

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 97-07518
Exam Date: 10/3/2016

1. Current Owner:
KEVIN HANSON 13506 N CHURCH RD RATHDRUM ID 83858 (208)215-9997
And/Or
TERRY HANSON 13506 N CHURCH RD RATHDRUM ID 83858 (208)215-9997

2. Accompanied by: Kevin Hanson

3. **SOURCE:**
UNNAMED STREAM

TRIBUTARY:
PRIEST RIVER

B. OVERLAP REVIEW

1. Other water rights with the same place of use: None
2. Other water rights with the same point-of-diversion: None

C. DIVERSION AND DELIVERY SYSTEM1. **LOCATION OF POINT(S) OF DIVERSION:**

UNNAMED STREAM SW¼NW¼ Sec. 13, Twp 56N, Rge 05W, B.M. BONNER County

Method of Determination: Maps and GPS. POD location at 48° 12.327, 116° 54.651.

Power unit located at 48° 12.256, 116° 54.774

2.

PLACE OF USE: DOMESTIC

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	05W	13							X										

PLACE OF USE: POWER

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	05W	13							X										

Method of Determination: Google Earth and Arc map.

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
UNNAMED STREAM	GRAVITY FLOW				

*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: 5 GALLON BUCKET TEST

5 GALLONS IN 6.5 SECONDS

 $5 \text{ GAL} / 6.5 \text{ SEC} = .7692307692 \times 60 \text{ MIN} = 46 \text{ GPM OR } 0.1 \text{ CFS}$

SYSTEM RUNNING AT 40 PSI

E. FLOW CALCULATIONS

Measured Method:

_____ Additional Computation Sheets Attached

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation: N/A
 2. Volume Calculations for Other Uses: DOMESTIC FOR 1 HOME WITH IRRIGATION UP TO ½ ACRE = 1.2 AF
- HYDROPOWER = 44.883 GPM X 60 MIN = 2692.98 GPH
- 2692.98 X 5 HOURS = 13,464.9 GPD
- 13,464.9 GPD X 365 DAYS = 4,914,688.5 GPY / 325,850 GAL/AF = 15.1 AF (NON CONSUMPTIVE)

G. NARRATIVE/REMARKS/COMMENTS

Field exam with Kevin Hanson showed a home and hydro power unit that used water from an unnamed stream tributary to the Priest River. Applicant had a 4 inch screened pipe in unnamed stream that went into a 1,800 gallon storage tank. Storage tank had another 4 inch overflow pipe that returned flow back into unnamed stream. Storage tank had a 4 inch buried pipe that went down the hill to home and power unit. Main line had a line to the home and a frost free hydrant. The main line also had 2 frost hydrants connected before line reached the power unit. Applicant had placed a hydrant right before power unit he could irrigate with it. We were able to shut off the flow of water to the power unit so we could a psi reading and 5 gallon bucket measurement from that hydrant. Psi was measured at 40 and 5 gallon bucket filled in 6.5 seconds which is equal to 46gpm or 0.1cfs.

Water from the storage down to power unit got around 95 feet of head before reaching the unit. Applicant had unit that was equipped with four heads. Two heads were 3/8 and two heads were 5/16. He said he never ran all four heads and usually only had enough water to run the 3/8 head and a 5/16 head. He said he put in a bigger unit with 4 heads just in case a head broke he would have a backup while he ordered parts. I asked Mr. Hanson how long he would run power unit each day, he said it varied by season. He said he might run system longer during the winter then during the summer. He said on average he would run the power unit about 5 hours a day to replenish his batteries from use the previous night and on appliances. Power will be given a diversion rate of 0.1cfs with an annual volume of 15.1 acre feet which is non consumptive.

Water also served the home with irrigation around the home and along the river. License will be changed to domestic with up to ½ acre of irrigation. License will be issued for 0.1cfs with that rate going to power and 0.04cfs going to domestic with up to ½ acre of irrigation. Diversion rate cannot exceed 0.1cfs with an annual volume of 16.3 acre feet with 1.2 acre feet being consumptive. No overlap concerns.

Have conditions of permit approval been met? ☒ Yes ☐ No

H. 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
POWER	01/01 to 12/31	0.10 CFS	15.1 AF
<u>Totals:</u>		0.100 CFS	16.30 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

I. AUTHENTICATION

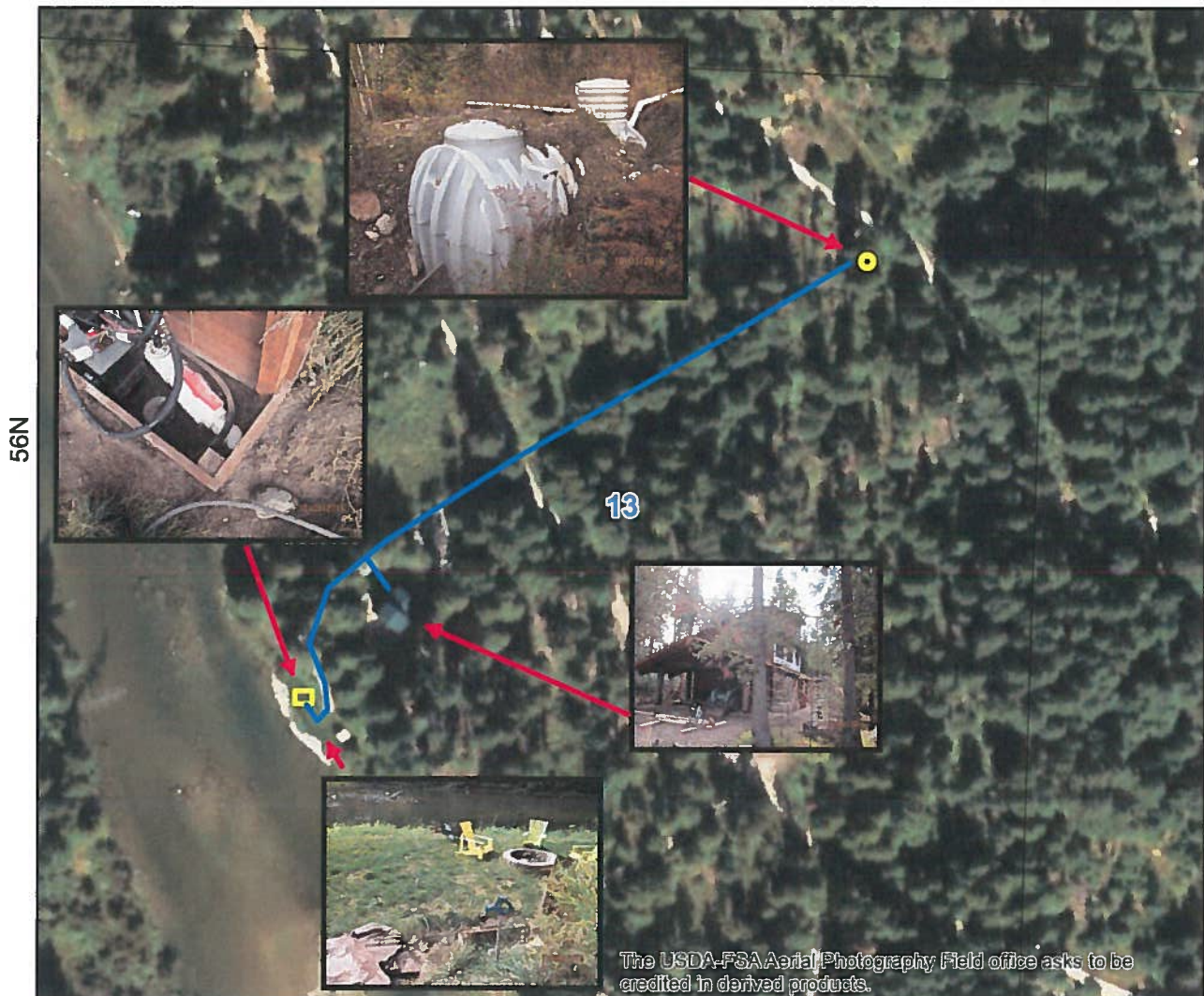
Field Examiner's Name Adam Franklin Date 5-16-2017

Reviewer Morgan Case Date 6/1/2017

State of Idaho
Department of Water Resources
Attachment to Field Exam
97-7518

SYSTEM DIAGRAM

05W



0 0.02 0.04 0.08 Miles

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



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DOMESTIC

05W



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

0 0.035 0.07 0.14 Miles

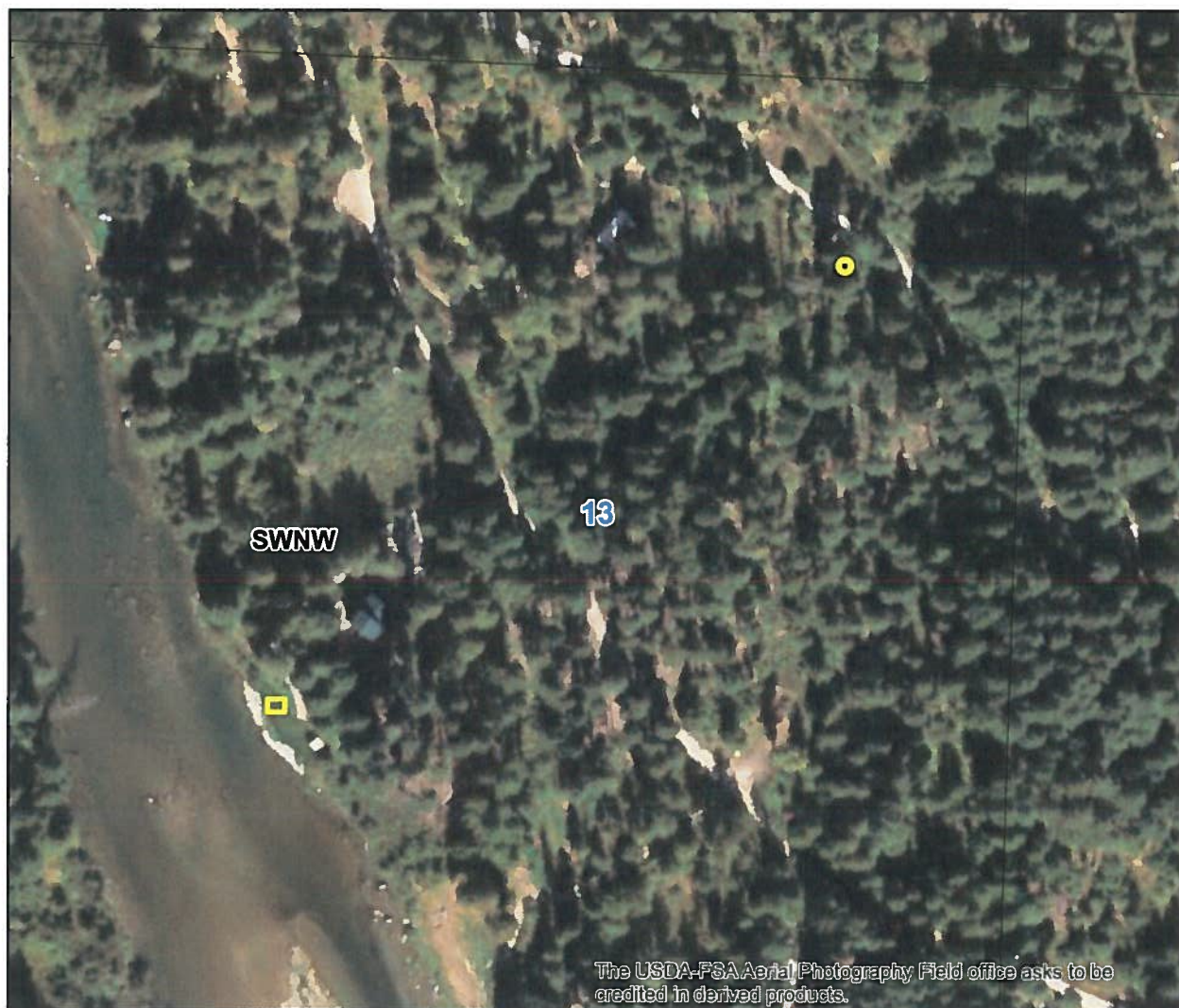


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POWER

05W

56N



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

0 0.02 0.04 0.08 Miles



97-7518

_____/yr. _____

_____-feet.

ditions of permit:

☒ No
 ☒ No
 ☒ No
 ☒ No
 ☒ No
 ☒ No

with your roof of

10/03/2016

No



Home



Point of diversion in unnamed stream



Looking up towards point of diversion. 4 inch pipe fed into 1,800 gallon cistern. Pipe going to left is overflow back into unnamed stream.



End of overflow pipe back into unnamed stream.



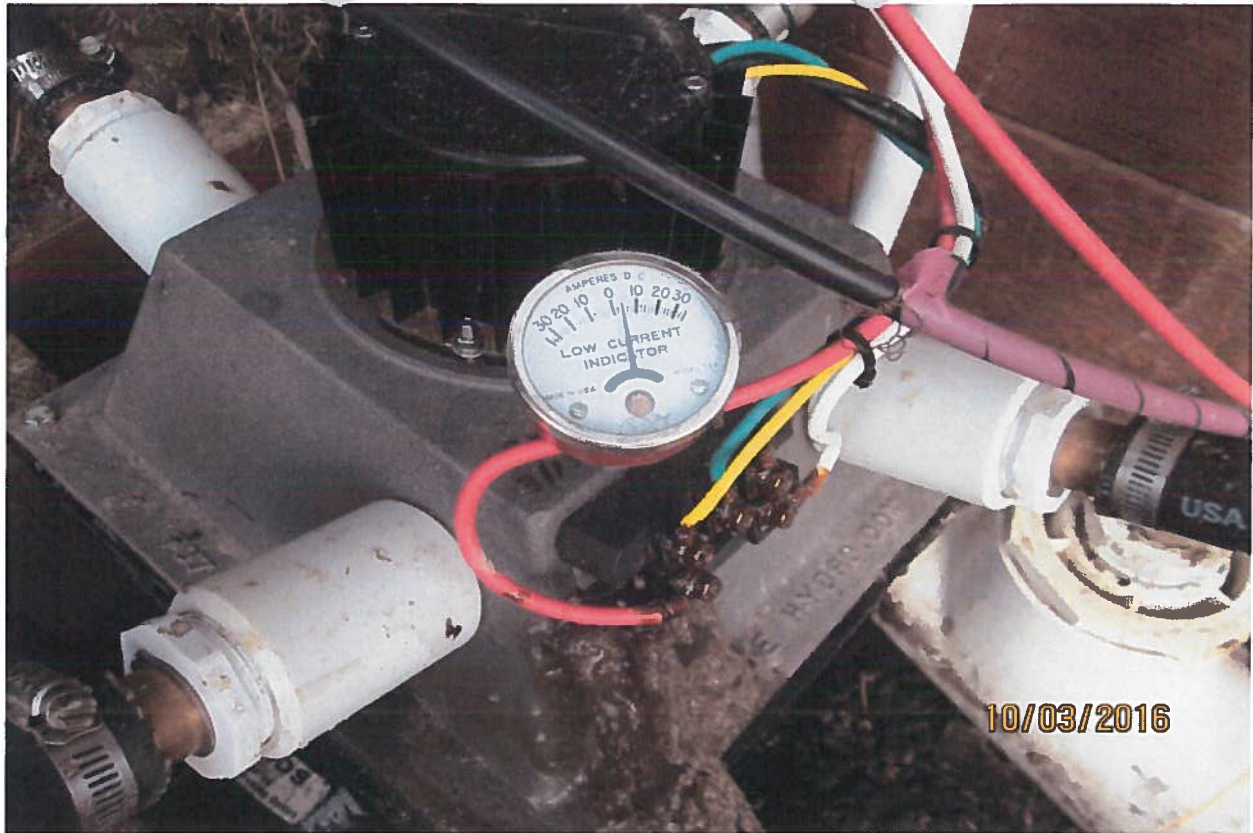
Cistern with inflow pipe and overflow pipe.



Hydropower unit with four 3/8 heads. Applicant only uses two heads at a time. Put in extra two units in case one or two heads get broke or stop working he can switch to other heads to keep power going.



Hydropower at 40 psi.



Output of power with unit running.



Outflow of water into river.



Frost free with hose and irrigation of yard.



Irrigated area next to river.



Frost free for irrigation.



Irrigation.