

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 87-11448
Exam Date: 10/15/2020

1. Current Owner:
ROELEN EVERGREEN PARK LLC 13904 92ND ST SE SNOHOMISH WA 98290-9039
2. Accompanied by: Michael Smith
Phone No: 360-521-7865
Address: 609 N. Almon ST SPC#4032, Moscow ID 83843
Relationship to permit Holder: Permit Holder's representative

3. SOURCE:
GROUND WATER

Method of Determination: Arcmap and DRG.

B. OVERLAP REVIEW

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

Water Right No.	Source	Purpose of Use	Basis
87-4032	GROUNDWATER	DOMESTIC	Statutory Claim (Active) / Beneficial Use Claim, Recommended Active status.
87-7157	GROUNDWATER	DOMESTIC	LICENSE
87-7069	GROUNDWATER	DOMESTIC	LICENSE

Comments: Right 87-4032 is associated with a statutory claim and beneficial use claim that both show active status, which use groundwater from the same well as this right for domestic purposes. Right 87-4032 and this right 87-11448 have the same POU, associated with the Roelen Evergreen Park. Condition 928 was added to this right during licensing review to mitigate any overlap concerns, and if claim 87-4032 is decreed as it is claimed, this right shall be diminished by the amount necessary to avoid any redundancy of water rights.

Rights 87-7157 and 87-7069 both use groundwater from wells not associated with this right, for domestic purposes not associated with this right's POU; overlap results from a large tract POU assigned when the department issued licenses in the past. There is no overlap concerns from rights 87-7157 and 87-7069.

There are multiple recommended claims associated with the City of Moscow, from groundwater sources, for municipal purposes that have large area POUs that overlap this water right, but are not a concern for overlap due to this right being connected to their own well for groundwater use.

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

Water Right No.	Source	Purpose of Use	Basis
87-4032	GROUNDWATER	DOMESTIC	Statutory Claim (Active) / Beneficial Use Claim, Recommended Active status.

Comments: Rights 87-4032 and 87-11448 have the same groundwater well, permit No. 87-90-N-1. Condition F06 was added to this permit during licensing review to describe the two rights having the same POD.

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

GROUND WATER SE¼ SE¼, Sec. 16, Twp 39N, Rge 05W, B.M. LATAH County

Method of Determination: GPS; POD is a well without tag (87-90-N-1) located at -116°57.732, 46°43.140

PLACE OF USE: DOMESTIC

Twp	Rng	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
39N	05W	16																X	

Method of Determination: Field exam and Arcmap aerial imagery.

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
87-90-N-1		5			

D. FLOW MEASUREMENTS

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date
NONE						

2. Measurements: Unable to perform flow measurement because system pumped directly into pressure tank with inadequate pipe requirements for flow measurement.

E. FLOW CALCULATIONS☒ Additional Computation Sheets AttachedMeasured Method: Theoretical pumping equation estimates flow at **0.13 cfs** considering department rounding standards, with a 5 hp pump depth of 164 feet, and a system operating pressure of 50 psi.

F. VOLUME CALCULATIONS

1. Volume Calculations for irrigation: N/A, right is for domestic in-home use only.

$$V_{IR} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) =$$

$$V_{DR} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 =$$

$$V = \text{Smaller of } V_{IR} \text{ and } V_{DR} =$$

2. Volume Calculations for Other Uses:

Domestic annual and maximum diversion volume = 1 home + 34 mobile homes = 35 homes x 0.6 af = **21.0 af**.

G. NARRATIVE/REMARKS/COMMENTS

Field exam conducted on 10/15/2020 with applicant's representative, Michael Smith, showed a well (87-90-N-1) providing groundwater for domestic purposes at Roelen Evergreen Park. The system includes a 5 HP pump that diverted water by buried water line from the well to a pump house building and 5ea pressure tanks, making flow measurements unattainable. Theoretical pumping equation determined the diversion rate of **0.13 cfs** considering department rounding standards, which will be applied as the maximum diversion rate on license. The pump was estimated to be 164 feet down and the system operating at 50 psi. The domestic component of this right was permit approved for a diversion rate of 0.20 cfs, but the applicant is limited by pump performance at time of field exam.

Right 87-11448 was applied for following an adjudication recommendation for right 87-4032, which provided a diversion rate of 0.03 cfs; the applicant applied for this permit on 8/12/2019 to secure rights for the larger diversion rate from the well and increased number of mobile homes in the Roelen Evergreen Park. A 2020 DEQ Public Drinking Water System Monitoring Schedule Report for water system ID2290013 validates the 35 service connections within the applicant's Domestic POU, which includes 1 home and 34 mobile homes.

During the field exam, photographs were taken to illustrate the beneficial use of water for domestic purposes. During licensing review, Arcmap aerial imagery was used to trace out the domestic POU. The well is located within a small pump house, and the water conveyance system routes underground to a pump house and then water lines route beneath the street in a circular pattern within the mobile home park. Frost free hydrants were observed throughout the POU, but Mr. Smith validated that water consumption was not for irrigation purposes, rather for in-home use only. A walk through the POU validated 34 slips, some empty at time of field exam but service connected, and 1 home. The domestic volume equals (1 home + 34 mobile homes) x 0.6 af = **21.0 af**, which is recommended as the annual volume and maximum diversion volume for the license.

Condition 046 and 106 were removed from the permit during licensing review. Condition F06 was added to describe rights 87-4032 and 87-11448 share the same POD (well). Condition 928 was added describing that some of the water use authorized by this right is claimed with an earlier priority date on Palouse River Basin Adjudication Claim No. 87-4032, and that if claim 87-4032 is decreed as it is claimed, this right shall be diminished by the amount necessary to avoid any redundancy of water rights.

Right 87-4032 is associated with a statutory claim and beneficial use claim that both show active status, which use groundwater from the same well as this right for domestic purposes. Right 87-4032 and this right 87-11448 have the same POU, associated with the Roelen Evergreen Park. Condition 928 was added to this right during licensing review to mitigate any overlap concerns, and if claim 87-4032 is decreed as it is claimed, this right shall be diminished by the amount necessary to avoid any redundancy of water rights. Rights 87-7157 and 87-7069 both use groundwater from wells not associated with this right, for domestic purposes not associated with this right's POU; overlap results from a large tract POU assigned when the department issued licenses in the past. There is no overlap concerns from rights 87-7157 and 87-7069. There are multiple recommended claims associated with the City of Moscow, from groundwater sources, for municipal purposes that have large area POUs that overlap this water right, but are not a concern for overlap due to this right being connected to their own well for groundwater use. There are no other overlap concerns for this water right.

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>Rate of Diversion</u>	<u>Annual Volume</u>
DOMESTIC	01/01 to 12/31	0.13 CFS	21.0 AF
<u>Totals:</u>		0.13 CFS	21.0 AF

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 Luke Bates - Water Resource Agent

Field Examiner's Name Luke Bates Date 11/3/2020

Reviewer Adam Fink Date 11/30/2020

State of Idaho
Department of Water Resources
Attachment to Field Exam
87-11448

DOMESTIC system diagram.

05W



- Point of Diversion
- Place Of Use Boundary
- Townships
- PLS Sections
- Quarter Quarters

0 0.035 0.07 0.14 Miles



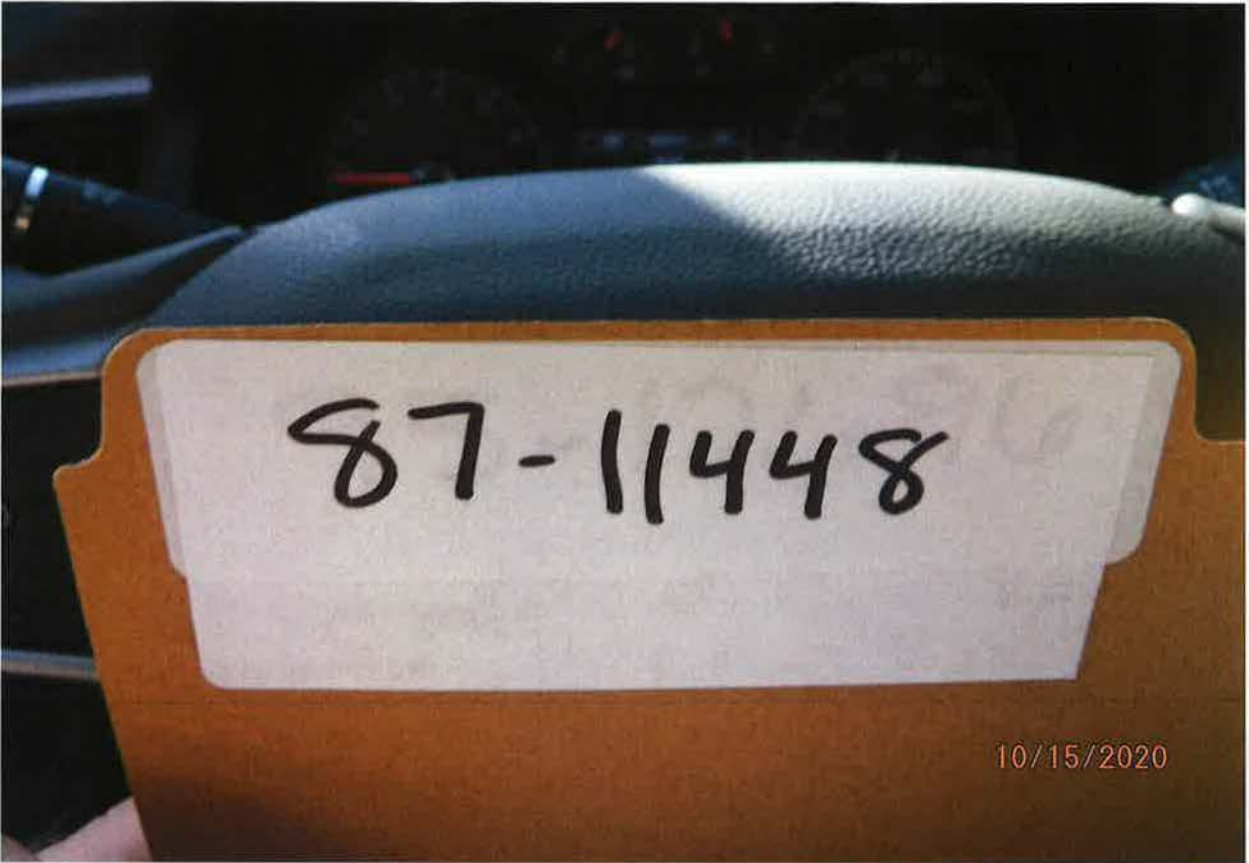
State law requires that this report be filed with the Director, Department of Water Resources within 30 days after the completion or abandonment of the well.

[illegible]

THEORETICAL PUMPING EQUATION FOR WR# 87-11448

Theoretical Pumping Equation is required because system did not allow for a proper measurement. Pump is estimated to be at 164 ft, and running at 50 psi.

<u>PUMP EQUATIONS</u>						
WATER RIGHT No.		87-11448				
		HP	H in feet	Efficiency as a decimal	Pumping lift in feet	System pressure in PSI
Q =	HP*8.8*Eff/H	5	279.6463	0.8	164	50
Q = 0.126 cfs		56.6 gpm				



WELL HOUSE



POD - WELL 87-90-N-1



WELL PUMP AND WATER SYSTEM HOUSE



5 HP WELL PUMP



WATER CONVEYANCE SYSTEM



50 PSI OPERATING PRESSURE



DOMESTIC POU – 1 HOME ON WATER SYSTEM



DOMESTIC POU





DOMESTIC POU



DOMESTIC POU – FROST FREE HYDRANT AT EACH MOBILE HOME SLIP



DOMESTIC POU





DOMESTIC POU

