

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

A. GENERAL INFORMATIONPermit No: 96-9564Exam Date: 4/26/2017

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: Lanie and Dani Wyrick
- Owner of Record Correct? X Y N
- Address of Record Correct? Y N
- If No: Address

Tax lot data shows Dani R. and Laine R. Wyrick as the owners of the property.

3. Beneficial Use Fees have been paid: X Y N Receipt No: C0

4. **SOURCE** **TRIBUTARY**

Pend Oreille River

Columbia River

Method of Determination: GIS and Tax Parcel DataChange in Source: Y X N**B. OVERLAP REVIEW**

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

Water Right No.	Source	Purpose of Use	Basis

Comments: Laclede Water District (water right 96-7616) overlaps the place of use, but it appears that right 96-7616 could supply the in-house use for this property. Water right 96-7616 is a domestic and industrial use water right, and does not have any irrigation component. Water rights 96-9079 and 96-9466 are for neighboring properties.

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

Water Right No.	Source	Purpose of Use	Basis

Comments: Water right 96-9079 does have a water right point of diversion in this 40 acre tract, but it is for and on the neighbor's property.

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

Source	Govt. Lot	1/4	1/4	1/4	Sec.	Twp.	Rge.		County
River Diversion			SW	SE	30	56N	3W	B.M.	BONNER
								B.M.	
								B.M.	

Method of Determination: GIS and Tax Lot data.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	
56N	3W	30															2.5		2.5
		Lot #																	
Total Acres =																			2.5

Method of Determination: GIS and Tax Lot DataChange in POU? X N Amendment Required? X N 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
River Pump	Unknown	2			2 inch impute per application for permit

*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
NONE						

2. Measurements: No measurement is required for an in-house exam.

E. FLOW CALCULATIONSYES Additional Computation Sheets Attached

Measured Method:

There was very little information in the file describing the pumping system for this permit, so a theoretical calculation using several assumptions to see if the flow rate seemed reasonable. I used the standard irrigation requirements allowed for the irrigation of property less than 5 acres of 0.03 cfs per acre allowed in Processing Administrative Memorandum #17.

Theoretical Calculation 0.08 cfs**Acre Limits = 2.5 acres X 0.03 cfs per acre = 0.08 cfs****Permit allowed = 0.05 cfs**

I am recommending a diversion rate of 0.05 cfs, since maximum rate per acre doesn't exceed the permitted amounts. The permit was limited to 0.10 cfs or 0.02 cfs per acre, but there is no explanation in the file to show why the maximum amount was not sought or why the agent reviewing the permit didn't inquire why the diversion rate was below the amount allowed.

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 2.5 \text{ acres} \times 3 = 7.5 \text{ af}$$

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

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = 7.5 \text{ af}$$

Please Note: This is a surface water right, so no volume will be included on the water right license.

2. Volume Calculations for Other Uses:

N/A

G. PURPOSE OF USEIrrigation X Y N # Stock Domestic # of Homes 1

Other: < >

Change in Purpose of Use? Y NMethod of Determination: Taxlot data and conversations with owner.If Yes: From Use To Use Amount CFS AFA **H. NARRATIVE/REMARKS/COMMENTS**

There is an issue with this permit that doesn't fit with the standards for irrigation uses under 5 acres. The diversion rate was limited to 0.02 cfs per acre instead of the standard of 0.03 cfs per acre for irrigation uses under 5 acres. There is nothing in the file that states why the permit was limited or why the application reviewer didn't contact the owner to ensure they fully covered. The system appears to have been designed to divert the 0.03 cfs per acre. Unfortunately, the permit was issued with this limitation, so I cannot recommend a greater diversion rate.

Another issue with this permit is the water supply for the in-house use. There is no confirmation or review in the permit file that describes what water source is used to supply the water for the home. This leads me to believe that Laclede Water District (water right 96-7616) supplies the in-house use for this property, since it is the only overlapping domestic right for this property. Water right 96-7616 is a domestic and industrial use water right, and does not have any irrigation component.

I moved the point of diversion shown in our database to match the location shown in the application for permit. Our database mapping shows the point of diversion approximately 250 feet north of the river instead of being on the river itself.

The permit required a fish screen, and the permit holder stated on the proof of beneficial use form that they had installed the fish screen.

Conditions 1 (X15) and 3 (004) will be carried forward to licensing. Condition 1 (X15) will be modified to state that the fish screen shall be maintained. Condition 2 (R62) will be replaced with R63 to allow the permit holder to upgrade their water use in the future if needed.

Have conditions of permit approval been met? X Yes No

I. 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	0.05 CFS	
<u>Totals:</u>		0.0 CFS	

Please Note: This is a surface water right, so no volume will be included on the water right license.

2. Recommended Amendments

 Change P.D. as reflected above Add P.D. as reflected above None

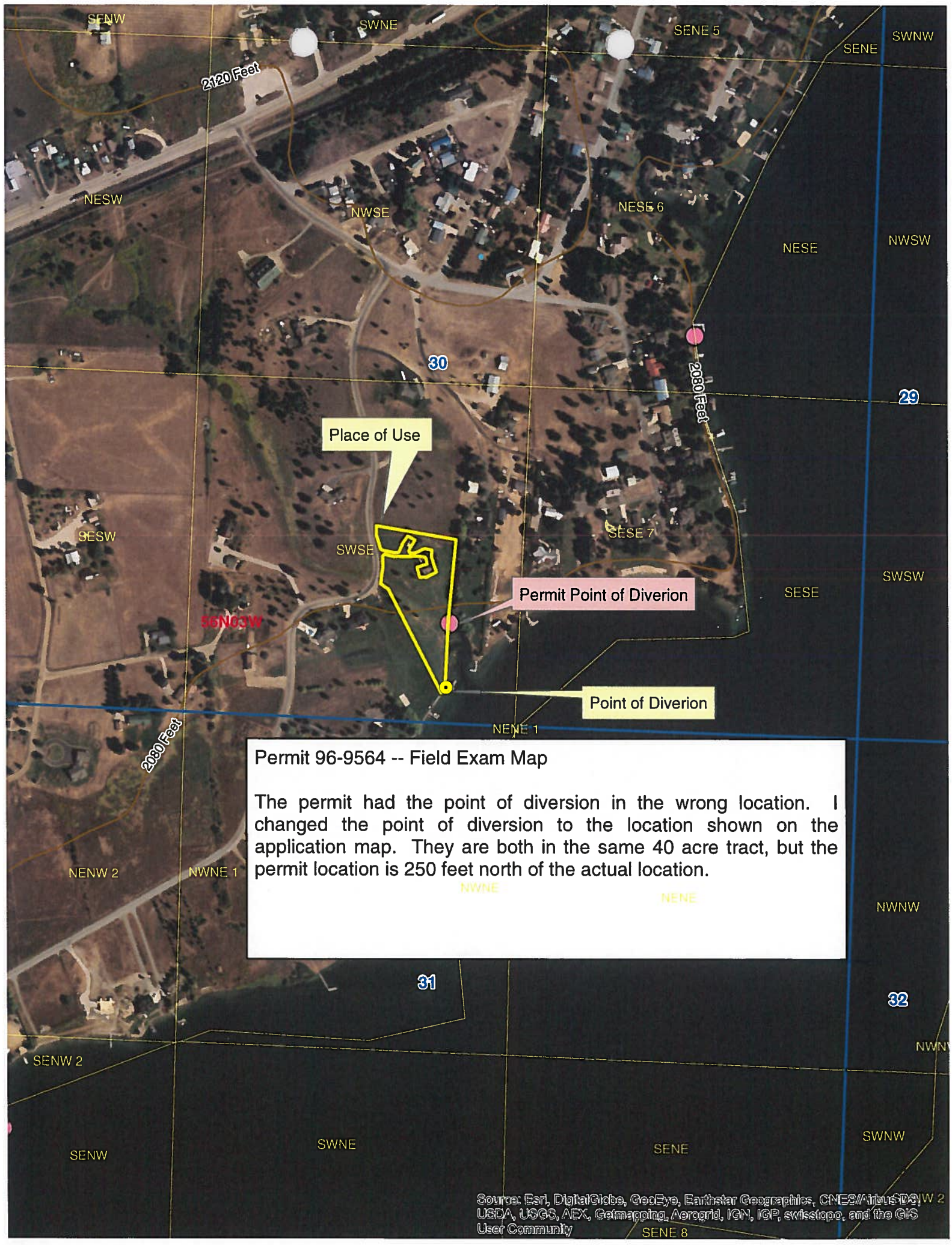
 Change P.U. as reflected above Add P.U. as reflected above None

Other: < >

J. AUTHENTICATION – DANIEL A. NELSON – WATER RIGHT ANALYST 3

Field Examiner's Name  Date 4-26-07

Reviewer _____ Date _____



Place of Use

Permit Point of Diversion

Point of Diversion

Permit 96-9564 -- Field Exam Map

The permit had the point of diversion in the wrong location. I changed the point of diversion to the location shown on the application map. They are both in the same 40 acre tract, but the permit location is 250 feet north of the actual location.

THEORETICAL HORSEPOWER EQUATION WORKSHEET (cjh 1/92)

Water Right No.: 96-9564
 Reviewer: Dan Nelson
 Date of Review: 4/10/2017

P/D No.:

	Scenario 1	Scenario 2	Scenario 3
PUMP HORSEPOWER	2	2	2
BOOSTER HORSEPOWER	0	0	0
PUMPING LEVEL	40	40	40
DISCHARGE PRESSURE	40	50	60
RATE OF FLOW (cfs)	0.09	0.08	0.07
	42	36	31

Ave. Rate
 0.08 cfs
 36.09 gpm

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:

The application for permit stated that a 2 Hp pump would be used for this system. The maximum contour on the Department's mapping program shows a maximum of 40 feet of lift. I used this lift to calculate the flow. I used the standard household pressure of 40 to 60 psi. This permit is limited to 0.02 cfs per acre instead of the standard 0.03 cfs per acre. This system could easily provide the 0.075 cfs for the 2.5 acres let alone the 0.05 cfs that was allowed by the permit.