

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 67-7995

Exam Date: 8/20/2012

1. Current Owner: WATERMAN FAMILY TRUST
C/O PEGGY WATERMAN
1215 W LINDEN
CALDWELL ID 83605
(208)459-2518
2. Accompanied by: Lynn Waterman
Phone No: (208) 861-3836
Address:
Relationship to Permit Holder: Son
3. **SOURCE** **TRIBUTARY**
ALDER CREEK GOODRICH CREEK

B. OVERLAP REVIEW

1. Other water rights with the same place of use: 67-7161
2. Other water rights with the same point of diversion: 67-7161

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

ALDER CREEK SE1/4NW1/4 Sec. 19, Twp 16N, Rge 02W, B.M.
WASHINGTON County

Method of Determination: Arc Map (Aerial Photo)

2.

PLACE OF USE: IRRIGATION

Twp	Rge	Sec	NE				NW				SW				SE				
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	Totals
16N	02W	19															1.5		1.5

Total Acres: 1.5

Method of Determination:

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.

<u>Well or Diversion ID No.*</u>	<u>Motor Make</u>	<u>Hp</u>	<u>Motor Serial No.</u>	<u>Pump Make</u>	<u>Pump Serial No. or Discharge Size</u>
N/A	N/A			N/A	(3" from collection basin)

*Code to correspond with No. on map and aerial photo

D. FLOW MEASUREMENTS

1.

<u>Measurement Equipment</u>	<u>Type</u>	<u>Make</u>	<u>Model No.</u>	<u>Serial No.</u>	<u>Size</u>	<u>Calib. Date</u>
55-gallon drum						

2. Measurements: Right holder's 55-gallon drum. Measured fill time of 3.5 minutes. Flow approximately 16 gpm or 0.035 cfs. Use flow of 0.04 cfs.

E. FLOW CALCULATIONS

____ Additional Computation Sheets Attached

Measured Method: (55-gallon drum)

Q(55-gallon drum) = 16 gpm = 0.035 cfs (Use Q = 0.04 cfs)

n = 0.013

R = D/4 = 0.25'/4 = 0.063'

(Continuity Equation)

L(3" PVC) = 1,400 lineal feet

 $V = 1.49/n(R)^{2/3}(S)^{1/2} = (1.49/0.013)(0.063')^{2/3}(0.20)^{1/2}$ $\Delta E(\text{Elevation Change}) = 280'$ $V = (114.62)(0.16)(0.447) = 8.20 \text{ ft/sec}$ $S = \Delta E/L = 280'/1400' = 0.20$

Q (Irrigable Appropriation) = 1.5 acre x 0.03 cfs = 0.05 cfs

A = 0.049 ft²Q = VA = 8.20 ft/sec x 0.049 ft² = 0.40 cfs

Q = 0.40 cfs > 0.09 cfs (permit) > 0.04 cfs(measured flow)

Appears the irrigation system has the capacity to attain the permit diversion rate of 0.09 cfs. The current water supply system appears capable of attaining the irrigation appropriation flow rate for 1.5 acres of 0.05 cfs.

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 1.5 \text{ acre} \times 4.0 \text{ AF} = 6.0 \text{ AFA}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.05 \times 214 \times 1.9835 = 21.2 \text{ AFA}$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = 6.0 \text{ AFA}$$

2. Volume Calculations for Other Uses: N/A

G. NARRATIVE/REMARKS/COMMENTS**WATER SUPPLY SYSTEM:**

The right holder constructed a small dam in Alder Creek to create a pool to divert water for irrigation. A 10-foot section of 3" steel pipe diverts water to a self-cleaning screen. Water is discharged from the self-cleaning screen through approximately 110 lineal feet of 6" PVC pipe to a steel collection basin. The collection basin contains another self-cleaning screen. An in-line valve is located near the collection basin to drain and flush the collection basin and the upper portion of the irrigation conveyance system back to Alder Creek. Water is diverted through approximately 1,400 lineal feet of 3" PVC pipe from the collection basin to the irrigation system at the cabin and the adjacent meadow area.

IRRIGATION SYSTEM:

The lawn and landscaping around the cabin is irrigated by a pressurized irrigation system with pop-up sprinklers. The meadow area, which contains a random planting of orchids, is irrigated by twelve (12) rainbird sprinklers. The water right permit indicated that the irrigation system waters 3 acres of lawn, landscaping, and meadow. The field exam determined that approximately 2.0 acres is currently being irrigated. However, since the place of use for decreed domestic Water Right 67-7161 overlaps Water Right Permit No. 67-7995, and provides irrigation of up to ½ acre of lawn and landscaping (Idaho Code Section 42-111), the total irrigable area for Water Right Permit No. 67-7995 shall be reduced by ½ acre to a total irrigable area of 1.5 acres.

OVERLAP ANALYSIS:

Point of Diversion: The right holder has a decreed domestic water right for the cabin (Water Right 67-7161). This right has the same point of diversion as Water Right Permit No. 67-7995.

Place of Use: The place of use for decreed domestic Water Right 67-7161 and Water Right Permit No. 67-7995 overlap at the right holder's cabin. The overlap for place of use is ½ acre of lawn and landscaping area around the cabin. The remaining 1.5 acres of irrigable area for Water Right Permit No. 67-7995 is for the adjacent meadow area located easterly of the cabin.

Have conditions of permit approval been met? ☒ Yes ☐ No

CONDITION NO.8 (01J) – Prior to diversion of water under this right, the right holder shall install and maintain a measuring device and lockable controlling works. I contacted Brandi Horton, Watermaster-District 67, to discuss this condition of approval. I informed her that the diversion structure is a rock and tarp dam, and that the 10' section of 3" steel pipe is not permanently secured to the dam and can be easily removed from Alder Creek to terminate water diversion. Therefore, there does not exist a mechanism/headgate in which to install a lockable control. With regards to installing a measuring device, the right holder would likely have to construct a weir structure within the 10-foot of separation between the dam and the self-cleaning screen. I informed her that the diversion pipe can easily be maneuvered from the self-cleaning screen to obtain a flow measurement with a 5-gallon bucket. On December 17, 2012, Brandi contacted me and indicated that she is in agreement to waive the requirements for the right holder to install a measuring device and lockable controlling works. Also, the

waiver of this condition shall include the following verbage 'with the understanding that should circumstances change in the future, the right holder may be required to install a measuring device and lockable controlling works at the request of the Department and/or Watermaster.

RATE &/OR STORAGE RECOMMENDED FOR LICENSING

Description	Rate of Flow (cfs)		Storage (af)
Permit Amount	0.09	&/or	N/A
Beneficial Use Limit	0.09	&/or	N/A
System Measurement	0.04	&/or	N/A
Proof Fee Amount	0.20	&/or	N/A
Recommended Amount	0.05	&/or	N/A

H. RECOMMENDATIONS

1. Recommended Amounts

<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>DIVERSION RATE</u>	<u>ANNUAL VOLUME</u>
IRRIGATION	04/01 to 10/31	0.050 CFS	6.0 AFA
<u>Totals:</u>		0.050 CFS	6.0 AFA

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 ___ Other

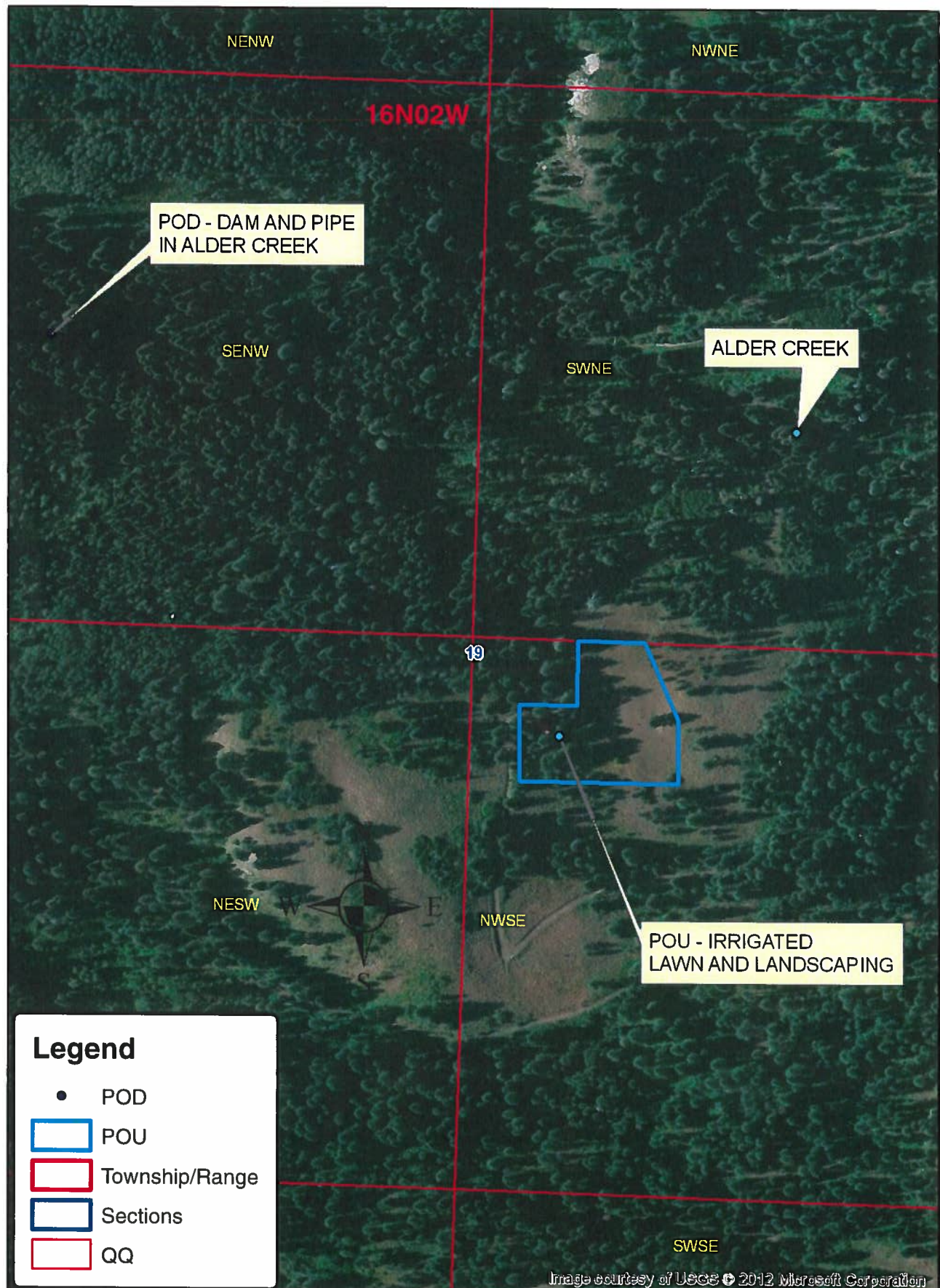
I. AUTHENTICATION

Field Examiner's Name Rick Collingwood Date 12/19/12

Reviewer _____ Date _____

67-7995

BING AERIAL PHOTO - 2011



0 110 220 440 660 880
Feet

FIELD EXAM PHOTOS

Water Right Permit: 67-7995

Field Exam Date: 8-20-12

PLS: NW1/4, SE1/4 Section 19, T.16N, R.02W.

Field Examiner: RC



Point of Diversion: View of dam in Alder Creek and a 10-foot long section of 3" steel supply pipe. Water is discharged to a self-cleaning screen next to Alder Creek.



Point of Diversion: View of the 3" steel supply pipe discharging to a self cleaning screen. A short section of 2" PVC allows flushing and draining of the self-cleaning screen basin back to Alder Creek.



View of collection basin (in background) and valve box (CMP with blue lid). The collection basin contains another self-cleaning screen. The collection basin is located approximately 110 feet downstream of the dam. The control valve is used to periodically flush the debris from the collection basin and to drain the upper section of the pipeline back to Alder Creek.



Place of Use: View southerly of lawn and landscaping surrounding the right holder's cabin.



Place of Use: View southerly of irrigated meadow. The right holder has planted orchids throughout the meadow. Rainbird sprinklers are located within the meadow to irrigate the meadow and orchids.



State of Idaho

DEPARTMENT OF WATER RESOURCES

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

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C. L. "BUTCH" OTTER
Governor

GARY SPACKMAN
Interim Director

August 9, 2012

Waterman Family Trust
C/O Wilbur Waterman
1215 W. Linden
Caldwell, ID 83605

RE: Scheduling Field Exam for Water Right Permit No. 67-7995

We are planning to **conduct water right field examinations** in the vicinity of the above-referenced permit **during the week of August 20, 2012**. An examination is needed to verify your water use in order to issue a water right license.

Please be advised that you will need to operate your system under normal operating conditions during the examination. The permit authorizes the diversion of 0.09 cfs from Alder Creek for irrigation of 3.0 acres.

In order to conduct your exam as efficiently as possible, we ask that you call this office to schedule a day and time convenient for you. **Please call me at 208-334-2190 by August 17, 2012, to conduct the exam during the week of August 20, 2012.** If there is a problem with scheduling or conducting the examination at this time, please let me know so we can reschedule or make other arrangements.

I appreciate your attention to this matter and I look forward to hearing from you.

Sincerely,

A handwritten signature in black ink, reading "Rick Collingwood". The signature is written in a cursive, flowing style with a large, sweeping loop at the end.

Rick Collingwood, P.E.
Water Resource Agent, Sr.