STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 2-10558
Exam Date: 10/13/2020

1. Current Owner:
   DAVID MARTIN III 202 CENTRAL HOUSE RD OROVILLE CA 95965-9686
   LISA MARTIN 202 CENTRAL HOUSE RD OROVILLE CA 95965-9686

2. Accompanied by: Same
   Phone No: (530) 370-1013
   Address: 16059 Map Rock Rd, Caldwell, ID 83607
   Relationship to permit Holder: Same

3. **SOURCE:**
SNAKE RIVER

Tributary
COLUMBIA RIVER

Method of Determination: Site visit, aerial imagery

B. OVERLAP REVIEW

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

Water Right No.	Source	Purpose of Use	Basis
2-10539	Snake River	Irrigation	Decreed
Wilder Irr. Dist. WR's	Snake River	Irrigation	Decreed

Comments: WR 2-10539 covers 13.7 acres of the 20 acre POU. The additional beneficial use is recommended for licensing instead of a combined use limit.

2. Other water rights with the same point-of-diversion: YES Overlap

Water Right No.	Source	Purpose of Use	Basis
2-10539	Snake River	Irrigation	Decreed

Comments: Water right 2-10539 was split in 2017 from 2-10266. A transfer was never filed to move the POD to the new pump location visible between 2017-2019 imagery.

C. DIVERSION AND DELIVERY SYSTEM

1. **LOCATION OF POINT(S) OF DIVERSION:**
SNAKE RIVER SE¼ SE¼, Sec. 8, Twp 01N, Rge 03W, B.M. CANYON County

Method of Determination: Pump GPS'd at 43° 25' 54" N, 116° 43' 1" W.

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	
01N	03W	8															1.0 L7	5.3 L7	6.3

Total Acres: 6.3

Method of Determination: Site visit, aerial imagery, digital PLSS system
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.

__X__ 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	Leeson	5	n/a	Munro	02420J2

D. FLOW MEASUREMENTS

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date
5 gal bucket	5 gal bucket test	n/a	n/a	n/a	5 gal	n/a

2. Measurements: 5-Gallon bucket test (Only two measurements were taken due to the pump getting clogged after the second measurement).

1. 4.05 sec
2. 4.65 sec

Larger = 4.65 = 64.52 gpm = 0.14 cfs

E. FLOW CALCULATIONS

__X__ Additional Computation Sheets Attached

Measured Method: Theoretical

$$Q = \frac{8.8 * (\text{Efficiency}) * hp}{\text{depth to water} + 2.31*(psi)+\text{friction}} = \frac{8.8*.7*5}{20*2.31*48} = \textbf{0.24 cfs}$$

Measured Method: Sprinkler rating

1 sprinkler every 40 ft
Range of 800 ft to 1000 ft
20 to 25 sprinklers, mid-range of 22.5 sprinklers
Mid-range of sprinkler @ 50 psi = 3.1 gpm
22.5 sprinkler @ 3.1 gpm = 69.75 gpm = **0.16 cfs**

Permit	0.350 cfs
B.U. Standard	0.13 cfs
B.U. Fee Paid	$100 0.21 to 1.00 cfs
5-Gal Test	0.14 cfs
Sprinkler rating	0.16 cfs
Theoretical	0.24 cfs

License Recommendation **0.02 cfs**

(Based on 0.16 cfs system capacity diversion rate minus the 0.14 cfs authorized by 2-10539.)

F. VOLUME CALCULATIONS

1. Volume Calculations for irrigation: Irrigation use from surface water source exempt from reporting volume per IDAPA 37.03.02

2. Volume Calculations for Other Uses: None

G. NARRATIVE/REMARKS/COMMENTS

This permit authorizes 0.350 cfs of water from the Snake River for irrigation of 24 acres in southern Canyon County. The application for permit was originally filed incomplete on January 16, 2018, but was returned on February 12, 2018 complete. The application was amended August 13, 2018, in order to resolve a protest regarding the point of diversion listed on the application. This did not advance the priority date. The application was filed by the company HGOAL LLC, but the permit was assigned to David and Lisa Martin on May 10, 2019. A field exam was completed by WRA Tyler Smith and was accompanied by the permit holders on October 13, 2020.

The point of diversion is a 5-hp Leeson motor on a Munro pump on a float in the Snake River. A 2" line comes from the pump and connects to a buried 4" PVC line that connects to a 6" main-line. Hand-lines are then attached to the 6" main-line via values spaced evenly on the main-line, with only one hand-line operated at a time. The hand-lines contain Aquaburst HF 30 sprinklers with 1/8" nozzles, with one sprinkler every 40 feet of line. Due to the shape of the place of use, sections of hand-lines are added or taken off to effectively irrigate the acreage. A 5 gal bucket test was conducted on the pump, resulting in 2 measurements due to a clogging of the pump during the third measurement, resulting in a measurement of 0.14 cfs.

20 acres of irrigation was developed, 13.7 acres of which were overlapping wr 2-10539. The additional beneficial use is recognized by this right instead of creating a combined use limit between the two rights, resulting in a 6.3 acre place of use. Aerial photography for the western section of the pou does not appear irrigated, but evidence of wheat crops was observed during the field exam. The sprinkler calculation provides a slightly higher diversion rate than the 5-gal bucket test. Since this is closer to the standard allowance, and the pump test was cut short, I am recommending a system capacity of 0.16 cfs. 0.14 cfs is already authorized by 2-10539, so 0.02 cfs represents the additional beneficial use. No volume is recommended due to the source being surface water.

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

H. RECOMMENDATIONS

1. Recommended Amounts

Beneficial Use	Period of Use	Rate of Diversion
IRRIGATION	03/01 to 11/15	0.02 CFS

Totals: 0.02 CFS

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

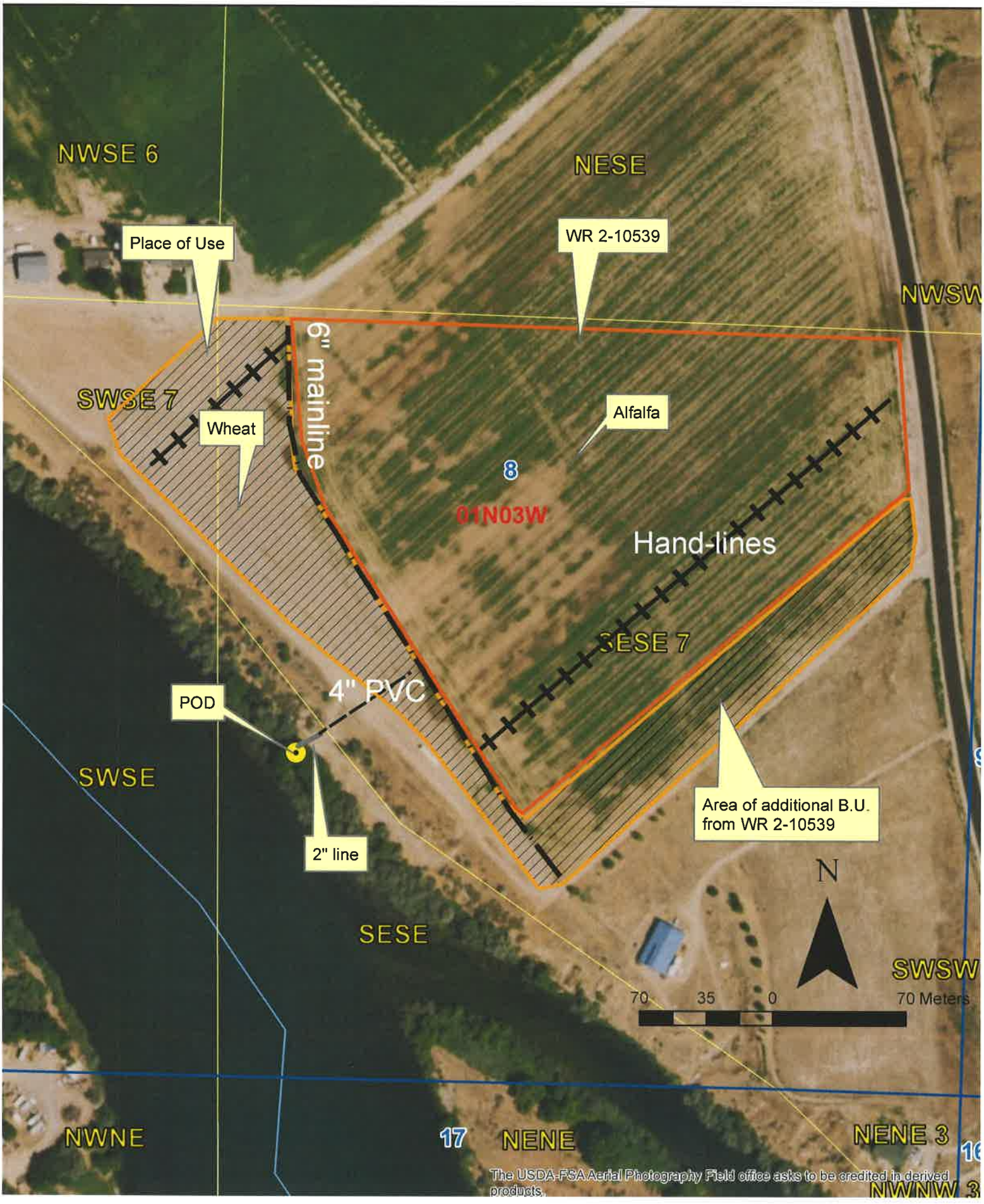
I. AUTHENTICATION

Tyler Smith - Water Resource Agent

Field Examiner's Name _____ Date 10/22/2020

Reviewer _____ Date 10-26-2020

Delivery System Diagram 2-10558



THEORETICAL HORSEPOWER EQUATION WORKSHEET (cjh 1/92)

Water Right No.: 2-10558
Reviewer: Tyler Smith
Date of Review: 10/20/2020

P/D No.:	Senerio 1	Senerio 2	Senerio 3	
PUMP HORSEPOWER	5	5	5	
BOOSTER HORSEPOWER	0	0	0	
PUMPING LEVEL	20	20	20	
DISCHARGE PRESSURE	45	48	50	
RATE OF FLOW (cfs)	0.25	0.24	0.23	0.24

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

Assumptions: %70 efficiency.
No Friction

Examiners Notes:

Field exam reports a 5 hp pump for irrigation use. Lift is recorded at 20 ft. A range of discharge pressures were used base on expected system pressures (45-50 psi). Theoretical average flow rate is 0.24 cfs.

LANE MANUFACTURING COMPANY

Toll Free (800) 410-5263 Fax (866) 410-5263
sales@lanemfg.net www.irrigationgaskets.com
8:00 am to 4:30pm PST

SPRINKLERS

3/4" Full-Circle Brass Impact Sprinkler

Torque Driven™ Spoon Technology

HF30

FIVE-YEAR
LIMITED BEARING
WARRANTY

Features

- Full-circle impact - 26° trajectory
- 3/4" male NPT base
- Single (HF30) or dual nozzle (HF30D)
- Fits 3/4" size nozzle (NOZ75 series)

Advantages

- Cast brass drive arm with I-Beam construction and Torque-Driven™ spoon technology with improved balance, rotation speed and durability
- Cast brass body with triple bridge construction and cored water passage
- Seal-Lock bearing creates a captive seal
- Spindle with debris journal to slow bearing wear
- Stainless steel fulcrum pin, arm spring, and bearing spring for long wearing reliability
- Ideal for hand line, wheel line, solid set, and a wide-range of other applications
- Made with domestic and foreign parts
- Pre assembled with XC-33 thread sealant

Sprinkler Head Does Not Include Nozzle

60/case

HF30	(single)
HF30-C	(single w/chrome bearing)
HF30D	(dual)
HF30D-C	(dual w/chrome bearing)

AQUA BURST® Performance Chart

Normal Stream Height At 9' Above Nozzle at Normal Pressure

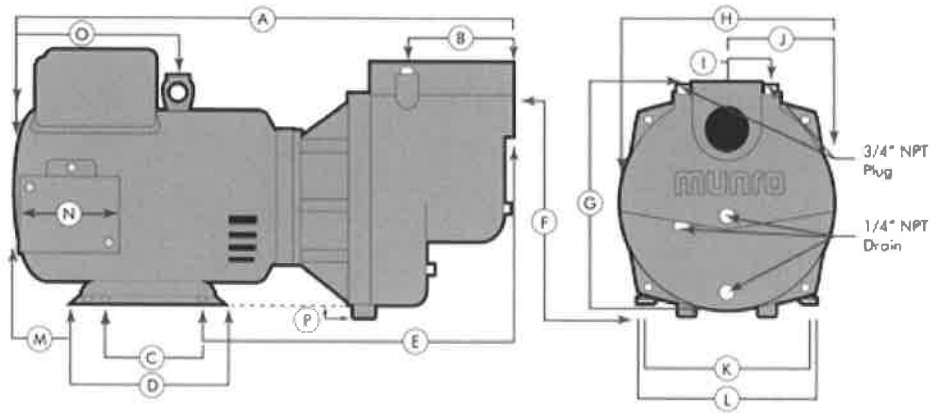
Single Nozzle
Radius - GPM

PSI	1/8" Nozzle	9/64" Nozzle	5/32" Nozzle	11/64" Nozzle	3/16" Nozzle
30	39 - 2.2	41 - 3.0	42 - 3.8	44 - 4.6	45 - 5.5
35	40 - 2.4	41 - 3.3	43 - 4.1	45 - 5.1	46 - 5.9
40	40 - 2.6	42 - 3.5	44 - 4.5	46 - 5.3	47 - 6.4
45	41 - 2.9	42 - 3.7	44 - 4.7	46 - 4.7	48 - 6.7
50	42 - 3.1	43 - 4.0	45 - 4.9	47 - 6.1	48 - 7.2
55	42 - 3.3	43 - 4.3	45 - 5.1	48 - 6.4	49 - 7.5
60	43 - 3.5	44 - 4.5	46 - 5.4	49 - 6.7	49 - 7.8
65	43 - 3.7	44 - 4.7	46 - 5.7	49 - 7.0	50 - 8.1
70	44 - 3.9	45 - 4.8	47 - 5.9	50 - 7.2	51 - 8.4

Dual Nozzle
Radius - GPM

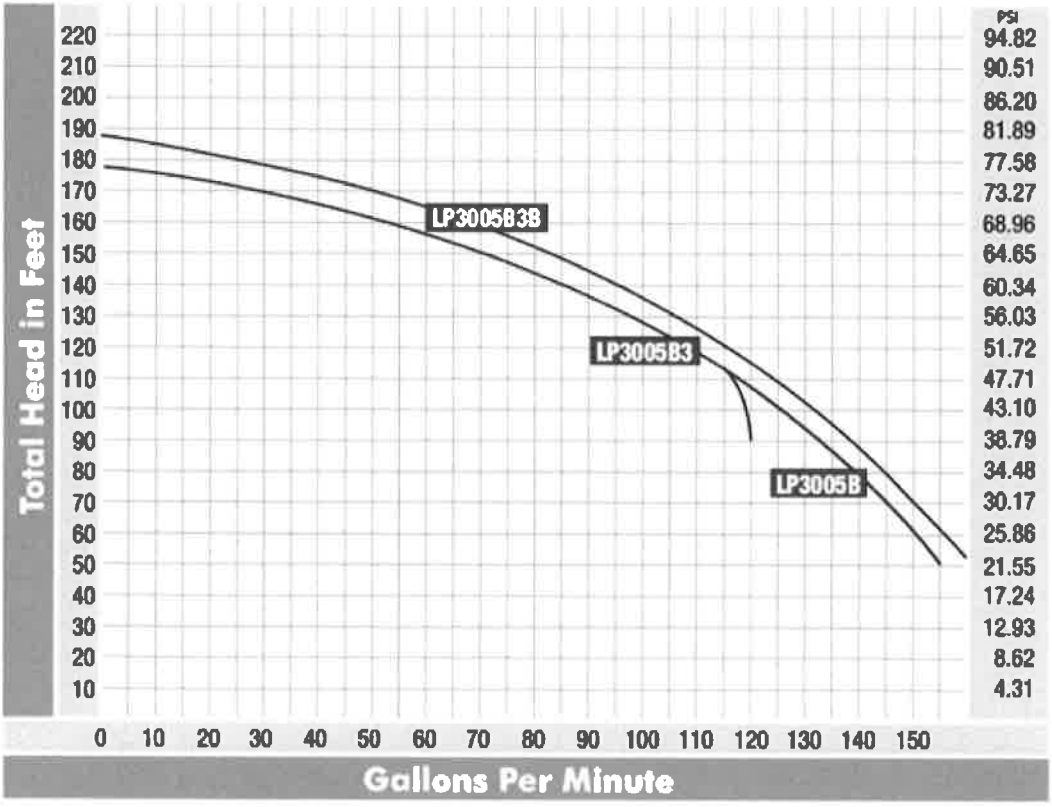
PSI	1/8"x3/32" Nozzle	9/64"x3/32" Nozzle	5/32"x3/32" Nozzle	11/64"x3/32" Nozzle	3/16"x3/32" Nozzle
30	39 - 3.8	41 - 4.4	43 - 5.3	44 - 6.0	44 - 7.0
35	40 - 4.1	41 - 4.8	44 - 4.7	45 - 6.4	46 - 7.4
40	41 - 4.4	42 - 5.2	44 - 6.1	45 - 7.0	47 - 8.0
45	41 - 4.6	42 - 5.5	45 - 6.5	46 - 7.5	48 - 8.6
50	42 - 4.9	43 - 5.8	45 - 6.8	47 - 7.9	49 - 9.1
55	42 - 5.2	43 - 6.1	46 - 7.1	48 - 8.3	50 - 9.5
60	43 - 5.4	44 - 6.3	46 - 7.4	48 - 8.7	51 - 9.8
65	43 - 5.7	44 - 6.6	47 - 7.8	48 - 9.0	51 - 10.3
70	43 - 5.9	45 - 6.9	47 - 8.1	49 - 9.4	52 - 10.6

Dimensions



HP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
5	21 3/4"	4"	4 1/2"	6 1/2"	13 1/2"	9 1/2"	12 5/8"	11"	3 1/8"	5 5/8"	7 1/2"	8 1/2"	2 1/2"	4 1/4"	7 1/2"	1 1/2"

HORSEPOWER RANGE: 5
PHASE: 1



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	65	70		
5	--	--	145	137	132	123	110	98	85	67	47	75	LP3005B
5	--	--	--	--	--	120	110	98	85	67	47	75	LP3005B3
5	--	160	154	145	135	130	116	107	95	84	63	78	LP3005B3B

Suction lift varies, depending upon elevation (altitude) and water temperatures. Max lift is 15 feet at 5000 feet elevation. Maximum case pressure is 100 PSI.

Point of Diversion Comparison

State of Idaho
Department of Water Resources
Beneficial Use Field Exam

Water right no. 2-10558

BasinSequence	Owner	Source	Use	NENE	NWNE	SWNE	SENE	NENW	NWNW	SWNW	SENW	NESW	NWSW	SWSW	SESW	NESE	NWSE	SWSE	SESE
2-10058	SMARTT, DAVID L	SNAKE RIVER							X										X
2-10211	ALLEN, ELAINE L; SALTZER, JOS; SHAKENIS, CLAUDIA SUSAN; SH	SNAKE RIVER															X		
2-10233	ALLEN, ELAINE L; SALTZER, JOS; SMARTT, DAVID L; VOLKNER, W	SNAKE RIVER															X		
2-10265	ALLEN, ELAINE L; D L EVANS BANK; DIAMOND B FARMS LLC; SAL	SNAKE RIVER															X		
2-10266	ALLEN, ELAINE L; SALTZER, JOS; SMARTT, DAVID L; VER HAGEN,	SNAKE RIVER															X		
2-10267	ALLEN, ELAINE L; D L EVANS BANK; DIAMOND B FARMS LLC; SAL	SNAKE RIVER									X								
2-10268	ALLEN, ELAINE L; ROSS, JOHN D; SALTZER, JOSEPH; SMARTT, DA	SNAKE RIVER									X								
2-10526	DIAMOND B DAIRY LP; SMARTT, DAVID L	SNAKE RIVER							X										X
2-10528	ALLEN, ELAINE L; DIAMOND B DAIRY LP; SALTZER, JOS; SMARTT,	SNAKE RIVER									X						X		
2-10529	ALLEN, ELAINE L; DIAMOND B DAIRY LP; ROSS, JOHN D; SALTZER	SNAKE RIVER									X								
2-10538	HGOAL LLC; SMARTT, DAVID L	SNAKE RIVER							X										X
2-10539	ALLEN, ELAINE L; HGOAL LLC; SALTZER, JOS; SMARTT, DAVID L	SNAKE RIVER															X		
2-10558	HGOAL LLC; MARTIN III, DAVID; MARTIN, LISA; XIA, RUIJIE	SNAKE RIVER																	X
2-10569	SMARTT, DAVID L; VER HAGEN, MARY BETH; VER HAGEN, SCOT	SNAKE RIVER							X										X
2-10581	ALLEN, ELAINE L; DIAMOND B DAIRY LP; MARTIN III, DAVID; MA	SNAKE RIVER									X						X		
2-2072	OPALINE IRRIGATION DISTRICT	SNAKE RIVER											X						
2-7089	FLYNN, ROSEMARY; HOAGLAND, MOLLIE L; ROBERT E FLYNN ES	SNAKE RIVER								X									
2-7140	FLYNN, ROSEMARY; HOAGLAND, MOLLIE L; ROBERT E FLYNN ES	SNAKE RIVER								X									
2-7177	TORREY, KENNETH D; TORREY, SUSAN V; WELCH, M J; WELCH, V	SNAKE RIVER											X						
2-7178A	GNEITING, FRANKIE K; LANDON, RICHARD A; LANDON, SANDY; M	SNAKE RIVER											X						
2-7179	GNEITING, FRANKIE K; GOODLOE, DONNA; GOODLOE, NORVEL;	SNAKE RIVER										X							
57-10091	YOUNG, CHARLES C; YOUNG, RUBY V	GROUND WATER											X						
57-10093	BLICK, FRANK W	GROUND WATER													X				
57-10288	ACKERLUND, CLARENCE W	GROUND WATER																X	
57-10399	ADAMS, LOIS E; ADAMS, ROBERT B	GROUND WATER													X				
57-10860	LONG, LESTER H; LONG, MARGARET	GROUND WATER													X				
57-10866	GILDERSLEEVE, LESTER; GILDERSLEEVE, RUTH	GROUND WATER													X				
57-7156	ROBERT E FLYNN ESTATE	SPRINGS								X			X						
57-7204	GOFF, MAURICE E; LONG, LESTER H; LONG, MARGARET	GROUND WATER													X				
57-7211A	SCHWISOW, GARY L; SCHWISOW, TERESA A; WHITE, NORRIS M	GROUND WATER													X				
57-7211B	D L EVANS BANK; SCHWISOW, GARY L; SCHWISOW, TERESA A; V	GROUND WATER													X				
57-7445	D L EVANS BANK; SCHWISOW, GARY L; SCHWISOW, TERESA A	GROUND WATER													X				
57-7534	SHEWEY, LOYD C; SHEWEY, WILMA L	GROUND WATER													X			X	
57-7612	SQUIRES, JOHN T	GROUND WATER												X					

= this right
= overlap

Place of Use Comparison

State of Idaho
Department of Water Resources
Beneficial Use Field Exam

Water right no. 2-10558

BasinSequence	Owner	Source	Use	NENE	NWNE	SWNE	SENE	NENW	NWNW	SWNW	SENW	NESW	NWSW	SWSW	SESW	NESE	NWSE	SWSE	SESE	TotalAcres
2-10211	ALLEN, ELAINE L; SALTZER, JOS; S	SNAKE RIVER	IRRIGATION																9.3	9.3
2-10233	ALLEN, ELAINE L; SALTZER, JOS; S	SNAKE RIVER	IRRIGATION						4.8											4.8
2-10265	ALLEN, ELAINE L; D L EVANS BAN	SNAKE RIVER	IRRIGATION						6.2											6.2
2-10266	ALLEN, ELAINE L; SALTZER, JOS; S	SNAKE RIVER	IRRIGATION													1.3	13			14.3
2-10267	ALLEN, ELAINE L; D L EVANS BAN	SNAKE RIVER	IRRIGATION						3											3
2-10268	ALLEN, ELAINE L; ROSS, JOHN D;	SNAKE RIVER	IRRIGATION														11			11
2-10528	ALLEN, ELAINE L; DIAMOND B DA	SNAKE RIVER	IRRIGATION			31	12	23			25					18.7	22			131.7
2-10529	ALLEN, ELAINE L; DIAMOND B DA	SNAKE RIVER	IRRIGATION			2		4			29.5						18.5			54
2-10539	**ALLEN, ELAINE L; HGOAL LLC; SA**	**SNAKE RIVER**	**IRRIGATION**																**13.7**	13
2-10558	HGOAL LLC; MARTIN III, DAVID; M	SNAKE RIVER	IRRIGATION															1	19	2
2-10581	ALLEN, ELAINE L; DIAMOND B DA	SNAKE RIVER	IRRIGATION								X					11	X			11
2-2072	OPALINE IRRIGATION DISTRICT	SNAKE RIVER	IRRIGATION							X		X		X	X					
2-7089	FLYNN, ROSEMARY; HOAGLAND,	SNAKE RIVER	IRRIGATION							12										12
57-7204	GOFF, MAURICE E; LONG, LESTEI	GROUND WATER	IRRIGATION												3					3
57-7211A	SCHWISOW, GARY L; SCHWISOW	GROUND WATER	IRRIGATION									1.5	3							4.5
57-7211B	D L EVANS BANK; SCHWISOW, G	GROUND WATER	IRRIGATION												1.8					1.8
63-136	BARKER ROSHOLT & SIMPSON LI	BOISE RIVER	IRRIGATION		X	X	X	X	X	X		X				X		X		
63-137B	BARKER ROSHOLT & SIMPSON LI	BOISE RIVER	IRRIGATION		X	X	X	X	X	X		X				X		X		
63-200A	BARKER ROSHOLT & SIMPSON LI	BOISE RIVER	IRRIGATION		X	X	X	X	X	X		X				X		X		
63-2106	UNITED STATES OF AMERICA AC	FIVEMILE CREEK	IRRIGATION		X	X	X	X	X	X		X				X		X		
63-233K	AMERICAN DITCH CO; BARKER R	BOISE RIVER	IRRIGATION		X	X	X	X	X	X		X				X		X		
63-2388A	UNITED STATES OF AMERICA AC	BOISE RIVER	IRRIGATION		X	X	X	X	X	X		X				X		X		
63-2392F	BOISE PROJECT BOARD OF CONT	WASTE WATER	IRRIGATION		X	X	X	X	X	X		X				X		X		
63-251A	UNITED STATES OF AMERICA AC	BOISE RIVER	IRRIGATION		X	X	X	X	X	X		X				X		X		
63-301A	UNITED STATES OF AMERICA AC	BOISE RIVER	IRRIGATION		X	X	X	X	X	X		X				X		X		
63-302A	UNITED STATES OF AMERICA AC	BOISE RIVER	IRRIGATION		X	X	X	X	X	X		X				X		X		
63-33251	BOISE PROJECT BOARD OF CONT	INDIAN CREEK	IRRIGATION		X	X	X	X	X	X		X				X		X		
63-33253	BOISE PROJECT BOARD OF CONT	TENMILE CREEK	IRRIGATION		X	X	X	X	X	X		X				X		X		
63-373A	UNITED STATES OF AMERICA AC	BOISE RIVER	IRRIGATION		X	X	X	X	X	X		X				X		X		

= this right
= overlap

Fig. 1 – POD is 5-hp pump in Snake River. View looking SW. GPS'd at:

43° 25' 54" N

116° 43' 1" W

Fig. 2 – Close up view of POD. Pump is covered by metal sheet and controlled via Munro smartbox.

Fig. 3 – Alternate view of floating pump with 2" line coming from it.

Fig. 4 – Pump specs:

Make: Leeson

Serial #: 02420J2

HP: 2

Hz: 60

Fig. 5 – Pressure is typically operated at 45-50 psi according to permit holder. Water bottle is for back-pressure.

Fig. 6 – View looking NE from river edge towards place of use. 2" line connects to 4" PVC line that has been buried.

Fig. 7 – 4" PVC connects to 6" mainline. Hand-lines are attached to mainline at these valves.

Fig. 8 – View of POU looking NE. Alfalfa currently being grown. WR 2-10539 overlaps place of use.

Fig. 9 – Sprinklers on hand-lines are Aquaburst HF 30 with 1/8" nozzle.

Fig. 10 – Sprinklers on hand-lines are Aquaburst HF 30 with 1/8" nozzle.

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

September 21, 2020

LISA & DAVID MARTIN
202 CENTRAL HOUSE RD
OROVILLE, CA 95965

RE: Scheduling Field Exam for Water Right Permit No. 2-10558

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 **0.35** of **SNAKE RIVER WATER** 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 or tyler.smith@idwr.idaho.gov 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,

Tyler Smith
Water Resource Agent

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