

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 95-9179
Exam Date: 08/09/2017

1. Current Owner:
ROY A ARMSTRONG 4950 N HUETTER RD COEUR D ALENE ID 83814
2. Accompanied by: Roy Armstrong, Farm manager
Relationship to permit Holder: Applicant, employee
3. **SOURCE:**
GROUND WATER

Method of Determination: Maps and DRG

B. OVERLAP REVIEW

1. Other water rights with the same place of use: None

Water Right No.	Source	Purpose of Use	Basis

Comments: _____

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

Water Right No.	Source	Purpose of Use	Basis
95-7049	Groundwater	Irrigation	License, Recommendation
95-7409	Groundwater	Irrigation	License, Recommendation

Comments: _____

C. DIVERSION AND DELIVERY SYSTEM

1. **LOCATION OF POINT(S) OF DIVERSION:**

GROUND WATER NE¼ SE¼, Sec. 32, Twp 51N, Rge 04W, B.M. KOOTENAI County

Method of Determination: Maps and GPS. POD located at -116° 51.396, 47° 43.168 given IDWR tag A0020023

PLACE OF USE: IRRIGATION

Twp	Rng	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
50N	04W	5	39.0			31.0	8.4												78.4

Total Acres: 78.4

Method of Determination: Google Earth and Arcmap

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
95-71-N-64					

D. FLOW MEASUREMENTS

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date
GE FLOWMETER	PANEMETRIC		PT878	PCC1316134		4/2/2019

2. Measurements: Two separate sections of pipe were measured to determine total flow.

Section 1 –

Total Ending – 232,945.828

Total Beginning – 220,778.616

$$232,945.828 - 220,778.616 = 12,167.212 / 10 \text{ minutes} = 1,216.7 \text{ gpm}$$

Section 2

Total Ending – 254,070.233

Total Beginning – 243,264.939

$$254,070.233 - 243,264.939 = 10,805.294 / 10 \text{ minutes} = 1,080.5 \text{ gpm}$$

$$1,216.7 + 1,080.5 = 2,297 \text{ gpm or } 5.1 \text{ cfs}$$

E. FLOW CALCULATIONS

Additional Computation Sheets Attached

Measured Method: N/A

F. VOLUME CALCULATIONS

1. Volume Calculations for irrigation:

$$V_{IR} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 78.4 \text{ AC} \times 3.0 \text{ AF} = 235.0 \text{ AF}$$

$$V_{DR} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 1.57 \times 246 \times 1.9835 = 766 \text{ AF}$$

$$V = \text{Smaller of } V_{IR} \text{ and } V_{DR} = 235.0 \text{ AF}$$

2. Volume Calculations for Other Uses: N/A

G. NARRATIVE/REMARKS/COMMENTS

Two field exams were performed on this right in order to determine a flow rate for what was applied for. The first exam was performed on July 25, 2017, with the applicant, Roy Armstrong. Flow measurements were taken on two center pivots though one had a broken end gun during measurement. A large field was not being irrigated using wheel line during the exam as well. I thought I would continue to check this field for when the irrigation started back up to perform a psi test on the sprinkler heads. The next two summers I continued to drive by though this field was left to fallow. It was brought to my attention that the Adjudication Section was waiting for a license on this permit because the applicant had also filed a claim on the permit. It was decided that a 2nd field exam should be performed to determine the capacity of the well so we could proceed with licensing this permit. A 2nd exam was performed on August 21, 2019.

The 2nd exam was performed with a farmer who was managing the fields. The system setup had pipes going in different directions to various fields. There were two sections of pipe that were diverting water so two separate measurements were performed. The two flow measurements were equal to 2,297.2 gpm or 5.1 cfs. The well would feed certain pivots and irrigation pipe and would then have to turn off certain fields in order to run the next pivot. The system was capable of producing the 1.68 cfs which was applied for. The actual irrigated acres was equal to 78.4 acres which was down from the 84 which was applied for. The license will be issued with a diversion rate of 1.57 cfs with an annual volume of 235.0 acre-feet.

There are 3 other water rights that are closely linked to this one; 95-2174, 95-7049, and 95-7409. Rights 95-7049 and 95-7409 also use the same point of diversion as this right. There is no overlap in irrigated acres, just the use of this well and two additional wells. Right 95-2174 is from a different well only for irrigation of lands different than this right. The rights all have overlapping conditions limiting them all to a maximum diversion rate of 10.8 cfs. This condition will be used on this right as well limiting all 4 rights to a diversion rate of 10.8 cfs. This right was applied for from a well that already had two other rights diverting from and was just for additional acres of irrigation.

Conditions 26A and 046 will be removed from the license and condition R62 will be left on license. Conditions 01M and 133 will be replaced by Rathdrum Prairie Aquifer conditions 174, 01R, and 175. Condition F06 will be added to identify the rights being diverted from the same well. Condition X35 will be added to limit all rights to a combined diversion rate of 10.8 cfs. Condition 004 will be added to license because it is believed this farm land will be sold for houses in the near future. There is no overlap concern for the irrigated acres.

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>
IRRIGATION	03/15 to 11/15	1.57 CFS	235.0 AF

Totals: 1.57 CFS 235.0 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

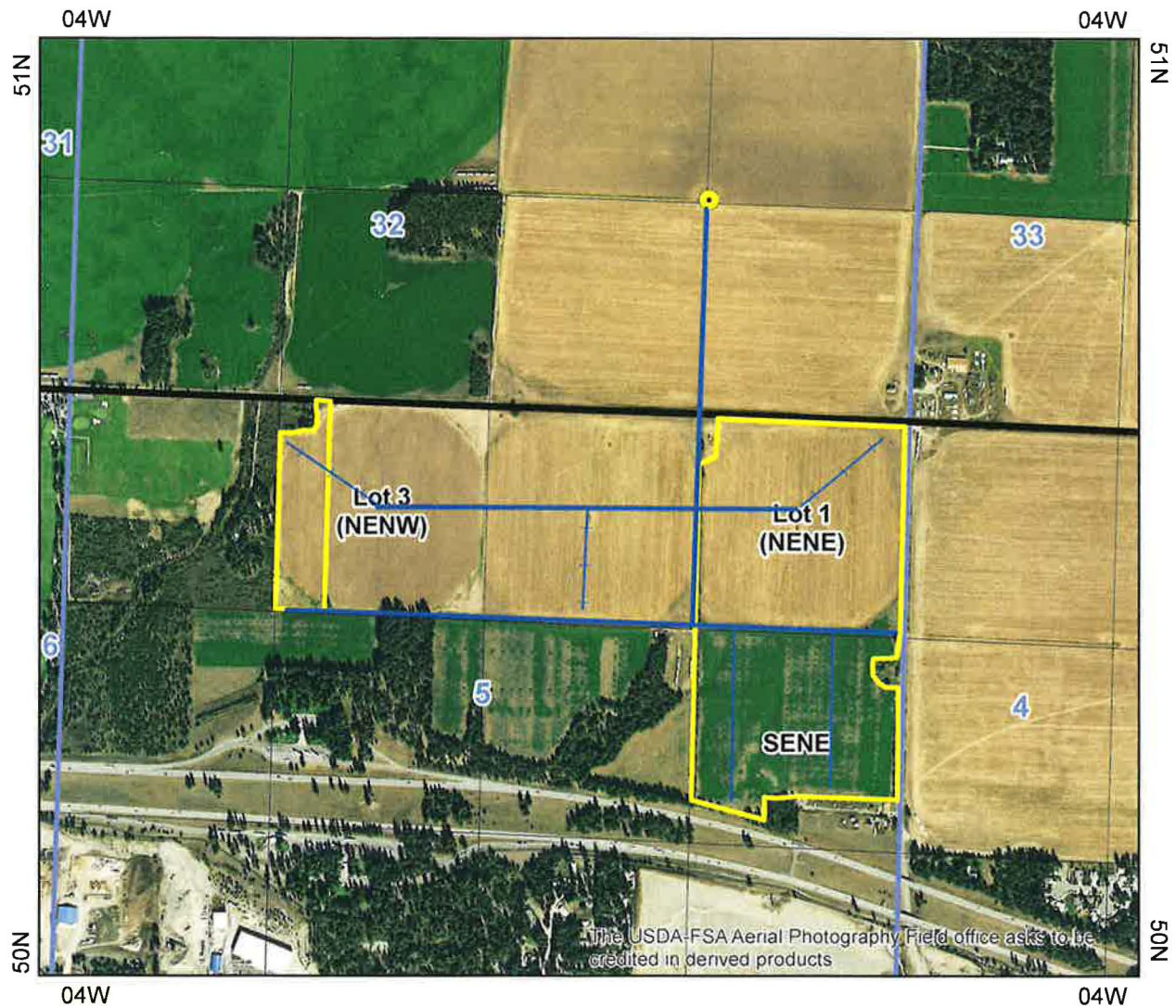
I. AUTHENTICATION

Adam Frederick - Water Resource Agent, Senior

Field Examiner's Name Adam Frederick Date 10/8/2019
 Reviewer Douglas Jones P.E. Date 12/30/2019

State of Idaho
Department of Water Resources
Attachment to Field Exam
95-9179

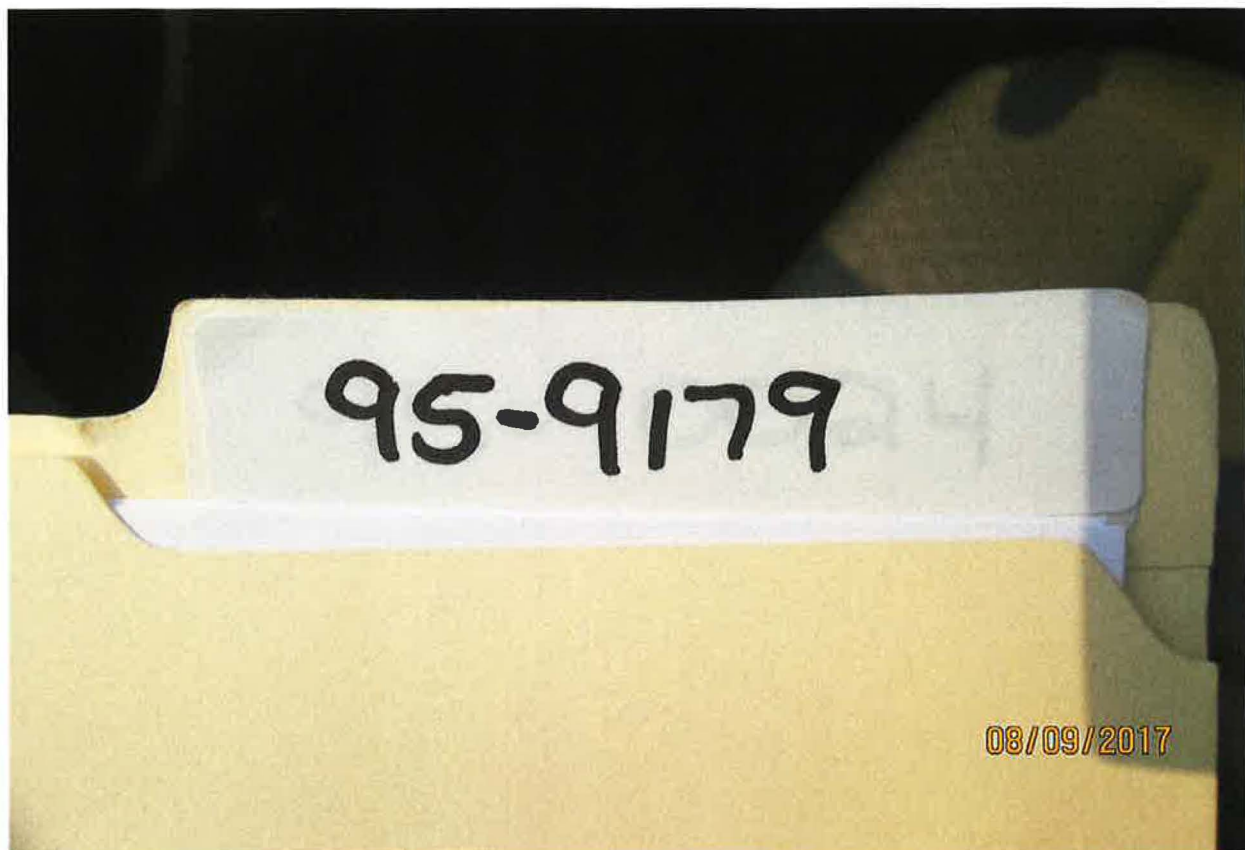
IRRIGATION / SYSTEM DIAGRAM



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

0 0.125 0.25 0.5 Miles





Well and with of unknown size.
Pump



Irrigation POU.





Irrigation POU.





Irrigation POU.





1st flow measurement performed using GE Panemetric.



2nd location used for measurement to determine well capacity.