

RECEIVED

SEP 23 2021

DEPARTMENT OF
WATER RESOURCESSTATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
STATEMENT OF COMPLETION
FOR SUBMITTING PROOF OF BENEFICIAL USE

FOR OFFICE USE ONLY

Amt. of Fee \$ 50
Receipt No. C110993
Received By Jan
Date Received 9-23-21

The Idaho Department of Water Resources considers this form a statement by the permit holder(s) that development of a water right has been **completed** and that water has been applied to beneficial use to the extent described below. **This form must be accompanied by an examination fee, when necessary, or by a completed Beneficial Use Field Report prepared by a certified water right examiner.** Please refer to the instructions and fee schedule for this form. If ownership of the permit has changed, contact any Department office or visit the Department's website at idwr.idaho.gov for an *Assignment of Permit* form. If you wish to relinquish your permit because you have not established the authorized use of the water and are not applying for an extension, please notify the Department in writing.

- Permit No. 98-07998 Telephone No. 208-659-4043
- Name of Permit Holder(s) Kendall D Bucklin and Donna R Bucklin living trust
- Mailing Address 738 Copper Falls Rd City Bonniers Ferry
State ID Zip 83805 Email Kendall.Bucklin@gmail.com
- Source of Water Unsanctioned stream If **GROUND WATER** (well), Date Drilled mo. _____ / yr. _____
Well Driller _____ Drilling Permit Number _____
- Extent of use(s) completed as authorized by the water right permit:
Domestic (No. of households) _____ Stockwater (No. and type of stock) _____
Irrigation (No. of acres) _____ Other Hydroelectric power and yard irrigation 0.03 cfs
0.10 cfs
- Total rate of diversion or storage volume for which proof is submitted 0.13 cfs OR _____ acre-feet.
- Compliance with a measuring device requirement, lockable controlling device requirement, and/or other conditions of permit:
Refer to the approval conditions on your permit and respond accordingly.
The Department will not issue a license if permit conditions are not met.

Measuring Device	Is a measuring device required?	Yes ☐	No ☒
	If yes, has the measuring device been installed?	Yes ☐	No ☐
Lockable Controlling Device	Is a lockable device required to control the diversion?	Yes ☐	No ☒
	If yes, has the lockable device been installed?	Yes ☐	No ☐
Fish Screen	Is a fish screen required?	Yes ☒	No ☐
	If yes, has the fish screen been installed?	Yes ☒	No ☐

Other Conditions of Permit

Do the approval conditions on your permit require you to submit additional information in connection with your proof of beneficial use? If yes, list the conditions below and attach documents with the required information.

Yes, use log, piezometer curve attach Completed? Yes ☒ No ☐

- Fee Enclosed \$ 50 or not applicable ☐. See fee schedule on page 2 of the instructions.
Proof statements filed without an appropriate fee, will be considered incomplete.
- Person to contact to accompany the Department representative during field examination of the water system.

Name Kendall Bucklin Telephone Number 208-659-4043
Mailing Address 738 Copper Falls Rd City Bonniers Ferry
State ID Zip 83805 Email Kendall.Bucklin@gmail.com

The information given on this form is my true statement of the extent to which the above numbered permit has been developed and water has been diverted and applied to a beneficial use. I understand that any undeveloped portion of the permit is relinquished to the State of Idaho.

Signature of Permit Holder [Signature] Date 9-20-21
(Include your title, if on behalf of company or organization)

Mail to: Idaho Department of Water Resources, PO Box 83720, Boise, ID 83720-0098

Kendall Bodkin
738 copper falls rd
Bonners Ferry, ID 83805
208-569-4043
Kendallbodkin@gmail.com

Permit # 98-07258

Hipower hydroelectric turbine LV1500 (48 volt)

10-2019	25amps,	1200 watts
11-2019	25amps,	1200 watts
12-2019	25amps,	1200 watts
01-2020	25amps,	1200 watts
02-2020	25amps,	1200 watts
03-2020	25amps,	1200 watts
03-2020	25amps,	1200 watts
04-2020	25amps,	1200 watts
05-2020	25amps,	1200 watts
06-2020	25amps,	1200 watts
07-2020	25amps,	1200 watts
08-2020	25amps,	1200 watts
09-2020	25amps,	1200 watts
10-2020	25amps,	1200 watts
11-2020	25amps,	1200 watts
12-2020	25amps,	1200 watts
01-2021	25amps,	1200 watts
02-2021	25amps,	1200 watts
03-2021	25amps,	1200 watts
04-2021	25amps,	1200 watts
05-2021	25amps,	1200 watts
06-2021	25amps,	1200 watts
07-2021	25amps,	1200 watts
08-2021	25amps,	1200 watts
09-2021	25amps,	1200 watts

Referr to Attached Output in Watts Per Nozzle for Lv800/Lv1500

Turbine has 4 - 1/4 in nozzles

Water pressure is approximately 80 pounds

Turbine is using approximately 16.1 GPM per nozzle

Turbine generates approximately 323 Watts per nozzle

Total GPM for turbine is 64.4.

Total Watts for turbine is 1292.

Total Amps for turbine is 26.9.

OUTPUT IN WATTS PER NOZZLE FOR LV800 / 1500

Psi	Feet	1/8		3/16		1/4		5/16		3/8		7/16		1/2		9/16		5/8							
30	69	GPM				9.9			15.5			22.3			30.4			50.2			62.0				
		Efficiency	Watts			40%		49		49%		94	57%		157	56%		211	55%		269	43%		266	36%
40	92			6.4		11.4		17.9		25.8		35.1		45.8		57.9		71.6							
				39%	42	55%	103	61%	181	64%	274	63%	365	60%	452	47%	447	39%	466						
43	100			6.7		11.9		18.5		26.8		36.5		47.6		60.2		74.4							
				39%	47	56%	119	64%	213	63%	303	65%	429	60%	512	47%	514	40%	539						
50	115	3.2		7.2		12.7		19.9		28.8		39.2		51.1		64.7		80.0							
		12%	8	47%	70	61%	160	64%	264	66%	393	66%	534	61%	650	48%	638	40%	668						
52	120	3.26		7.3		13.0		20.3		29.3		39.9		52.1		65.9		81.5							
		14%	10	47%	74	60%	169	65%	285	65%	414	63%	540	61%	687	48%	677	41%	713						
60	139	3.51		7.9		14.0		21.9		31.6		43.0		56.0		70.9		87.7							
		21%	18	51%	100	62%	216	65%	357	64%	506	62%	662	60%	835	46%	812	40%	869						
65	150	3.64		8.2		14.5		22.7		32.8		44.7		58.2		73.7		91.1							
		28%	28	51%	113	63%	245	66%	404	64%	569	62%	750	58%	910	46%	914	39%	962						
70	162	3.79		8.5		15.1		23.6		34.1		46.4		60.5		76.6		94.7							
		33%	36	52%	130	62%	271	66%	455	65%	646	61%	829	57%	1005	44%	987	39%	1072						
80	185	4.05		9.1		16.1		25.2		36.4		49.6		64.7		81.9		101.2							
		36%	49	54%	165	60%	323	66%	558	63%	770	61%	1004	54%	1170	44%	1213	38%	1292						
90	208	4.3		9.7		17.1		26.8		38.7		52.7		68.7		86.9		107.4							
		39%	62	55%	200	60%	382	65%	654	63%	914	60%	1179	53%	1357	44%	1420	36%	1454						
100	231	4.52		10.2		18.0		28.2		40.7		55.5		72.3		91.6		113.2							
		41%	78	56%	237	60%	452	65%	761	63%	1067	58%	1346	51%	1539	42%	1596	35%	1627						
110	254	4.75		10.7		18.9		29.6		42.7		58.2		75.9		96.1									
		45%	97	55%	270	59%	512	63%	849	62%	1207	56%	1502	49%	1690	30%	1722								



BRAD LITTLE
Governor

State of Idaho

DEPARTMENT OF WATER RESOURCES

322 East Front Street • P.O. Box 83720 • Boise, Idaho 83720-0098
Phone: (208) 287-4800 • Fax: (208) 287-6700 • Website: www.idwr.idaho.gov

GARY SPACKMAN
Director

September 30, 2021

KENDALL D BODKIN AND DONNA K BODKIN LIVING TRUST
739 COPPER FALLS RD
BONNERS FERRY ID 83805

PROOF ACKNOWLEDGEMENT LETTER

RE: Permit No. 98-7998

Dear Permit Holder:

The Department acknowledges receipt of the proof of beneficial use form submitted for the above referenced permit. The next step in the process of developing a water right is for the Department to conduct a field examination to determine and confirm the use being made of the water.

Please be advised that Idaho Code § 42-248, requires you or the owner of this water right to maintain current ownership and address records on file with the Department. Forms to file a change of ownership of a water right and/or a change in the address of the water right owner are available from any Department office or at the Department's website at www.idwr.idaho.gov.

If you have any questions concerning the field examination, please contact the Northern Region Office of the Department located in Coeur d'Alene at (208) 762-2800.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Debbi Judd', is written over a light blue circular stamp.

Debbi Judd
Technical Records Specialist

Enclosures

Judd, Debbi

From: Edl, Michele
Sent: Tuesday, September 28, 2021 3:51 PM
To: Rauhut, Manuel
Cc: Parker, Cody; Judd, Debbi
Subject: RE: Permit 98-7998

Manuel and Debbi,
Compliance with this condition would be clumsy in the best of circumstances for micro hydropower units. This appears to be one of those units.

It likely runs continuously to trickle charge a bank of batteries.

The permittee has the option to swap nozzles to make the most of seasonably variable flows and appears to have provided most of the equipment specs.

I agree that this proof should be accepted.

Manuel, your thinking is spot on target.

Michele

From: Rauhut, Manuel <Manuel.Rauhut@idwr.idaho.gov>
Sent: Tuesday, September 28, 2021 2:36 PM
To: Edl, Michele <Michele.Edl@idwr.idaho.gov>
Subject: FW: Permit 98-7998

Hi Michelle –

It looks to me like the Permit Holder meets the intent of the condition (highlighted in yellow) with the information provided.

However...

- the permit allows for 0.10 cfs (44.8 gpm) and the information provided is based on 64.4 gpm (the 64.4 gpm is based on the table for the nozzle which corresponds to 323 watt/ nozzle or 1292 watts for 4 nozzles)
- they did not provide monthly power generation figures, but rather a slightly reduced (from 1292 to 1200 watts) instantaneous capacity. I'm not sure if these smaller facilities can actually record how much power they are generating over time.

In my opinion we can accept the proof, and clarify at licensing that the water right is 0.10 cfs and therefore the system must be adjusted (smaller nozzles?)

What are your thoughts?

Thanks,
Manuel

From: Judd, Debbi <Debbi.Judd@idwr.idaho.gov>
Sent: Tuesday, September 28, 2021 1:11 PM
To: Rauhut, Manuel <Manuel.Rauhut@idwr.idaho.gov>
Subject: Permit 98-7998

Hi Manuel,

I'm hoping you are the right person for this. The Department received a proof for a permit that has a condition (condition 10) requiring "a copy of the characteristic performance curve for the turbine(s) and a copy of the monthly power generation figures during the development period." Attached is the proof and documents that were submitted. Can you tell me if these documents satisfy that condition?

Thanks,
Debbi

Debbi Judd
Technical Records Specialist
debbi.judd@idwr.idaho.gov

Idaho Department of Water Resources
322 E Front St
PO Box 83720
Boise, ID 83720-0098
208-287-4920
www.idwr.idaho.gov