATION WORKSHEET (cjh 1/92)

Water Right No.: 65-22333
 Reviewer: Justin Shearer
 Date of Review: 9/11/2020

P/D No.:	Senerio 1	Senerio 2	Senerio 3
PUMP HORSEPOWER	0.75	0.75	0.75
BOOSTER HORSEPOWER	0	0	0
PUMPING LEVEL	10	10	10
DISCHARGE PRESSURE	10	20	30
RATE OF FLOW (cfs)	0.14	0.08	0.06 0.09

The above calculates the formula =

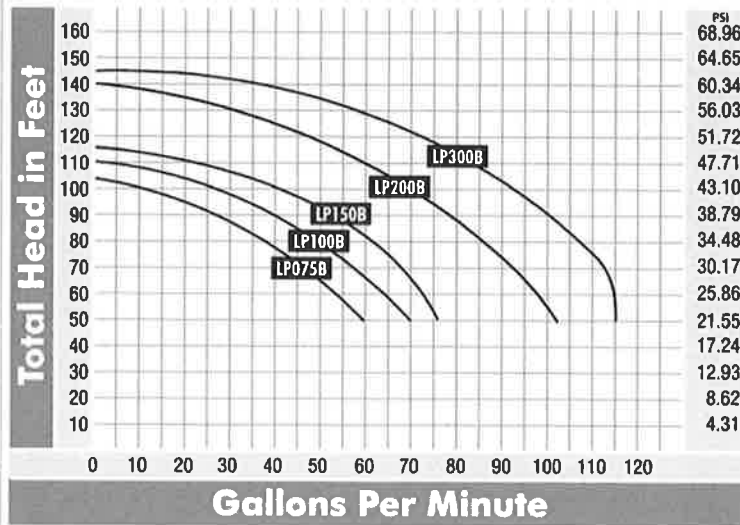
$$Q = \frac{8.8 * (\text{Efficiency}) * \text{hp}}{\text{depth to water} + 2.31 * (\text{psi}) + \text{friction}}$$

Assumptions: %70 efficiency.
 No Friction

Examiners Notes:

A 3/4 hp pump is used for this irrigation use and the requested diversion rate is relatively small. Because pumping elevation is at around 5000 ft (ASL) a pump horsepower of 1/2 hp was assumed. Lift was measured using field observation and handheld gps. Topography from the POU to stream waters measure close to 10 feet. A range of discharge pressures were used based on the ratings for the model of pump being used (20-40 psi). Theoretical average flow rate is 0.04 cfs.

HORSEPOWER RANGE: 3/4 - 3



Performance

HP	Capacity - U.S. Gallons per Minute Discharge Pressure (PSI) at 5' Suction Lift									Shut Off Pressure Psi	Model Number
	20	25	30	35	40	45	50	55	60		
3/4	63	53	43	33	25					45	LP075B
1	73	65	57	47	35	18				47	LP100B
1-1/2	75	70	68	60	48	35				49	LP150B
2	102	98	92	82	74	61	52	40		60	LP200B
3	115	114	112	105	100	88	72	56	30	61	LP300B

Suction lift varies, depending upon elevation (altitude) and water temperatures. Max lift is 15 feet at 5000 feet elevation. Maximum case pressure is 150 PSI.

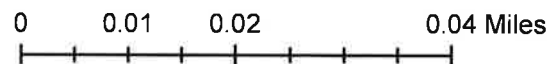
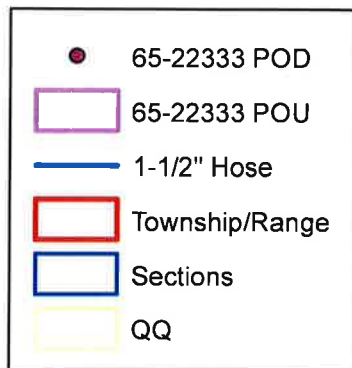
HP	Phase	Discharge Pipe Tap	Suction Pipe Tap	Capacity — U.S. Gallons Per Minute Discharge Pressure (PSI)								Suction Lift Feet	Shut Off Pressure PSI	Model Number
				10	15	20	25	30	35	40	45			
3/4	1	1-1/2"	2"	56	48	42	37	29	21			5	41	LP075B
1	1	1-1/2"	2"	58	53	48	43	38	32	23	11	5	48	LP100B
1-1/2	1	1-1/2"	2"	78	77	71	70	62	53	43	30	5	47	LP150B
2	1	1-1/2"	2"	86	84	81	77	71	62	52	40	5	50	LP200B
3	1	1-1/2"	2"	102	101	101	97	91	85	76	68	5	63	LP300B
5	1	3"	3"	—	—	141	139	137	132	123	115	5	73	LP3005B

MAXIMUM CASE PRESSURE — 100 PSI

State of Idaho
Department of Water Resources

Attachment to Beneficial Use Field Report

System Diagram for Water Right 65-22333





Pic of POD location
on Unnamed
Stream



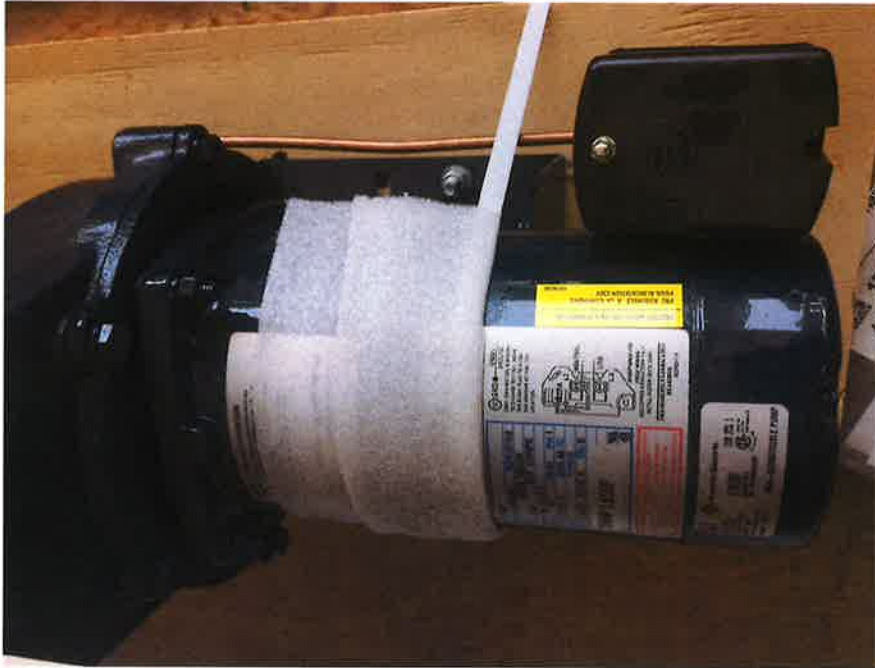
Pic of POU looking
North from center
of property



Pic of POU looking
West from center of
property



Pic of POU looking
South from center
of property



Pic of $\frac{3}{4}$ hp Century motor



Pic of Munro pump and Century motor after return from repair



State of Idaho

DEPARTMENT OF WATER RESOURCES

Western Region • 2735 W Airport Way • Boise ID 83705-5082

Phone: (208) 334-2190 • Fax: (208) 334-2348

Website: idwr.idaho.gov • Email: westerninfo@idwr.idaho.gov

BRAD LITTLE
Governor

GARY SPACKMAN
Director

April 25, 2019

JON C POWELL
5437 W BLACK CANYON HWY
EMMETT, ID 83617

COPY

RE: Scheduling Field Exam for Water Right Permit No. 65-22333

Dear Permit Holder:

We are planning to conduct water right examinations in the vicinity of the above-referenced permit **this season**. An examination is needed to verify the water use in order to issue a water right license.

The above-referenced permit authorizes **0.050 CFS** from an **UNNAMED STREAM**, tributary to **NORTH FORK PAYETTE RIVER** for **IRRIGATION** use. **If you have developed a beneficial use and still own the place of use property, please contact me at your earliest convenience to schedule an examination.**

If you did not develop a beneficial use of water under the permit during the beneficial use period, a license cannot be issued and the permit should be relinquished. If that use was developed, but have ceased using the water and you currently carry no interest in it, please relinquish the permit by submitting the enclosed Relinquishment of Permit form (no fee required).

If you did develop a beneficial use of water under the permit, but you no longer own the place of use property identified in the permit, please submit the enclosed Assignment of Permit form with the applicable \$25 processing fee.

Please contact me within the next thirty (30) days at (208) 334-2190 to either schedule an examination or submit a relinquishment or assignment form. If you no longer own the place of use property and/or do not respond to this letter, the department will work with the current property owner to issue a license or void the permit.

Sincerely,

Justin Shearer
Water Resource Agent, Sr.

Enclosures: Relinquishment of Permit form
Assignment of Permit form
Water Permit Report and Map



State of Idaho

DEPARTMENT OF WATER RESOURCES

Western Region • 2735 Airport Way • Boise, Idaho 83705-5082

Phone: (208) 334-2190 • Fax: (208) 334-2348 • Website: www.idwr.idaho.gov

C.L. "BUTCH" OTTER
Governor

GARY SPACKMAN
Director

July 3, 2017

JON C POWELL
5437 W BLACK CANYON HWY
EMMETT, ID 83617

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Justin Shearer
Water Resource Agent

Enclosures: Relinquishment of Permit form
Assignment of Permit form
Water Permit Report and Map