

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

A. GENERAL INFORMATIONPermit No: 96-9609

Exam Date: 10/26/2016

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: Stacey Bell-Powell
 Owner of Record Correct? X Y ___ N
 Address of Record Correct? Y ___ N
 If No: Address

Tax lot data shows Stacy R. Bell-Powell as the owner of the property.

3. Beneficial Use Fees have been paid: X Y ___ N Receipt No: C102573

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

Pend Oreille River

Columbia River

Method of Determination: GIS and Taxlot 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
NONE			

Comments: Water rights 96-4082, 96-7556, and 96-9596 all are in the same 40 acre tract, but are west of the property associated with this permit. The City of Sandpoint's place of use may overlap this point of diversion, but there is no shape file in the Department's records, and the water right states it is within the City's service area. There is no record of the City of Sandpoint Service area, but this property sits in the middle of Sandpoint suggesting that the property is within the City of Sandpoint service area.

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

Water Right No.	Source	Purpose of Use	Basis
NONE			

Comments: Water rights 96-4082, 96-7556, and 96-9596 all are in the same 40 acre tract, but are west of the property associated with this permit.

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

Source	Govt. Lot	¼	¼	¼	Sec.	Twp.	Rge.		County
River Pump			SE	SE	22	57N	2W	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	
57N	2W	22																D	
		Lot #																	
Total Acres =																			

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		Unknown	

*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:

The permit holder states in their application for permit that they use a 2 Hp pump to divert the water. I used some estimated lift and pressure to see if this pump could provide adequate water for this permit, and it appears as though they have more than enough pump to operate the system

Theoretical Calculation = 0.08 cfs

Administrative Memorandum #22 limits = 0.04 cfs

Permit allowed = 0.04 cfs

I am recommending 0.04 cfs per the permit and Administrative Memorandum #22.

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = \underline{\hspace{2cm}}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = \underline{\hspace{2cm}}$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = \underline{\hspace{2cm}}$$

2. Volume Calculations for Other Uses:

Administrative Processing Memorandum # 22 limits the in-house and lawn irrigation use to 1.2 af. I am recommending this permit for 0.04 cfs.

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**

This permit is qualifies for an in-house exam. The application for permit only describes the irrigation use, and doesn't specify if this use will be used in the home. It does appear as though this property is within the service area of the City of Sandpoint, but we don't have any service area maps for the City of Sandpoint. Therefore, I feel we need to maintain that this permit is for both in-house use and yard irrigation and give them the full 0.04 cfs and 1.2 af allotted for a home with in-house and external use.

The aerial photos suggests that there is a single home on 2 tax parcels. However, Google Maps provides street view photos that show that the property is actually part of a duplex or townhouse. The two buildings are connected together, but there are two separate entryways, addresses, and garages.

The permit requires that a 1/4 inch fish screen be installed. The permit holder stated that they had complied with the fish screen requirements in the Proof of Beneficial Use statement.

All of the conditions on the permit will be carried forward to licensing except for condition 1 (26A) which will be removed per Department standards. Condition X60 was added, but I will also add condition X59 to show the point of diversion is also diverted in the tax parcel. Condition X60 will be corrected to read Wiels Subdivision and not Wells Subdivision.

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>
Domestic	01/01 to 12/31	0.04 CFS	1.2 AF
<u>Totals:</u>		0.04 CFS	1.2 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. AUTHENTICATION – DANIEL A. NELSON – STAFF HYDROLOGIST

Field Examiner's Name

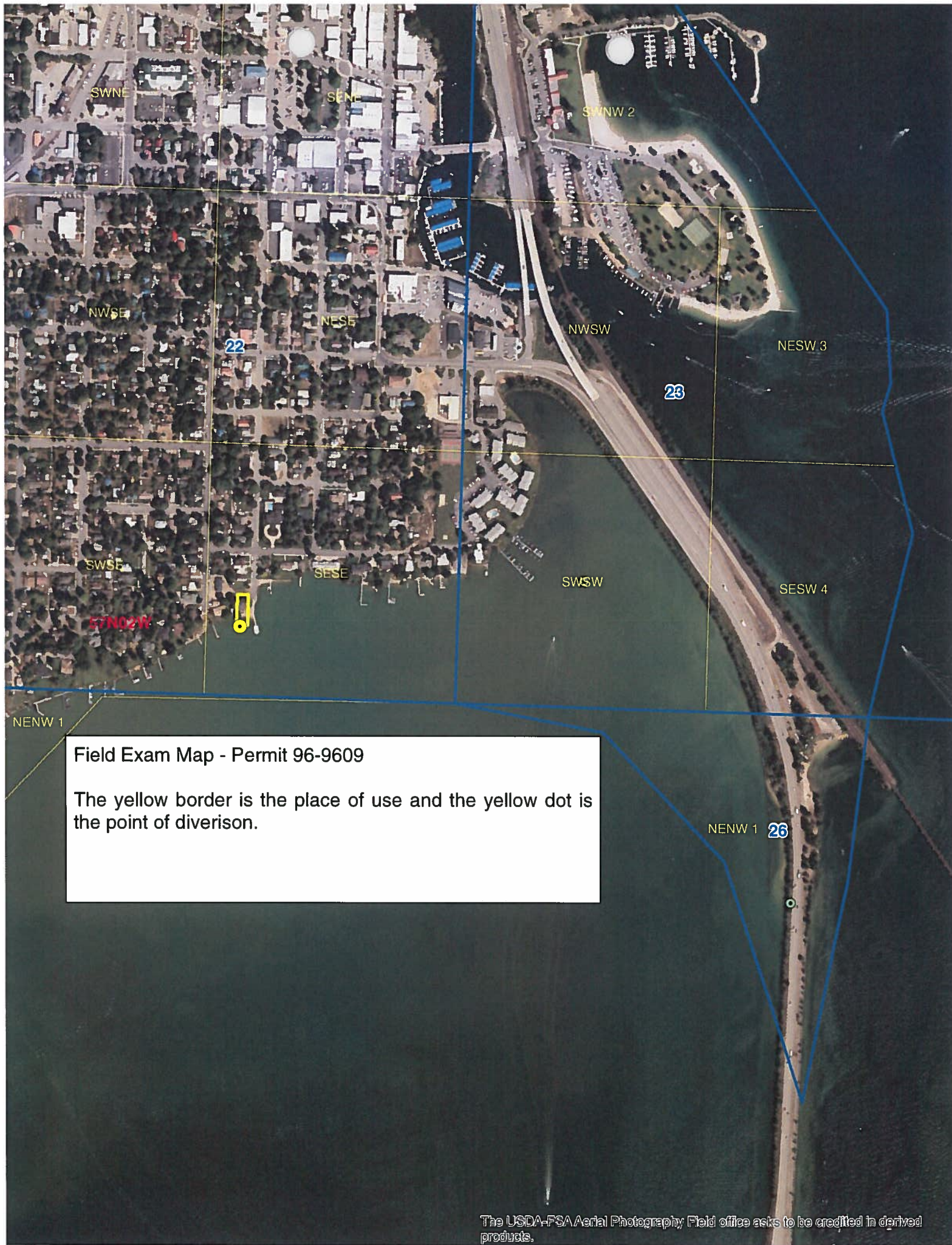


Date

10.26.17

Reviewer

Date



Field Exam Map - Permit 96-9609

The yellow border is the place of use and the yellow dot is the point of diversion.

THEORETICAL HORSEPOWER EQUATION WORKSHEET (cjh 1/92)

Water Right No.: 96-9609
 Reviewer: Dan Nelson
 Date of Review: 10/26/2016

P/D No.:

	Scenario 1	Scenario 2	Scenario 2
PUMP HORSEPOWER	2	2	2
BOOSTER HORSEPOWER	0	0	0
PUMPING LEVEL	20	20	20
DISCHARGE PRESSURE	40	50	60
RATE OF FLOW (cfs)	0.11	0.09	0.08
	49	41	35

Average
 0.10
 45.00

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:

This is a fairly flat area, so I used an estimated 20 feet of lift. I also estimated the diversion pressure as being between 40 and 60 psi. Using these numbers, the 2 Hp pump that the permit holder stated in the application that they use for this facility should provide more than enough water for the irrigation system.

Permit 96-9609 Field Exam photos



This photo was taken from Google Maps for the property in question. The property associated with this permit is the eastern portion of a duplex. The duplex belonging to the permit holder is the one closest to the street in the photo above.