

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
IN-OFFICE REVIEW/BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATIONPermit No: 95-12783

Exam Date: 12/10/2015

1. Does this qualify for an in-office field exam (IDAPA 035.02.r)? x Y N
- Irrigation of 5 acres or less
 - Storage of up to 14.6 AF for stockwater purposes only
 - Any use other than irrigation or storage, if the combined diversion rate is 0.24 cfs or less
 - Other < >

2. Current Owner: Name: Daniel A Loeffler or Susan M Loeffler
 Owner of Record Correct? x Y N
 Address of Record Correct? x Y N
 If No: Address

3. Beneficial Use Fees have been paid: x Y N Receipt No: N031393

4. SOURCE TRIBUTARY

Ground Water N/A

Method of Determination: Well Driller's Report, Application & Proof of Beneficial Use

Change in Source: Y x N**B. OVERLAP REVIEW**

1. Other water rights with the same place of use: x No Overlap

Water Right No.	Source	Purpose of Use	Basis

Comments:

2. Other water rights with the same point of diversion: x No Overlap

Water Right No.	Source	Purpose of Use	Basis

Comments:

C. DIVERSION AND DELIVERY SYSTEM

1. LOCATION OF POINT(S) OF DIVERSION:

Source	Govt. Lot	¼	¼	¼	Sec.	Twp.	Rge.		County
Ground Water			NW	NW	22	52N	04W	B.M.	Kootenai
								B.M.	
								B.M.	

Method of Determination: Well Driller's Report, Application & Proof of Beneficial Use

Change in POD? x N Amendment Required? x N

2. **PLACE OF USE:** Use: Irrigation

TWP	RGE	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
52N	04W	22						2.0											2.0
		Lot #																	
Total Acres =																			2.0

Method of Determination: Aerial Photo & ArcMap GIS tools

Change in POU? ☐ x ☐ N Amendment Required? ☐ x ☐ N

In-House review.

☐ Delivery System Diagram Attached (required). Indicate all major components and distances between components.

Indicate weir size/pipe as applicable.

☐ x ☐ Aerial Photo Attached (required for irrigation of 10+ acres).☐ Photo of Diversion and System Attached

4. Well or Diversion Identification No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
D0040428					

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

D. FLOW MEASUREMENTS

1. Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date

2. Measurements: In-House review; no measurements taken. Flow rate estimated using known & standard factors.**E. FLOW CALCULATIONS**☐ x ☐ Additional Computation Sheets Attached

Measured Method:

Per App. Processing Memo #17, up to 0.03 cfs/acre for irrigation up to 5 acres acceptable. 2.0 acres (0.03 cfs) = 0.06 cfs

Per IDWR standard: Assume pump efficiency = 0.7 (70%) and PSI = 30 psi for small irrigation. Lift estimated from Well Driller's Report showing static water level at 265-270 ft

$$Q = (8.8 \times \text{HP} \times \text{EFF}) / (\text{Lift} + (\text{PSI} \times 2.31)) = (8.8 \times 5 \times 0.7) / (275 + (30 \times 2.31)) = 0.09$$

Theoretical Rate Range = 0.05 to 0.13 cfs**Permit allowed = 0.14 cfs****License recommend for 0.06 cfs****F. VOLUME CALCULATIONS**

1. Volume Calculations for Irrigation:

$$V_{IR} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 2.0 \times 3.0 = 6.0 \text{ af}$$

$$V_{DR} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.06 \times 246 \times 1.9835 = 29.3 \text{ af}$$

$$V = \text{Smaller of } V_{IR} \text{ and } V_{DR} = 6.0 \text{ af}$$

2. Volume Calculations for Other Uses: N/A

G. PURPOSE OF USEIrrigation ☒ Y ☐ N # Stock _____ Domestic # of Homes _____

Other: < >

Change in Purpose of Use? ☐ Y ☒ N

Method of Determination: Permit and confirmation of use through aerial photo.

If Yes: From Use _____ To Use _____ Amount _____ CFS _____ AFA _____

H. NARRATIVE/REMARKS/COMMENTS

The permit holder submitted Statement of Completion for Submitting Proof of Beneficial Use in a timely manner as noted by the receipt date. The form was inadvertently lost and the permit lapsed in error. The permit holder provided a new signed copy of the proof form to substitute for the lost form with no loss of priority. An order to reinstate the permit will be issued at the same time as the license.

Although the information on the substitute proof form was not very detailed, evaluation of irrigation can be made through review of aerial photography. It is clear where irrigation outside the wooded area has occurred in the open areas around the buildings and roads. Flow calculations were estimated using information from the Well Driller's Report and common standards.

Have conditions of permit approval been met? ☐ Yes ☐ No No special conditions for compliance.**I. RECOMMENDATIONS****1. Recommended Amounts**

<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>DIVERSION RATE</u>	<u>ANNUAL VOLUME</u>
Irrigation	03/15 to 11/15	0.06 CFS	6.0 AF
<u>Totals:</u>		0.06 CFS	6.0 AF

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 ☒ None

Other: < >

J. AUTHENTICATIONField Examiner's Name Samuel Shaffer Date 12-10-2015

Reviewer _____ Date _____

Process	Basin Sequence	Draft	Owner	Source	POD/ POU	NWNW	Total Acres
Permit	95-12783	Y	LOEFFLER, DANIEL A; LOEFFLER, SUSAN M	GROUND WATER	POD	X	0
Permit	95-12783	Y	LOEFFLER, DANIEL A; LOEFFLER, SUSAN M	GROUND WATER	POU	4.5	4.5
Water Right	95-10019	Y	A portion of NORTH KOOTENAI WATER DISTRICT Rights POU boundary is adjacent to SWSW Section 22	GROUND WATER	POU		0
Water Right	95-12599	Y	NORTH RAMSEY OHIO MATCH WATER ASSN Rights are located in the NENE Section 22	GROUND WATER	POU		0

No POD or POU overlapping rights found for Right 95-12783 in the NSNW, Section 22 T52N, R04W.

THEORETICAL HORSEPOWER EQUATION WORKSHEET

Water Right No.: 95-12783
 Reviewer: Pam Skaggs
 Date of Review: 12/11/2015

P/D No.:

PUMP HORSEPOWER
 BOOSTER HORSEPOWER

PUMPING LEVEL

DISCHARGE PRESSURE

RATE OF FLOW (cfs)
 (gpm)

Example #1	
	3
	0
	275
	30
	0.05
	24

Example #2	
	5
	0
	275
	30
	0.09
	40

Example #3	
	7
	0
	275
	30
	0.13
	56

The above calculates the formula =

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

Assumptions: %70 efficiency.
 No Friction

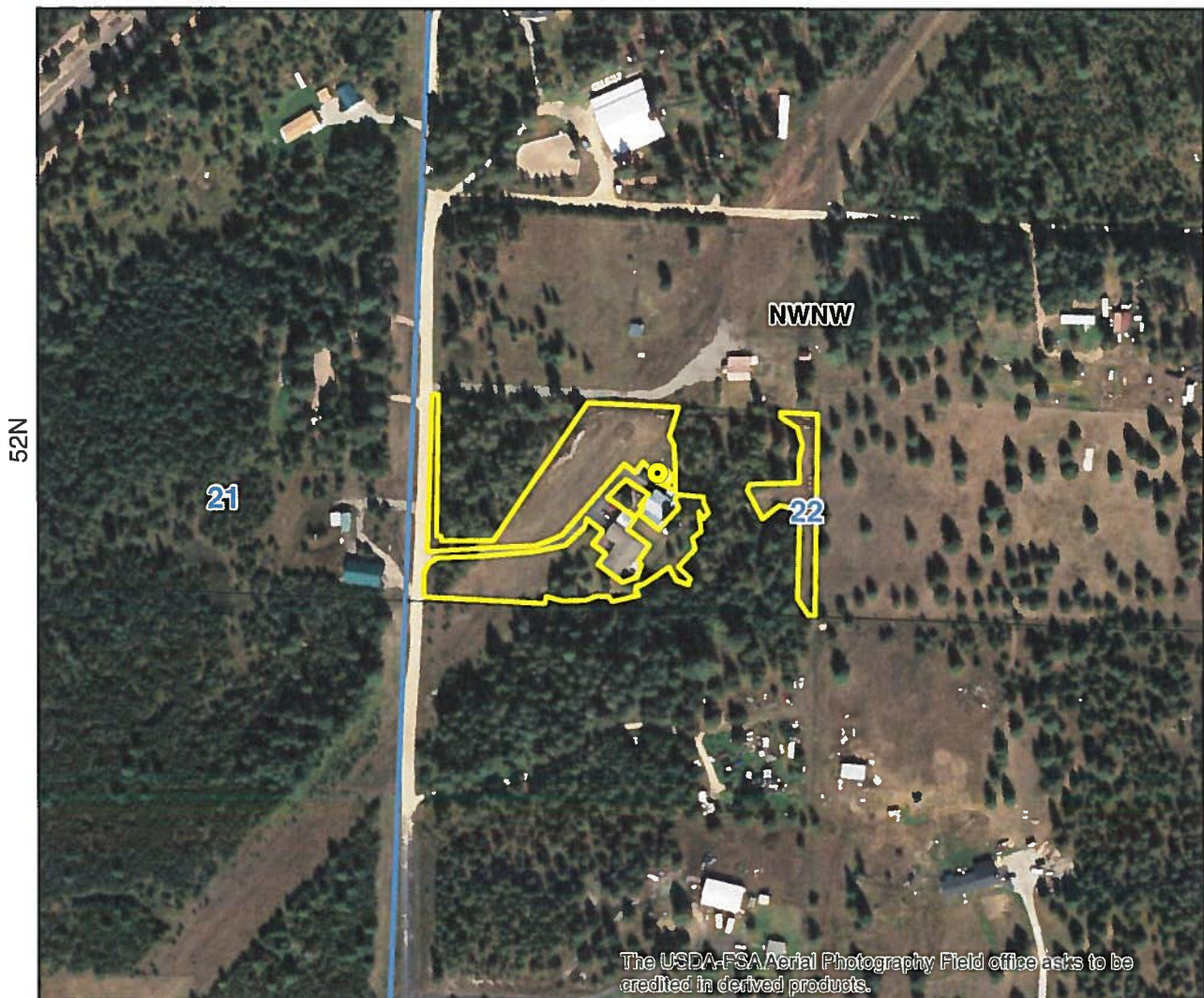
Examiners Notes:

In-house review for licensing using IDWR standard assumptions, pumping level estimated from 265 ft. static level listed on well driller's report including some drawdown, and a variety of small pump sizes. Results range from 0.05 to 0.13 cfs.
 0.06 cfs recommended for irrigation of two acres and is within acceptable limits of the theoretical ranges.

State of Idaho
Department of Water Resources
Attachment to Field Report
95-12783

This map depicts the IRRIGATION place of use boundary for this water right at the time of this approval and is attached to the approval document solely for illustrative purposes.

04W



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

0 0.035 0.07 0.14 Miles

