

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

A. GENERAL INFORMATION

Permit No: 94-9345

Exam Date: 11/2/2015

1. Does this qualify for an in-office field exam (IDAPA 035.02.r)? ☒ Yes ☐ No
- a. ☒ **Irrigation of 5 acres or less**
- b. Storage of up to 14.6 AF for stockwater purposes only
- c. Any use other than irrigation or storage, if the combined diversion rate is 0.24 cfs or less
- d. Other < >
2. Current Owner: Name: Phil J Walker
- Owner-of-Record Correct? ☒ Yes ☐ No
- Address-of-Record Correct? ☒ Yes ☐ No
- If No: <Address> Added email address and phone number to contact info
3. Beneficial Use Fees have been paid: ☒ Yes ☐ No Receipt No: C101074

4. SOURCE**TRIBUTARY**

Unnamed Stream

South Fork Coeur D Alene River

Method of Determination: Applicant submitted photos of stream and diversion.

Change in Source: ☐ Yes ☒ No**B. OVERLAP REVIEW**

1. Other water rights with the same place of use: Overlap? ☐ Yes ☒ No

Water Right No.	Source	Purpose of Use	Basis

Comments: There are no other water rights/ permits/ claims/ or recommendations in the QQ that overlap this permit.

2. Other water rights with the same point of diversion: Overlap? ☐ Yes ☒ No

Water Right No.	Source	Purpose of Use	Basis

Comments: There are no other water rights that overlap with the point of diversion 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
Unnamed Stream			SW	NE	33	48N	06E	B.M	Shoshone

Method of Determination: The point of diversion is an unnamed stream on the property owned by Phil Walker. A pump was installed in a buried corrugated pipe along side of the stream channel. A telephone conversation with Phil Walker on 10/30/2015 verified the location of the diversion on the permit. The legal description in the permit is validated by PLS data and aerial photography.

Change in POD? ☐ Yes ☒ NoAmendment Required? ☐ Yes ☒ No

2. **LOCATION OF PLACE(S) 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	
48N	06E	33			X														1.0

Method of Determination: Created shape from phone conversation with Phil Walker on 10/30/2015 that described the location of his vegetable gardens along with aerial photography from the 2015 season. Mr. Walker planted potatoes and other vegetables in the clearing underneath the power line cut on his property.

Change in POU? ☐ Yes ☒ No Amendment Required? ☐ Yes ☒ No

LOCATION OF PLACE(S) OF USE: Use: Fire Protection

TWP	RGE	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
48N	06E	33			X														

Method of Determination: The same shape was used for fire protection and irrigation. Mr. Walker stated that the place of use for the irrigation is where he takes tree debris from clearing trees on his property and has burn piles.

Change in POU? ☐ Yes ☒ No Amendment Required? ☐ Yes ☒ No

3.

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

Indicate weir size/pipe as applicable.

Applicant submitted photos of the point of diversion and pump with Proof of Beneficial Use.

☒ Aerial Photo Attached (required for irrigation of 10+ acres).

☒ Photo of Diversion and System Attached - Permit holder submitted photos of the diversion system when proof of beneficial use was submitted.

4. Well or Diversion Identification No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
		¾ HP			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
N/A						

2. Measurements: In-office field exam. No measurements taken

The irrigation and fire protection system operates from a ¾ HP pump powered by a generator. Mr. Walker stated that there is approximately 5' of lift from the water level to the pump inside the corrugated pipe.

E. FLOW CALCULATIONS☒ Additional Computation Sheets Attached

Per App. Processing Memo #17, up to 0.03 cfs/acre for irrigation of up to 5 acres is acceptable. 1.0 acres x (0.03 cfs) = 0.03 cfs

Calculated standard = 0.03 cfs

Pump theoretical calculation = 0.06 cfs

Permit allowed = 0.06 cfs (Permit allowed for 2 acres at 0.03 cfs per acre for a total of 0.06 cfs)

License recommended for irrigation - 0.03 cfs (0.03 cfs x 1 acre)**License recommendation for fire protection - 0.06 cfs****License recommendation for maximum diversion rate - 0.06 cfs****F. VOLUME CALCULATIONS**

1. Volume Calculations for Irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 1.0 \times 3.0 = 3.0 \text{ af}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.03 \times 200 \times 1.9835 = 11.9 \text{ af}$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = 3.0 \text{ af}$$

Volume Calculations for Other Uses: N/A**G. PURPOSE OF USE**Irrigation ☒ Yes ☐ No # Stock _____ Domestic # of Homes _____

Other: Fire Protection

Change in Purpose of Use? ☐ Yes ☒ No

Method of Determination: Information in the water right file is consistent with aerial photography and conversation with Mr. Walker.

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

H. NARRATIVE/REMARKS/COMMENTS

Permit 94-9345 is an authorized diversion from an unnamed stream in Shoshone County for irrigation and fire protection. Due to the small amount of diversion and irrigation of less than 5 acres, this permit qualifies for an in-office license exam.

A phone conversation with permit owner Phil Walker on 10/30/2015 confirmed details of the system such as the ¾ HP pump used for the irrigation and fire protection system. They are the same system from one source. Water is pumped from a buried corrugated pipe alongside an unnamed stream through a hose to above ground sprinklers that water vegetable gardens. Photos of the diversion system were submitted with the proof of beneficial use.

The diversion system is not physically in the unnamed stream however it does appear to be directly hydrologically connected as it collects water through the corrugated pipe on the bank of the stream. During a phone conversation with Phil Walker on 11/02/2015, the permit holder stated that he excavated between the stream and the location of the corrugated pipe and backfilled the area with gravel. The diversion system appears to utilize stream bank gravel as a filter for the system. Phil also mentioned that at the time of the photos, the stream level was low and that during run-off season the stream levels would rise to a closer proximity of the corrugated pipe and pump.

Conditions-Condition #26A should be removed for licensing however all other conditions (R66, X15, 077, 004, & 227) should be carried over to licensing. As the backfilled streambank around the corrugated pipe filters the water for the pump, condition x15 regarding a fish screen could be removed with the current diversion system however the condition should be carried over to licensing in the event that the diversion system is changed.

Have conditions of permit approval been met? ☒ 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	4/15 to 10/31	0.03 cfs	N/A
Fire Protection	01/01 to 12/31	0.06 cfs	N/A
	Total	0.06 cfs	

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 ☒ Other

Other: < >

I. AUTHENTICATION – Steven Visosky, Water Resource Agent

Field Examiner's Name  Date 11/02/2015

Reviewer _____ Date _____

Attachment to in-house field exam report

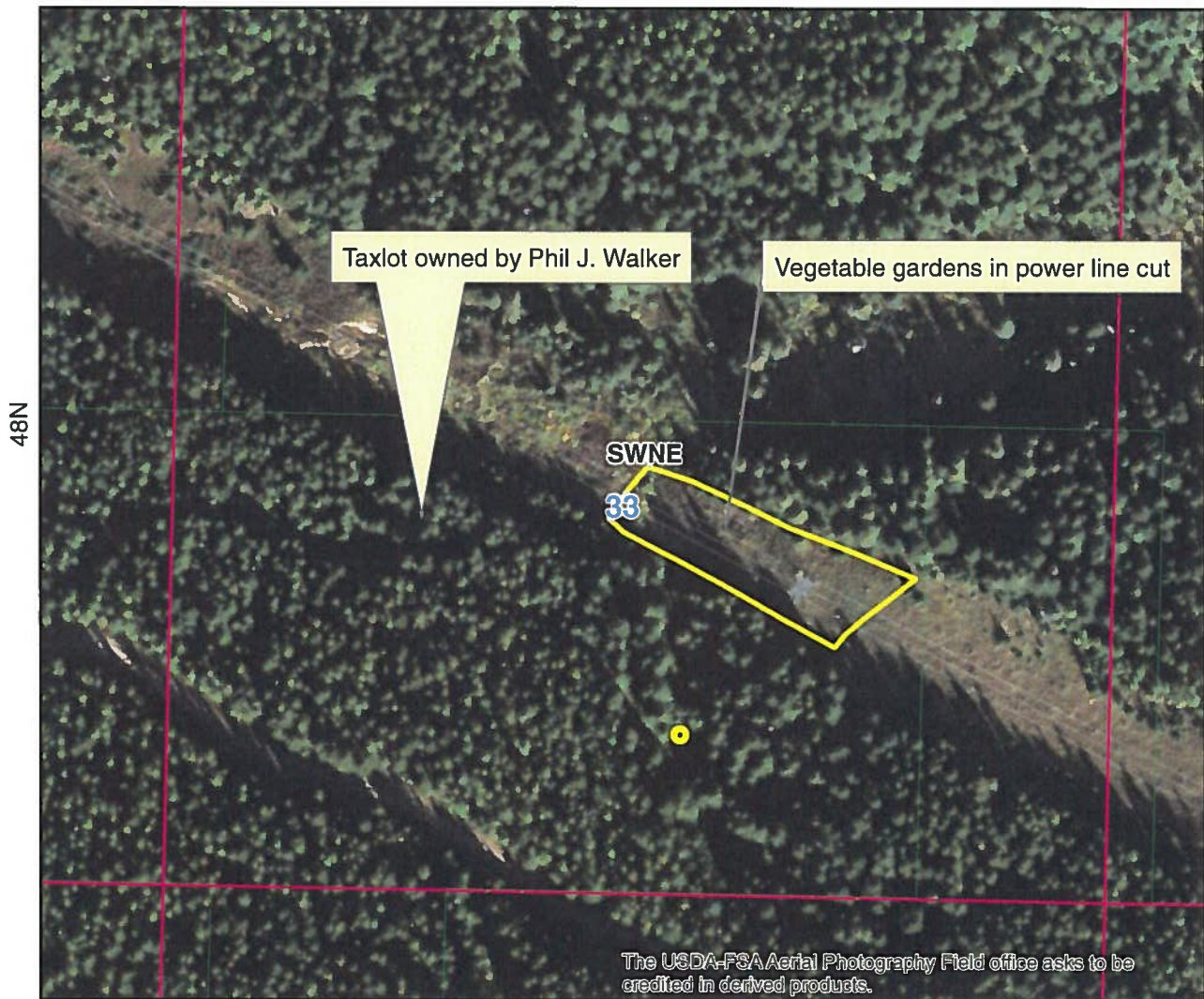
94-9345

Map by Steven Visosky

November 2, 2015

This map depicts the IRRIGATION and FIRE PROTECTION place of use boundary for this water right and is solely for illustrative purposes.

06E



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

0 0.03 0.06 0.12 Miles



THEORETICAL HORSEPOWER EQUATION WORKSHEET (cjh 1/92)

Water Right No.: 95-9345
 Reviewer: Steven Visosky
 Date of Review: 10/30/2015

P/D No.:

PUMP HORSEPOWER
 BOOSTER HORSEPOWER

PUMPING LEVEL

DISCHARGE PRESSURE

RATE OF FLOW (cfs)

Well #1
0.75
0
5
30
0.06
28

Well #2
0.75
0
5
40
0.05
21

Well #3
0.75
0
5
50
0.04
17
22.13

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:

Mr. Walker stated that his pump is a 3/4 HP pump with a lift of approximately five feet from the water level to the pump inside the corrugated pipe. Assuming average discharge pressures listed above for irrigation, a 3/4" HP pump could supply the 0.03cfs per acre rate associated with this permit.