

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 81-11978

Exam Date: 07/29/2008

1. Current Owner: KENNETH DUHON And
MONA DUHON
134 LITTLE SMITH CREEK RD
KOOSKIA ID 83539
(208) 926-4367

2. Accompanied by: Ken Duhon
Phone No: same as above
Address: same as above
Relationship to Permit Holder: same

3. SOURCE

BIG SMITH CREEK

TRIBUTARY

MIDDLE FORK CLEARWATER RIVER

B. OVERLAP REVIEW

1. Other water rights with the same place of use: 81-4011 and permit 81-11925
2. Other water rights with the same point of diversion: permit 81-11925

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

BIG SMITH CREEK NE¼SE¼ Sec. 32, Twp 33N, Rge 06E, B.M. IDAHO County

Method of Determination: Field landmark reference, GIS, Satellite Imagery
GPS was unsuccessful due to forest canopy

2.

PLACE OF USE: AESTHETIC

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	
33N	06E	32													X				X
																			L 1

Method of Determination: GIS, Satellite Imagery

3. X Delivery System Diagram Attached (required). Indicate all major components and distances between components. Indicate weir size/pipe as applicable. Attachment A
- X Map Attached Showing Location(s) of point(s) of diversion and place(s) of use (required). Scale must be 1:24,000 or greater. Attachment A
- X Aerial Photo Attached (required for irrigation of 10+ acres). Attachment A
- X Photo of Diversion and System Attached. Attachment B

4.

<u>Well or Diversion</u> <u>ID No.*</u>	<u>Motor Make</u>	<u>Hp</u>	<u>Motor Serial No.</u>	<u>Pump Make</u>	<u>Pump Serial No. or Discharge</u> <u>Size</u>
N/A					

*Code to correspond with No. on map and aerial photo

D. FLOW MEASUREMENTS

1.

<u>Measurement</u> <u>Equipment</u>	<u>Type</u>	<u>Make</u>	<u>Model No.</u>	<u>Serial No.</u>	<u>Size</u>	<u>Calib. Date</u>
Bucket					5.5 gallons	
Stopwatch	Digital					

2. Measurements: Five measurements taken at the outlet to the first pond using a bucket and stopwatch

#1 – 9.0 sec.
 #2 – 8.4 sec.
 #3 – 8.6 sec.
 #4 – 8.6 sec.
 #5 – 8.3 sec.

avg. = 8.58 sec. → (5.5 gal/8.58 sec)(60 sec/1 min) = 38.5 gpm = **0.09 cfs**

E. FLOW CALCULATIONS

_____Additional Computation Sheets Attached

Measured Method: N/A

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation: N/A

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

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

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

2. Volume Calculations for Other Uses: AESTHETIC

March 1 through October 31 = 245 days

$0.09 \text{ cfs} \times 1.9835 \times 245 \text{ days} = \mathbf{43.7 \text{ acre-feet per year}}$

Pond Dimensions, three dimensional average

Upper Pond = 99 ft long x 21 ft wide x 4 ft deep = 8,316 ft³

Middle Pond = 165 ft long x 45 ft wide x 7 ft deep = 51,975 ft³

Lower Pond = 117 ft long x 45 ft wide x 6 ft deep = 31,590 ft³

Total Pond Volume = 91,881 ft³ = 2.11 acre-feet

G. NARRATIVE/REMARKS/COMMENTS

Water is diverted from Big Smith Creek through a 4-inch diameter intake pipe covered with 1/4-inch screen mesh. The intake reduces to a 2-inch diameter pipe and follows creek to ponds. Prior to entering the first (upper) pond, the pipe flows through a valve control box with a lockable lid. **There is no measuring device or data logger in place at the point of diversion as required by the permit.** The pipe discharges water into the upper pond, water flows through the pond, into a drop inlet immediately above the first dam, through a 4-inch diameter pipe buried under the dam, and discharges into the second (middle) pond. Water flows through the middle pond, into a drop inlet immediately above the second dam, through a 4-inch diameter pipe buried under the dam, and discharges into the third (lower) pond. Water flows through the lower pond, into a drop inlet immediately above the third dam, through a 4-inch diameter pipe buried under the dam, and discharges into an open channel which returns water to Big Smith Creek.

A 2-inch diameter pipeline delivers water from Little Smith Creek into the upper pond as authorized by right 81-4011. In addition to water for irrigation and stockwater uses, this right provides up to 6.0 acre-feet of water for recreation storage and 0.28 cfs for diversion to storage. The three ponds have a total combined storage volume of 2.1 acre-feet which is filled under right 81-4011

Permit 81-11978 provides water from Big Smith Creek to flow through the ponds. If the permit requirement for a measuring device and data logger can be modified or removed this right should be licensed for aesthetic purposes at a rate of 0.09 cfs.

Considering the channel morphology of Big Smith Creek, the catchment area, and the local climate, it seems very likely that 0.09 cfs can be diverted year round and that the diversion rate is limited by the capacity of the current infrastructure. Mr. Duhon explained that water from Big Smith Creek is generally diverted at the system capacity and used from March through October, a period of 245 days. The annual volume for this right should be based upon this typical use period and a continual flow at the maximum diversion rate for a total of 43.7 acre-feet.

Have conditions of permit approval been met? ____ Yes X No

H. RECOMMENDATIONS**1. Recommended Amounts**

<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>DIVERSION RATE</u>	<u>ANNUAL VOLUME</u>
AESTHETIC	01/01 to 12/31	0.09 CFS	43.7 AF
<u>Totals:</u>		0.09 CFS	43.7 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 ____ Other

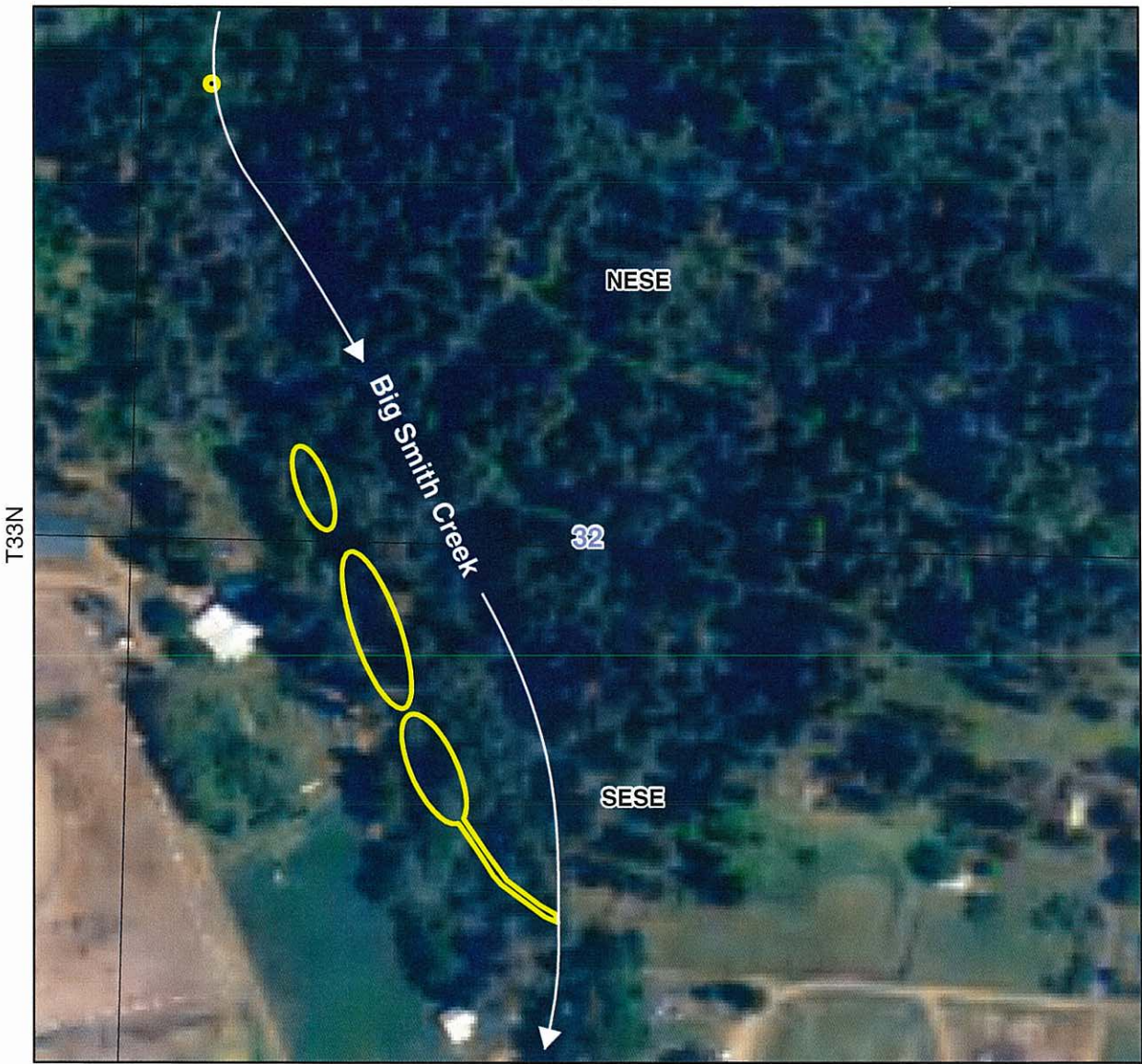
I. AUTHENTICATION

Field Examiner's Name AARON MARSHALL Date 10/20/2008

Reviewer _____ Date _____

Attachment A
Place of use map and system diagram for Permit 81-11978

R06E



Legend

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



Attachment B
Photographs of Diversion, Delivery System, and Ponds

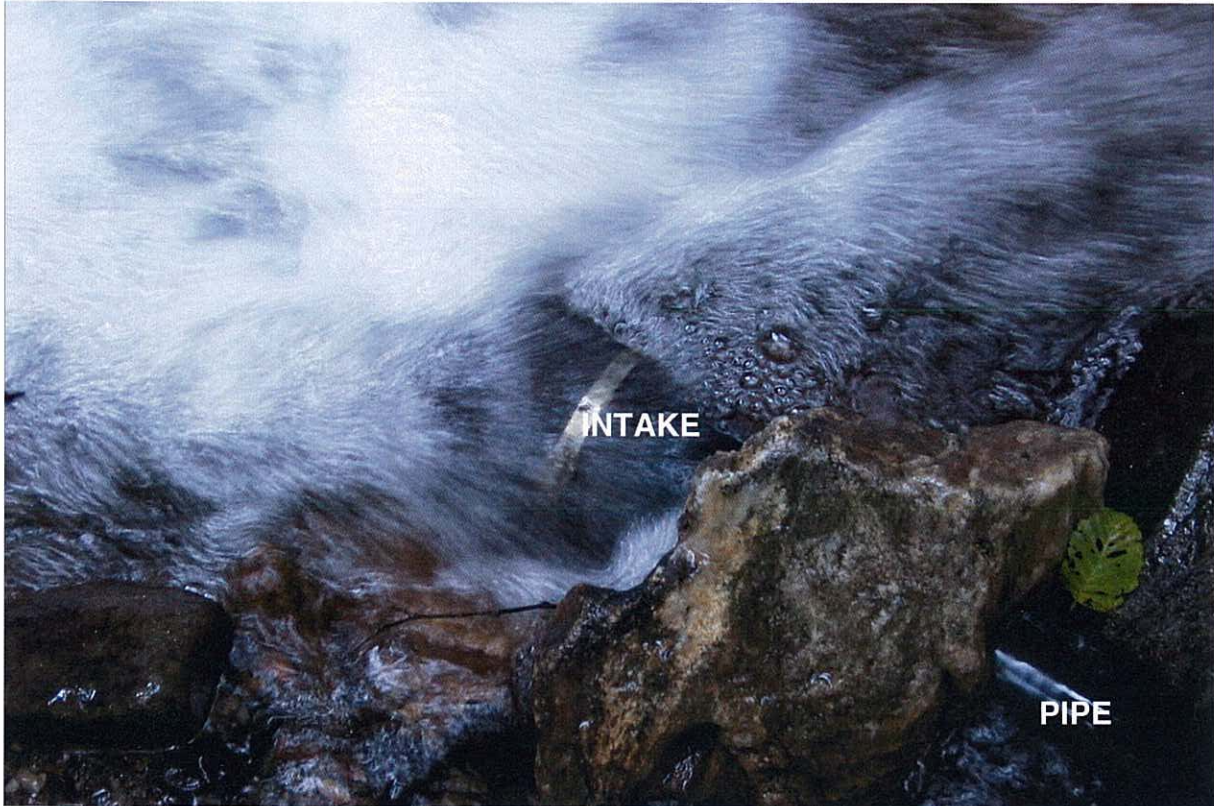


FIGURE 1: Diversion intake and pipeline anchored in channel by rocks.



FIGURE 2: Valve control box and 2" PVC pipeline.



FIGURE 3: 2" outlet into upper pond.

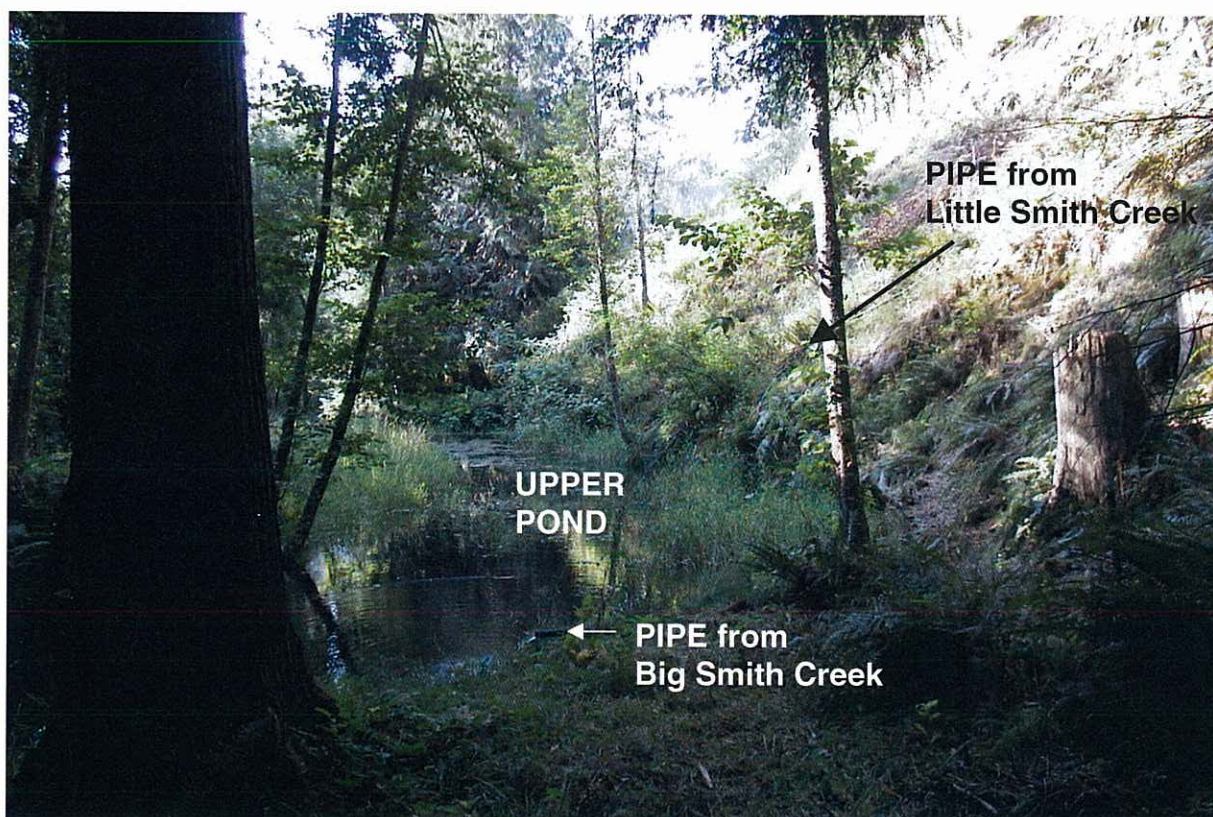


FIGURE 4: Upper pond indicating pipe discharging water from Little Smith Creek under water right 81-4011 and the outlet under permit 81-11978. View facing downstream (south) with Big Smith Creek to the left.



FIGURE 5: Middle pond, view facing upstream (north) with Big Smith Creek to the right.



FIGURE 6: Second dam impounding middle pond, downstream is to the left.

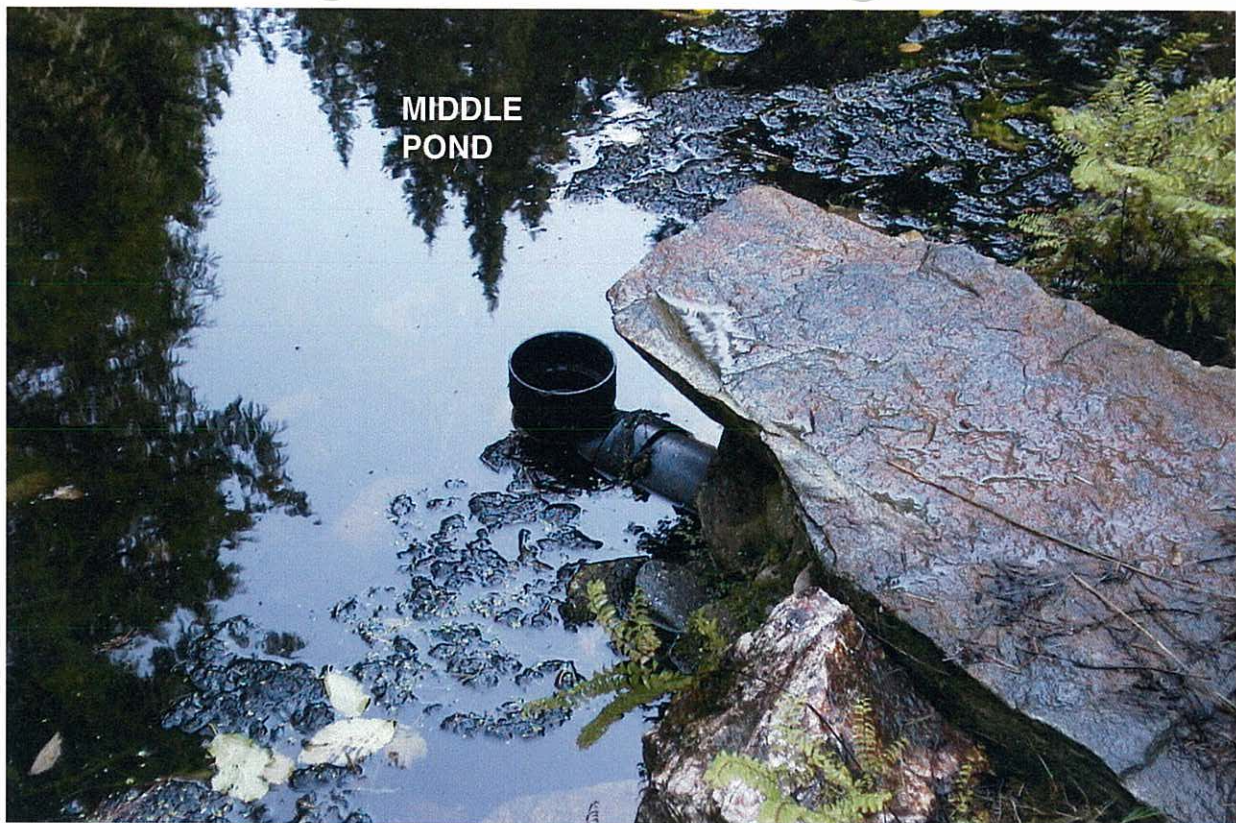


FIGURE 7: 4" diameter drop inlet at second dam pictured in figure 6.



FIGURE 8: Channel carrying water from middle pond to lower pond. Downstream is to the right.



FIGURE 9: Channel carrying water from lower pond back to Big Smith Creek.
View facing downstream.

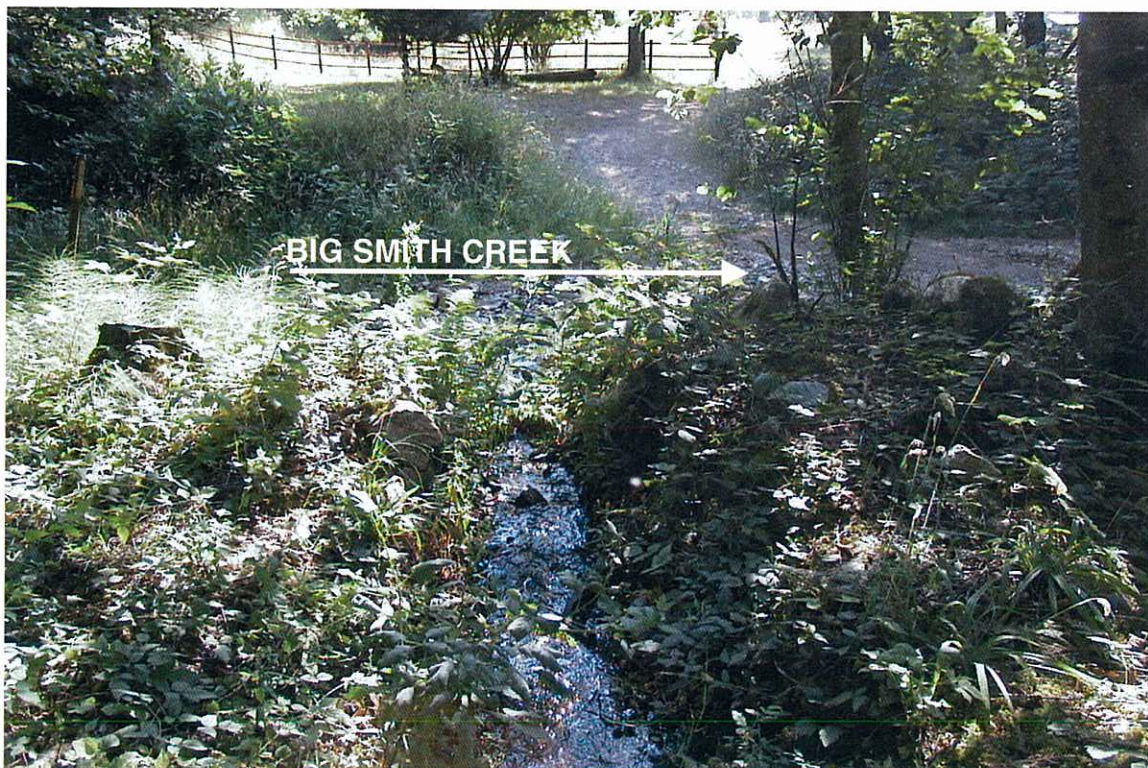


FIGURE 10: Return channel immediately above Big Smith Creek which flows to the right (south).