

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 65-13944

Exam Date: 6/5/2013

1. Current Owner: DERROLL K ELLIS
9988 ROUND VALLEY RD
CASCADE ID 83611
(208)382-5156

2. Accompanied by: Derroll Ellis
Phone No: Same
Address: Same
Relationship to Permit Holder: Same

3. **SOURCE**

UNNAMED STREAM

TRIBUTARY

CHIPPS CREEK

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

NE1/4SE1/4

Sec. 1, Twp 11N, Rge 03E, B.M.

VALLEY County

Method of Determination: GPS Location N 44° 18.76212' W 116° 2.36202' Garmin model GPSmap 76 Datum NAD 83

2. **PLACE OF 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	
11N	03E	1													8				8
11N	04E	6						3			9								12
								L 5			L 6								

Total Acres: 20

Method of Determination: Esri (2012) Aerial Photography w/ field verification.

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
N/A	N/A – gravity system	N/A	N/A	N/A	N/A

D. FLOW MEASUREMENTS**1. Measurement**

<u>Equipment</u>	<u>Type</u>	<u>Make</u>	<u>Model No.</u>	<u>Serial No.</u>	<u>Size</u>	<u>Calib. Date</u>
Stop watch, tape measure + leaves	N/A	N/A	N/A	N/A	N/A	N/A

=> Time Volume ("Orange Peel Method") Measured Estimation (travel time of leaves in rectangular dirt ditch with wetted perimeter dimensions).
=> Manning Flow Rate Estimation (based on high water mark perimeter dimensions of rectangular dirt ditch & GPS slope est. from elevation of two points on ditch)

2. Measurements:

- a. Rectangular dirt ditch dimensions:
 - D_w (depth of water in ditch) = 1 inch
 - D_h (depth high water mark in ditch) = 4 inches
 - W (width of ditch) = 8 inches
- b. Travel time small leaf 6.5 ft down straight section of ditch:
 - Time #1 = 6.0 sec
 - Time #2 = 6.0 sec
 - Time #3 = 6.0 sec
 - Time #4 = 6.5 sec
 - Time #5 = 6.0 sec
 - Avg = $[(6.0 + 6.0 + 6.0 + 6.5 + 6.0)/5] = 6.1$ sec

E. FLOW CALCULATIONS X Additional Computation Sheets Attached**Measured Method: Time Volume Measured Estimation:**

$$A = [D_w \times W] = [1 \text{ in} \times 8 \text{ in}] = 8 \text{ in}^2 = 0.06 \text{ ft}^2$$

$$V = 6.5 \text{ ft} / 6.1 \text{ sec} = 1.1 \text{ ft/sec}$$

$$Q = A \times V = 0.06 \text{ ft}^2 \times 1.1 \text{ ft/sec} = 0.07 \text{ cfs}$$

Measured Method: Manning Flow Rate Estimation:

$$Q = 0.41 \text{ cfs} \text{ (see attached "Manning Flow Rate Calculation Summary Report" for details)}$$

Time Volume Measured Estimation = **0.07 cfs**Manning Flow Rate Estimation = **0.41 cfs**Permitted Rate = **0.54 cfs**Beneficial Use Limit = 20 ac x 0.02 cfs/ac = **0.40 cfs**Proof of Beneficial Use fee paid = \$100.00 = up to **1.00 cfs****Recommend Beneficial Use Limit = 0.40 cfs**

Recommend beneficial use limit rate based on high water mark estimation (when water is present diversion works in place capable of diverting water to place of use for irrigation).

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation: **N/A** (surface water source irrigation use).
2. Volume Calculations for Other Uses: **N/A** (no other uses authorized).

G. NARRATIVE/REMARKS/COMMENTS**SYSTEM DESCRIPTION AND IRRIGATION PRACTICES:**

Gravity irrigation system of earthen ditches dug to divert unnamed stream water across relatively flat 20 acre pasture land to facilitate growth of grasses for cattle to feed on.

WATER SUPPLY / RATE RECOMMENDATION:

Time volume measurement estimated approximately 0.06 cfs of flow in the main ditch at the time of examination. Owner stated rate of flow considerably higher earlier in irrigation season, ditch will almost fill most years. Therefore, recommend beneficial use limit rate of 0.40 cfs based on estimated flow capacity of diversion works up to 0.41 cfs per

G. NARRATIVE/REMARKS/COMMENTS CONTINUED

Manning Flow Rate Estimation.

OVERLAP AND ARCMAP POU SHAPES:

There are no other rights diverted at the point of diversion or used on the same place of use as this permit. Right 65-3848 diverts water from a different unnamed stream through a different set of ditches for irrigation of different acres. The POU shape created for licensing of this permit visually overlaps the shape of right 65-3848, however owner confirmed there is no overlap. See 65-13944 Beneficial Use Field Report System Diagram and Map for details.

POU RECOMMENDATION – LICENSING AMENDMENT REQUIRED:

Irrigation of pasture within Lot 5 (SWNW) Sec 6 T11N R4E found during examination is outside of the permitted POU. Total acres being irrigated is less than permitted. Licensing amendment required to include irrigated acres outside permitted POU.

COMPLIANCE WITH PERMIT CONDITIONS:

Owner required to install a measuring device and lockable controlling works. No devices found at time of exam. Spoke with WD 65 Watermaster Ron Shurtleff regarding conditions. Mr. Shurtleff indicated modifying the condition(s) to require future installation of measuring device and lockable controlling works upon notification is acceptable in this instance.

Local source name not confirmed at exam, but unnamed stream diverted for this permit is tributary to the unnamed stream locally known as Rabbit Creek, which is tributary to Chipps Creek. See 65-13944 Beneficial Use Field Report System Diagram and Map for details.

Have conditions of permit approval been met? Yes X No – Modifications of measurement device and lockable controlling works requirement as discussed above approvable per WD 65 watermaster. All other conditions met.

H. RECOMMENDATIONS**1. Recommended Amounts**

<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>DIVERSION RATE</u>	<u>ANNUAL VOLUME</u>
IRRIGATION	04/15 to 10/31	0.40 CFS	
<u>Totals:</u>		0.40 CFS	

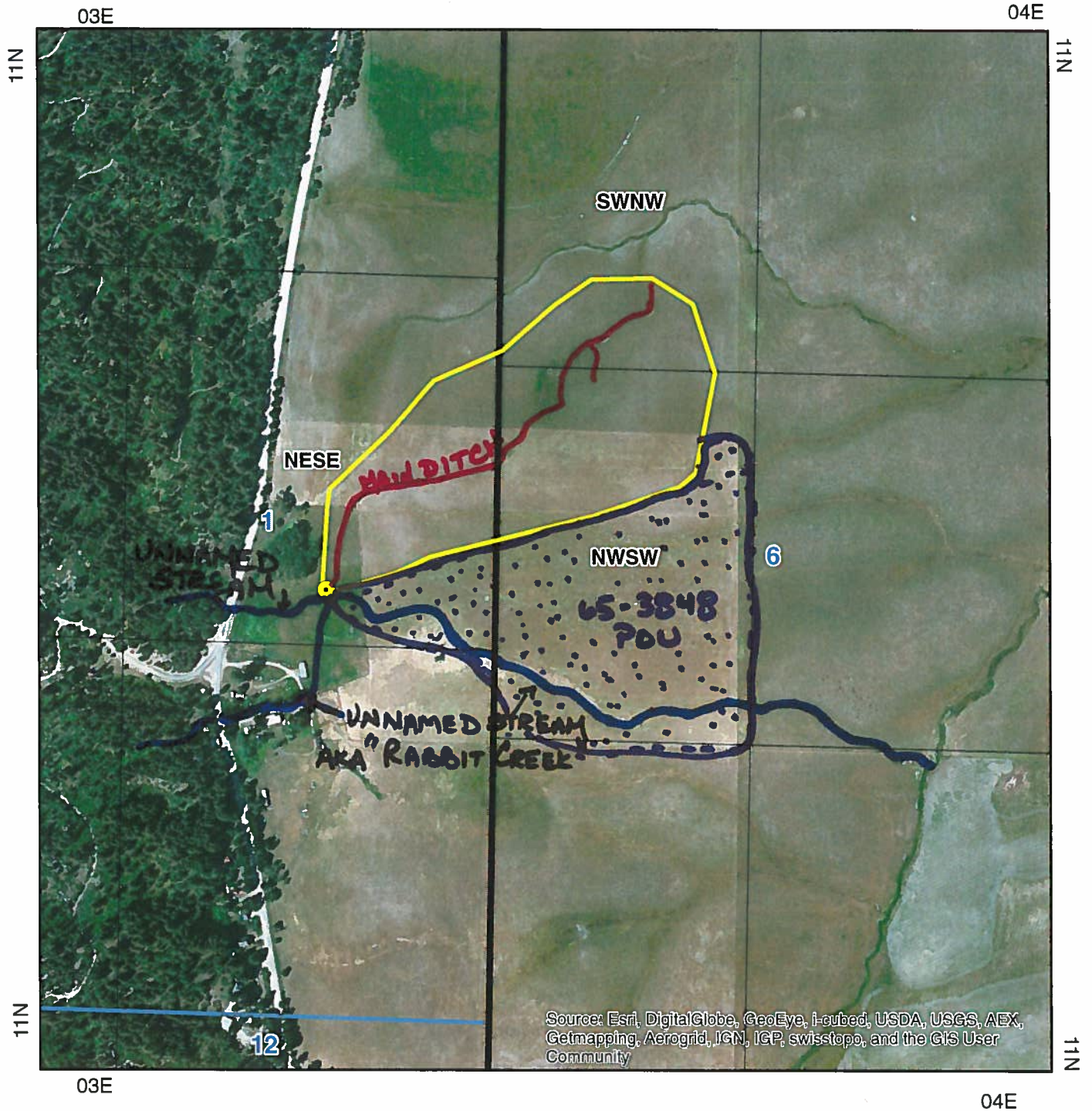
2. Recommended Amendments

X Change P.D. as reflected above Add P.D. as reflected above None
X Change P.U. as reflected above Add P.U. as reflected above Other

I. AUTHENTICATION

Field Examiner's Name Angela M. Quinn Date 8/8/2013
 Reviewer _____ Date _____

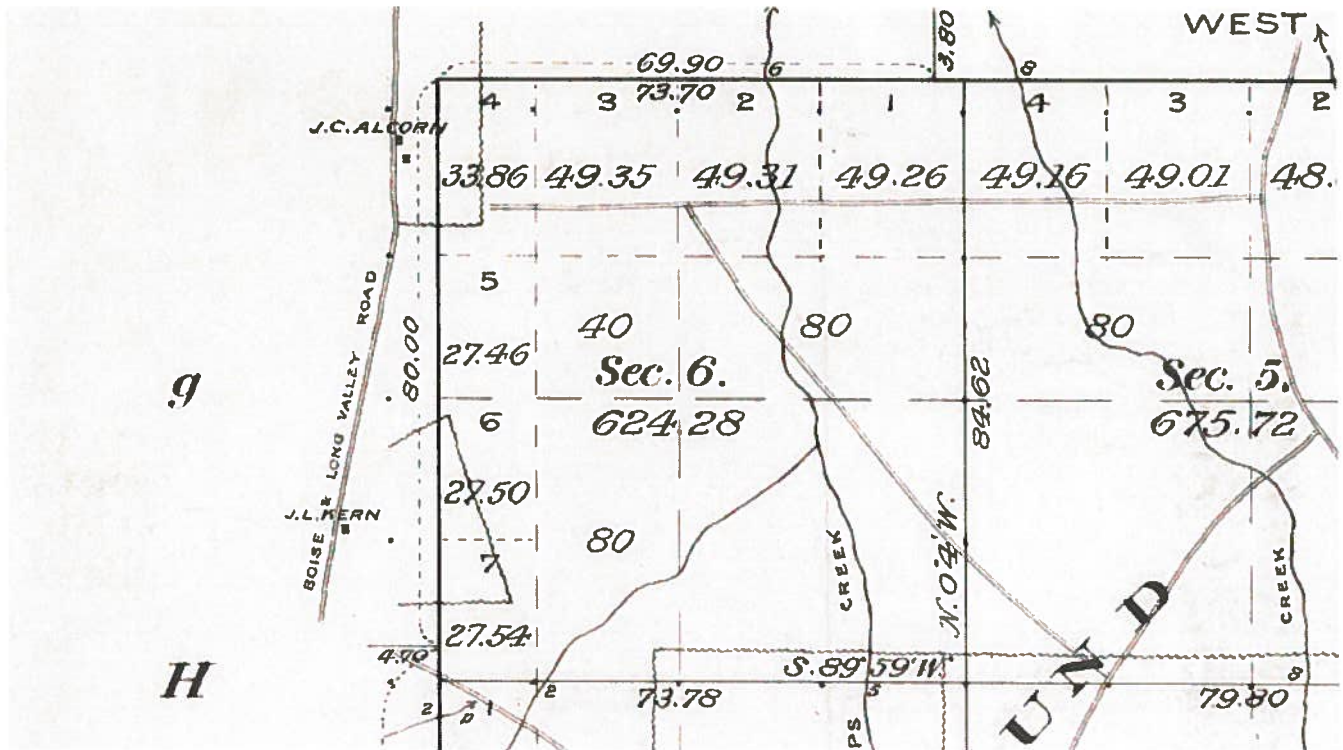
65-13944 Beneficial Use Field Report System Diagram and Map



0 0.05 0.1 0.2 Miles

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





T11N R4E SECTION 6



Manning Flow Rate Calculation Summary Report

General Information:

Permit/Claim Number(s): 65-13944

Name of Claimant/Permit Holder: Derroll K. Ellis

Name of Ditch, Canal, or Stream: Unnamed Stream

Date of Measurement: 6/5/13

Data Collect By: Angie Grimm

Measurement Location: NE 1/4 SE 1/4 Section: 1 TWNS: 11N RNG: 3E

Channel Description Information:

Channel Type

☐ Pipe Full ☐ Circular ☒ Rectangular ☐ V-Notch ☐ Trapezoidal ☐ User Defined

Channel Description: Natural channel/earthen ditch with few pebbles/small rocks and natural grasses and plants along sides of ditch.

☒ Photo(s) Attached

☒ Map(s) Attached

Channel Cross Sectional Information:

Basis

☒ High Water Mark ☐ Water Surface

Pipe Full

Radius: _____

Circular Channel

Radius: _____

Depth of Flow: _____

Rectangular Channel

Width: 8 in

Depth of Flow: 4 in

User Defined Channel:

Meas. No. Distance (ft) Depth (ft)

1
2
3
4
5
6
7
8
9
10
11
12

V-Notch Channel

Height: _____

Depth of Flow: _____

Top Width: _____

Trapezoidal Channel

Height: _____

Depth of Flow: _____

Top Width: _____

Bottom Width: _____

Channel Slope Information:

Basis

☐ High Water Mark ☐ Channel Bottom ☒ Land Surface

	Upstream Elevation Meas. (ft)	Downstream Elev. Meas. (ft)	Distance Between US & DS Points (ft)	Slope (ft/ft) US - DS /Dist.
Upper Alignment:	<u>1480 ft</u>	<u>1477 ft</u>	<u>140 ft</u>	<u>0.0214</u>
Middle Alignment:	_____	_____	_____	_____
Lower Alignment:	_____	_____	_____	_____

Manning Calculation Output

Q = 0.41 CFS

V = 1.86 FPS

A = 0.22 SF

S = 0.0214 FT/FT

n = 0.035

65-13944 Beneficial Use Field Report Photos



65-13944 Exam 6/5/2013: POD. Unnamed stream source for this permit coming into photo at top (from west) diverted to right (northeast) to POU. Natural channel of unnamed stream known as Rabbit Creek in bottom left hand corner of photo.



65-13944 Exam 6/5/2013: POU in photo foreground side of fenc facing east/northeast.



State of Idaho

DEPARTMENT OF WATER RESOURCES

Western Region, 2735 Airport Way • Boise, Idaho 83705-5082

Phone: (208) 334-2190 • Fax: (208) 334-2348 • Web Site: www.idwr.idaho.gov

C. L. "BUTCH" OTTER
Governor

GARY SPACKMAN
Director

August 12, 2013

DERROLL K ELLIS
9988 ROUND VALLEY RD
CASCADE ID 83611

RE: Water Right Permit No. 65-13944

Dear Permit Holder:

The Department of Water Resources is reviewing the permit referenced above prior to issuing a water right license. By issuing a license, the Department confirms the extent of development that has been established in compliance with the terms of the permit. The examiner who verified your water use reported that certain elements of the permit have been developed differently than described on your permit. Changes that do not increase the authorized use of water under the permit can be requested and approved in accordance with Section 42-211, Idaho Code. Before a license can be issued, your permit must be amended to depict your water use as it was actually developed.

Based on the examiner's report, the following elements were developed differently than described on your permit:

✓ **Point of Diversion**

✓ **Place of Use**

The enclosed Application for Amendment form depicts the elements of the water right as they will appear on the license when it is issued. Please review the amendment form carefully. If you concur with the information presented, please sign the form and return it with the \$100.00 filing fee within 14 days.

If you have any questions, please call me at (208)334-2190.

Sincerely,

A handwritten signature in black ink that reads "Kay Walker". The signature is written in a cursive, flowing style.

KAY WALKER
Sr. Water Resource Agent

Enclosures



State of Idaho

DEPARTMENT OF WATER RESOURCES

Western Region, 2735 Airport Way • Boise, Idaho 83705-5082

Phone: (208) 334-2190 • Fax: (208) 334-2348 • Web Site: www.idwr.idaho.gov

September 26, 2012

C. L. "BUTCH" OTTER
Governor

GARY SPACKMAN
Interim Director

Derroll K. Ellis
9988 Round Valley Rd.
Cascade, ID 83611

RE: Request for Relinquishment of and/or Scheduling Field Exam for Water Right Permit No. 65-13944

Dear Mr. Ellis:

We are planning to conduct water right examinations in the vicinity of the above-referenced permit during the weeks of October 1 and October 9, 2012. Permit 65-13944 authorizes diversion of unnamed stream water for irrigation of up to 27 acres. Decreed water right 65-3848 authorizes diversion of unnamed stream water for irrigation of the same 27 acres at a rate up to 0.54 cfs (0.02 cfs/ac). Generally, the maximum allowable rate per acre for irrigation from a single source is 0.02cfs/ac per Idaho Code § 42-220. If diversion under permit 65-13944 is from the same unnamed stream as right 65-3848 for the same 27 acres, the Department cannot license permit 65-13944 unless you can demonstrate that a rate in excess of 0.02cfs/ac is necessary for irrigation of your land.

For reasons described above, the Department requests you either complete and submit the enclosed Relinquishment of Permit form, or provide information to demonstrate a rate in excess of the statutory limit is necessary for irrigation of your property. If information provided satisfactorily demonstrates the excess rate is required, the Department must conduct a field examination to verify your water use in order to issue a water right license for permit 65-13944.

Please complete the enclosed relinquishment form or submit the requested information at your earliest convenience. If a field examination will be needed (information demonstrates the need for the permit) **please call me at 208-334-2190 by October 5, 2012** to schedule an exam day and time convenient for you. If there is a problem with scheduling or conducting the examination at this time, please call and other arrangements can be made. **If I do not receive a response by October 31, 2012, the Department will take action to issue an order to void permit 65-13944.** I appreciate your attention in this matter and I look forward to hearing from you.

Sincerely,

Angela M. Grimm, P.G.
Water Resource Agent, Sr.