

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 71-10898

Exam Date: 6/16/2016

1. Current Owner:
SCOTT E ELISON & MICHELLE LOWE ELISON 1999 REVOCABLE TRUST
3407 MOONLIGHT DR KIMBERLY ID 83341 (661) 978-1851

2. Accompanied by: Scott Elison, Permit Holder

3. **SOURCE:**
SALMON RIVER

TRIBUTARY:
SNAKE RIVER

B. OVERLAP REVIEW

1. Other water rights with the same place of use: Water Right 71-7103
2. Other water rights with the same point-of-diversion: Permit 71-10899

C. DIVERSION AND DELIVERY SYSTEM**1. LOCATION OF POINT(S) OF DIVERSION:**

SALMON RIVER L2 (NW¼NE¼NW¼) Sec. 10, Twp 10N, Rge 13E, B.M. CUSTER County

Method of Determination: Field observation and GPS

2.

PLACE OF USE: DOMESTIC

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
10N	13E	10					X L2												

Method of Determination: Field observation and Aerial Photo

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	Goulds	1.5	C48C53A06	GT15	Serial #30315J2

D. FLOW MEASUREMENTS

A measurement is not required for domestic use if diversion rate does not exceed 0.24 cfs according to new Beneficial Use Examination Rules dated 3/29/2012

Not required for permits with irrigation less than five (5) acres per new Beneficial Use Examination Rules implemented 3/29/2012

Theoretical yield: $Q = \frac{8.8 \times (HP) \times (EFF)}{H}$

Where: HP = 1.5 HP (acquired from plate on pump)

EFF = Pump Efficiency = 70% (assumed)

H = Total Dynamic Head = (total lift) + (2.31 x operating pressure). Total lift was estimated at 5 ft based on field observations. Operating pressure estimated at 40 psi based on typical lawn sprinkler.

$$H = 5 \text{ ft} + (2.31 \times 40.0 \text{ psi}) = 97.4 \text{ feet}$$

$$Q = \frac{8.8 \times (1.5) \times (0.70)}{97.4} = 9.24$$

$$Q = 0.10 \text{ CFS}$$

Manufacture Pump Efficiency Curves

Where: Based on data acquired from Goulds Pumps for a 1.5 hp motor/pump (model no. GT 15), operating at a discharge pressure of 40 psi and 5 ft of dynamic suction lift will be able to produce 45 GPM (0.10 CFS).

Under either flow analysis, rate exceeds permitted amount of 0.04 CFS.

:

E. FLOW CALCULATIONS

_____ Additional Computation Sheets Attached

Measured Method: None

F. VOLUME CALCULATIONS

Not required for permits with irrigation using natural stream flow from a stream or spring per new Beneficial Use Examination Rules implemented 3/29/2012.

G. NARRATIVE/REMARKS/COMMENTS

Application for Permit 71-10898 was filed on May 15, 2006 by James H. Elison for domestic use from the Salmon River. The permit was approved on July 26, 2006 and proof of beneficial use was due on or before August 1, 2007. Proof of Beneficial use was submitted on October 30, 2006. On June 16, 2016 I met with Scott Elison, (son of James Elison), to conduct the licensing exam. During my visit Mr. Elison verified the point of diversion and place of use as well as demonstrated the capability of the irrigation system. The system developed under permit 71-10898 consists of a 1.5 HP Goulds pump that diverts water from the Salmon River by the use of a fish screen and a 2" line to a 1.5" intake at the pump and a 1.5" discharge line to the underground irrigation system. The IDF&G provided the fish screen for the applicant's use. Because of the type of fish screen provided by IDF&G for the applicant this satisfies the screening and approach velocity condition requirement at the point of diversion. A theoretical estimate of the system and pump manufacturer data indicates that a 1.5 HP pump can produce up to 0.1 cfs, which exceeds the permitted rate of 0.04 cfs. Beneficial Use Examination Rules states, for irrigated acreage of five (5) acres or less, a diversion rate up to three one-hundredths (0.03) cfs per acre may be allowed on the license to be issued by the Director. It is recommended that license 71-10898 be issued for domestic purposes with a rate of 0.02 cfs. It is also recommended that this right, 71-10898, along with any additional domestic rights, is limited to 13,000 gpd and no more than 0.5 acres of irrigation. During the exam the applicant's son, Scott Elison, submitted a Notice of Change in Water Right Ownership form to update department records for permit 71-10898 and water right 71-7109. The permit was issued with Water District 170 standard conditions for watermaster requirements. At licensing these conditions should be removed as a result of the preliminary order for Water District 170, dated December 10th, 2012, exempting domestic water rights as defined by Idaho Code §§ 42-111 and 42-1401A(11) from watermaster regulation. The applicant also has a water right, 71-7103, for domestic use from ground water for a well located on the applicant's property.

Have conditions of permit approval been met? X Yes No

H. RECOMMENDATIONS**1. Recommended Amounts**

<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>DIVERSION RATE</u>	<u>ANNUAL VOLUME</u>
DOMESTIC	05/01 to 10/31	0.02 CFS	N/A
<u>Totals:</u>		0.020 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

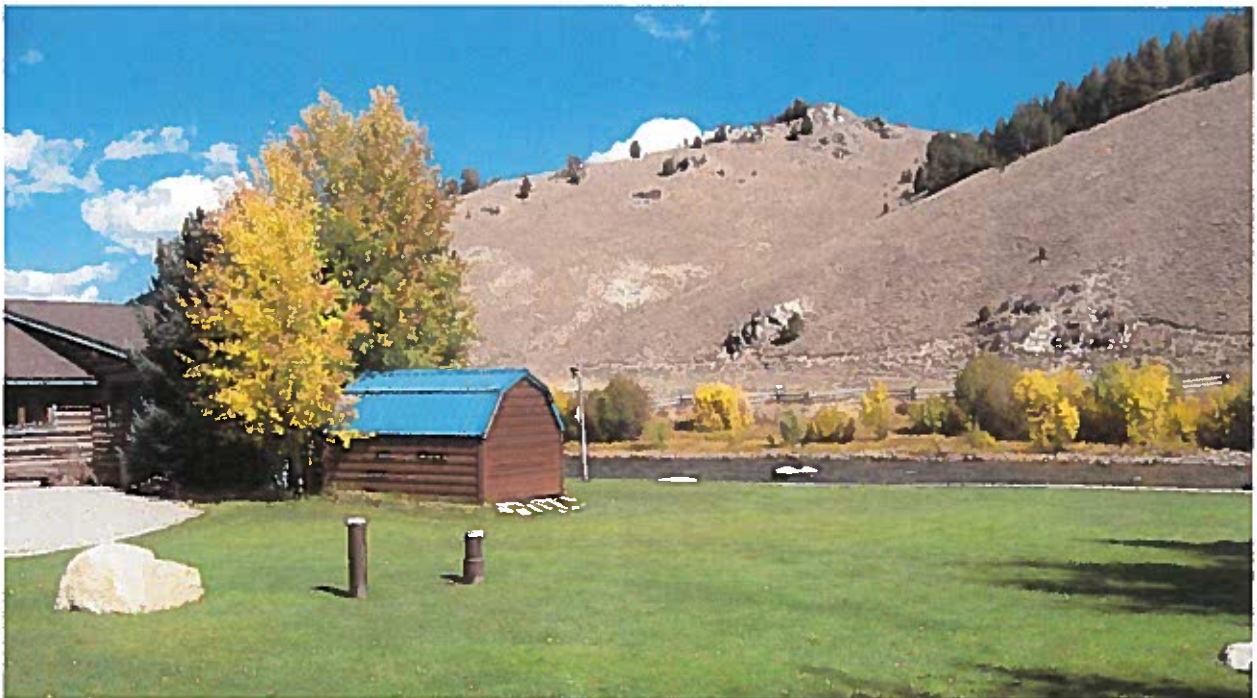
I. AUTHENTICATION

Field Examiner's Name Benny Walker Date 9/26/2016
 Reviewer _____ Date _____

Permit 71-10898



Home and Landscaping



Lawn

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Permit 71-10898



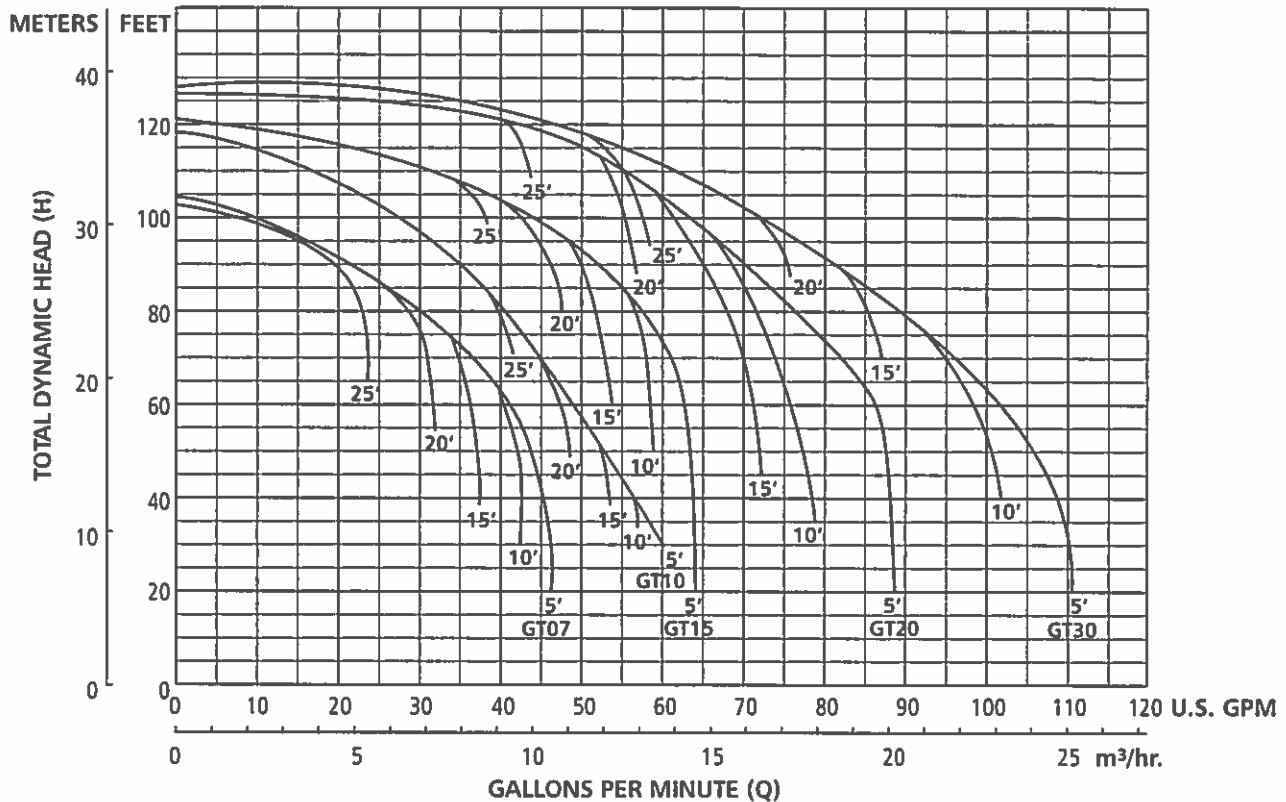
Above: Pump and Fish Screen from Salmon River



Above: Sprinkler System for Lawn

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PERFORMANCE CURVE



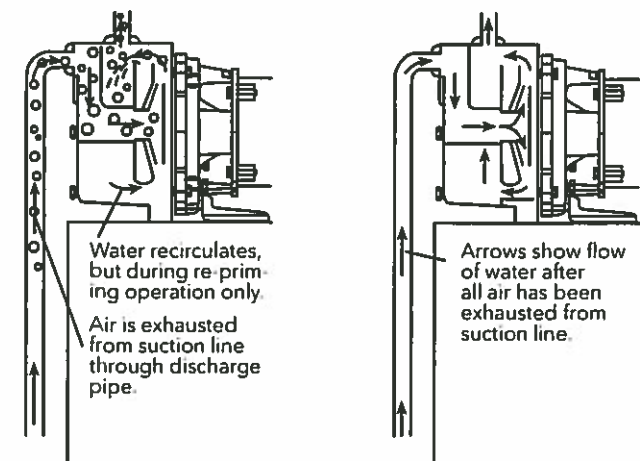
Single and three phase have same performance.

PERFORMANCE RATINGS

Model	PSI Discharge Pressure	Suction Lift in Feet				
		5	10	15	20	25
GT07/ GT073	20	44	41	36	31	24
	30	34	31	26	22	14
	40	10	4	0	0	0
GT10/ GT103	20	53	51	49	46	41
	30	43	41	38	36	32
	40	29	22	16	8	0
GT15/ GT153	20	63	59	54	49	39
	30	60	55	51	46	37
	40	45	38	33	20	14
GT20/ GT203	20	86	77	70	59	46
	30	80	72	67	57	44
	40	65	60	57	50	43
GT30/ GT303	20	105	100	88	76	60
	30	92	90	84	75	57
	40	73	67	62	55	50

Performance ratings are in GPM.

SELF-PRIMING (AFTER INITIAL PRIME)[®]





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Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroX, Geomapping, AeroGRID, IGN, IGP, swisstopo, and the GIS User Community