

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 65-23810
Exam Date: 05/11/2020

1. Current Owner:
WILLIAM F THOMPSON JR 16 RIVER RD GARDEN VALLEY ID 83622
2. In-office qualification (IDAPA 035.01r):
Total diversion rate ≤ 0.24 cfs and irrigation of less than 5 acres

3. **SOURCE:** MIDDLE FORK PAYETTE RIVER Tributary
PAYETTE RIVER

Method of Determination: Aerial imagery, photographs

B. OVERLAP REVIEW

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

Water Right No.	Source	Purpose of Use	Basis

Comments: No overlap present

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

Water Right No.	Source	Purpose of Use	Basis

Comments: No overlap present

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

MIDDLE FORK PAYETTE RIVER NE¼ NE¼, Sec. 34, Twp 10N, Rge 04E, B.M. BOISE County

Method of Determination: Aerial imagery, digital PLSS map, photographs

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	
10N	04E	34	1.0																1.0

Total Acres: 1.0

Method of Determination: Aerial imagery, digital PLSS map, photographs

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
n/a	Baldor	3	n/a	n/a	n/a

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: In-office exam so no flow measurement was taken.

E. FLOW CALCULATIONS

☒ Additional Computation Sheets Attached

Measured Method:

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

Admin AP memo no. 17 states that a rate of flow in excess of 0.02 cfs/acre is often necessary for irrigation of a small acreage, due to restricted system design mechanics and poor economy of scale. To correspond with practical design procedures, the Department will accept rates of diversion as high as 0.03 cfs/acre for irrigation of up to five acres without the justification that a rate greater than 0.02 cfs is necessary. Irrigation for 1.0 acre in this right's POU is allowed a rate up to 0.03 cfs/acre, and therefore a rate 0.03cfs/acre multiplied by 1.0 acres results in a diversion rate of 0.03 cfs. This rate of 0.03 cfs is recommended for licensing.

Permit	0.03 cfs
B.U. Standard Allowance	0.03 cfs
B. U. Proof Fee	\$100 → 0.21 – 1.00 cfs
Theoretical Rate	0.05 cfs

License Recommendation 0.03 cfs

F. VOLUME CALCULATIONS

1. Volume Calculations for irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 1.0 \text{ ac} \times 3.5 \text{ af/ac} = 3.5 \text{ af}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.03 \text{ cfs} \times 231 \text{ days} \times 1.9835 = 13.7 \text{ af}$$

$$V = \text{Smaller of } V_{I,R} \text{ and } V_{D,R} = 3.5 \text{ af}$$

2. Volume Calculations for Other Uses:

G. NARRATIVE/REMARKS/COMMENTS

This permit authorizes the diversion of 0.03 cfs for irrigation use in a 1.0 acre place of use within Boise County. It therefore qualified for an in-office beneficial use exam, which was completed August 5, 2020. The point of diversion and place of use were confirmed using aerial imagery, digital PLSS maps and photographs provided by the permit holder.

The point of diversion is an intake hose on the bank of the Middle Fork Payette River with 3 hp pump to sprinkler lines. The property of the point of diversion is not owned by the permit holder, but a right-of-way from the river has been established since 1999. The permit holder estimated a lift of roughly 150 ft to 400 ft with a discharge pressure of 75 psi. A theoretical diversion rate was calculated using a range of pumping levels between 150 ft and 400 ft which resulted in an average rate of 0.05 cfs. The permit was limited to a diversion rate of 0.03 cfs and is therefore the rate recommended for licensing.

Condition 01H on the permit required a lockable device, and photos provided by the permit holder showed this had been installed as a lockable box over the power controls for the pump. The point of diversion is within Water District no. 65 and therefore the use of water for this right after June 15 requires approval from the watermaster.

The provided pictures also present evidence of irrigation of at the place of use. The POU is located within Lot 24 of Pine Tree Ranch #11 Subdivision. The POD is located within Lot 12 of Pine Tree Ranch #11 Subdivision. Tax lot data indicates that William F. Thompson Jr. is the property owner at the place of use.

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>
IRRIGATION	03/15 to 10/31	0.03 CFS

Totals: 0.03 CFS

2. Recommended Amendments

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

Tyler Smith - Water Resource Agent

Field Examiner's Name _____ Date 8/5/20

Reviewer Patricia Wilson Date 8-12-2020

THEORETICAL HORSEPOWER EQUATION WORKSHEET (cjh 1/92)

Water Right No.: 65-23810
 Reviewer: Tyler Smith
 Date of Review: 8/5/2020

P/D No.:	Senerio 1	Senerio 2	Senerio 3
PUMP HORSEPOWER	3	3	3
BOOSTER HORSEPOWER	0	0	0
PUMPING LEVEL	150	225	400
DISCHARGE PRESSURE	75	75	75
RATE OF FLOW (cfs)	0.06	0.05	0.03 0.05

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:

Permit holder reports a 3 hp pump, discharge pressure of 75 psi, and a lift between 150 ft and 400 ft. A range of pumping levels were used. Theoretical average flow rate is 0.05 cfs.

65-23810 Delivery System Diagram



The USDA-FSA Aerial Photography Field office asks to be credited in derived products.

Point of Diversion Comparison

State of Idaho
Department of Water Resources

Water Right no. 65-23810

Beneficial Use Field Exam

BasinSeq	Owner	Source	NENE	NWNE	SWNE	SENE	NENW	NWNW	SWNW	SENW	NESW	NWSW	SWSW	SESW	NESE	NWSE	SWSE	SESE
65-13910	CROW, CANDICE; SEEH	PAYETTE RIVER	X															
65-13002	PORTER, CLYDE; PORTE	PYLE CREEK	X															
65-13818	DENNET, GEROLD; SIM	PAYETTE RIVER	X															
65-23060	MARION, ALLAN R; MA	PAYETTE RIVER	X															
65-18124	BAILEY, DARIUS T	PYLE CREEK	X															
65-23807	BAILEY, DARIUS T; RUF	PAYETTE RIVER	X															
65-2901B	BAILEY, DARIUS T; POR	PAYETTE RIVER	X															
65-22449	PORTER, CLYDE	PAYETTE RIVER	X															
65-13972	STEEN, KENNETH	PYLE CREEK	X															
65-13335	BACKUS, DAVID L; BAC	PAYETTE RIVER	X															
65-23810	THOMPSON JR, WILLIA	PAYETTE RIVER	X															

= this right

= overlap

State of Idaho
Department of Water Resources
Beneficial Use Field Exam

Water Right no. 65-23810

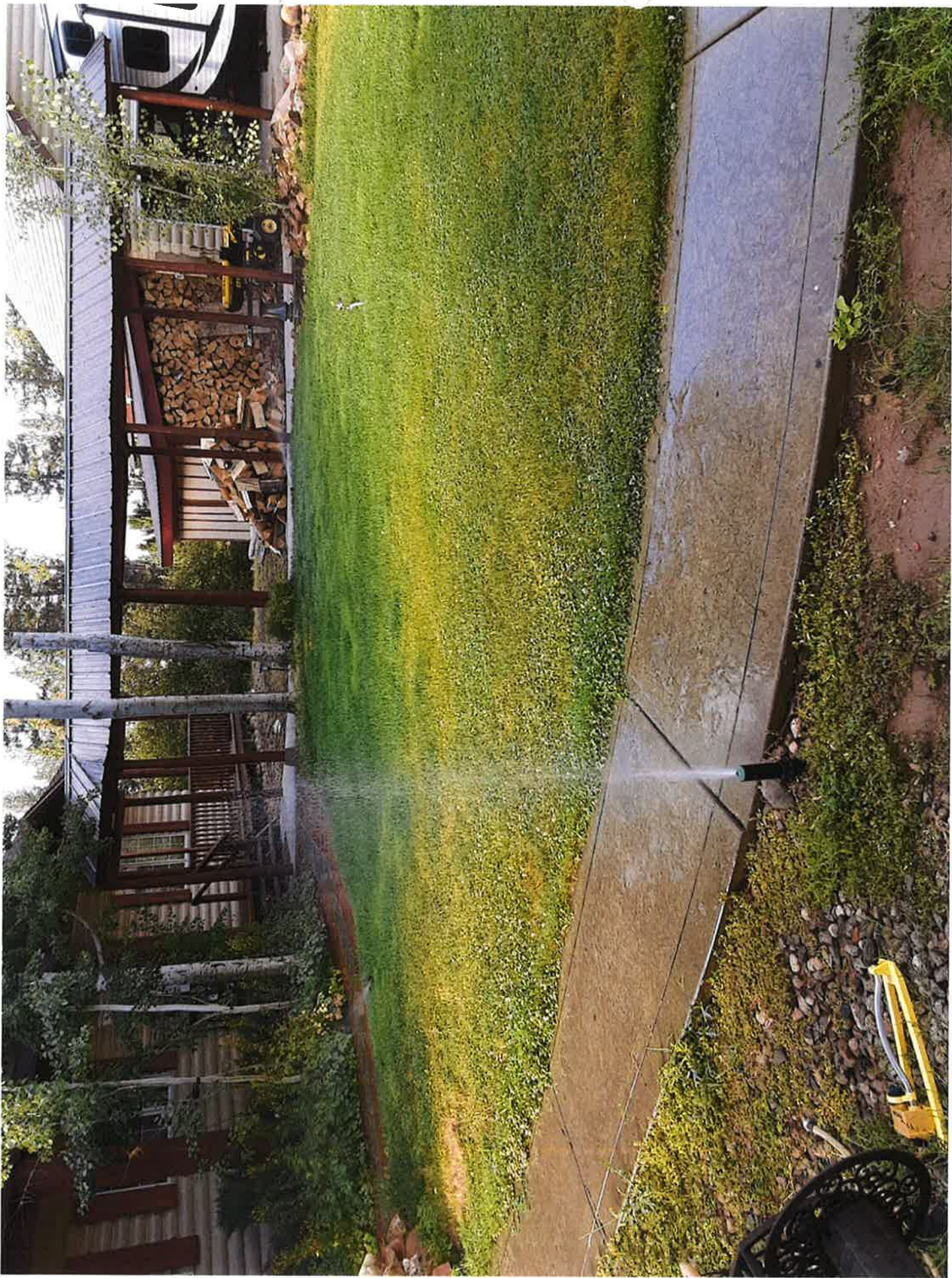
Basin	Owner	Source	Use	NENE	NWNE	SWNE	SENE	NENW	NWNW	SWNW	SENW	NESW	NWSW	SWSW	SESW	NESE	NWSE	SWSE	SESE	Total Acres
65-12735	KIRK, KENT	PAYETTE RIVER	IRRIGATION	0.8																0.8
65-13002	PORTER, C	PYLE CREEK	IRRIGATION	2.2																2.2
65-13027	PINE TREE	GROUND WATER	DOMESTIC	X	X															
65-13027	PINE TREE	GROUND WATER	IRRIGATION	7	3															10
65-13335	BACKUS, D	PAYETTE RIVER	IRRIGATION	2																2
65-13818	DENNET, G	PAYETTE RIVER	IRRIGATION	0.7																0.7
65-13910	CROW, CA	PAYETTE RIVER	IRRIGATION	1																1
65-13972	STEEN, KEN	PYLE CREEK	IRRIGATION	0.1			0.9													1
65-18124	BAILEY, DA	PYLE CREEK	STOCKWATER	X																
65-22296	BAILEY, DA	PAYETTE RIVER	IRRIGATION	6.9	0.5		0.7	0.5												8.6
65-22449	PORTER, C	PAYETTE RIVER	STOCKWATER	X																
65-22871	DOPERSAL	PAYETTE RIVER	IRRIGATION	0.2																0.2
65-23060	MARION, A	PAYETTE RIVER	IRRIGATION	0.7																0.7
65-23806	BAILEY, DA	PAYETTE RIVER	IRRIGATION	1.3																1.3
65-23807	BAILEY, DA	PAYETTE RIVER	IRRIGATION	1.3																1.3
65-23810	THOMPSON	PAYETTE RIVER	IRRIGATION	1																1
65-29018	BAILEY, DA	PAYETTE RIVER	IRRIGATION	2.2																2.2
65-3225	PINE TREE	SCRIVER CREEK	IRRIGATION	11	10															21

= this right
 = overlap









Smith, Tyler

From: Bill Thompson <billfthompson@aol.com>
Sent: Monday, July 27, 2020 7:16 PM
To: Smith, Tyler
Subject: Re: pump pics

Here you go,

Baldor 3hp 1750 rpm Dual voltage 120/240 I Don't have any info on the pump it's old. The system pressure is about 40psi. The motor and pump has to overcome about 150ft rise from the river and about 250ft run to the upper part of the property. The pressure increases to 75 psi when the two upper zones are operating.

-----Original Message-----

From: Smith, Tyler <Tyler.Smith@idwr.idaho.gov>
To: Bill Thompson <billfthompson@aol.com>
Sent: Mon, Jul 27, 2020 2:11 pm
Subject: RE: pump pics

Mr. Thompson,

Thank you for sending the pictures. Those should do the trick. The only other information I need is any information you have regarding your pump and/or motor such as Hp, make, model, etc. If you could send me whatever information you have regarding that, that should be all I need.

Best,

Tyler

From: Bill Thompson [mailto:billfthompson@aol.com]
Sent: Monday, July 27, 2020 11:48 AM
To: Smith, Tyler <Tyler.Smith@idwr.idaho.gov>
Subject: Fwd: pump pics

Mr. Smith,
My permit #65-23810

Attached are the pics I promised you after the system was operational

Let me know if you need further info.

Thanks,
Bill Thompson
16 river rd, Garden Valley, ID

Bill Thompson

16 River Road Garden Valley, ID

Phone: 1-503-949-5641 (cell)

Email: billfthompson@aol.com

To whom may concern:

The water system at this address was existing but the permit had lapsed before my purchase in Jan 2016. After viewing all the installed equipment and fixing the pump I applied for a renewed permit. That was issued 20 Feb. 2019. After which I contacted the water master of this dist. And notified him of the issued permit and will he come and expect the equipment. I explained to him that it had been installed, I thought, in 2004 or 5 by the owner than, Mr. Schumer. The permit called for a lockable device (a J-box down at the pump) and a water meter to verify the cf/m. I told him the pump hp and He told me that wouldn't necessary due the small draw and limited use.

The water master indicated he was familiar with the system and asked at what level would the draw be? I said 0.03 cf/m. and that has not changed.

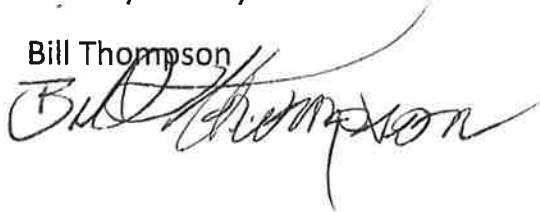
So he told me to proceed and said the Middle Fork was not on the restricted list at this time. He thought a small fee would be imposed if it were since the permit draw was so small and a short period of time.

I thanked him and started the system.

I thought I'd add this bit of history to better familiarize you with what has transpired as I know it.

Thank you for your consideration?

Bill Thompson

A handwritten signature in black ink, appearing to read "Bill Thompson", written over the printed name.