

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 63-12590

Exam Date: 9/20/2012

1. Current Owner: WAYNE LEIGH
30398 LEIGH LANE
PARMA ID 83660
208-337-8487
2. Accompanied by: WAYNE LEIGH
Phone No: 208-337-8487
Address: 30398 LEIGH LANE, PARMA, ID 83660
Relationship to Permit Holder:

3. **SOURCE**

DRAIN DITCH NO 3

TRIBUTARY

SNAKE RIVER

B. OVERLAP REVIEW

1. Other water rights with the same place of use:
2. Other water rights with the same point of diversion: 63-4437A, 63-4437B, 63-4437C

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

~~DRAIN DITCH NO 3~~ L4 SE1/4SW1/4 Sec. 24, Twp 06N, Rge 06W, B.M. CANYON County
Un-named Drain

Method of Determination: GPS

2.

PLACE OF USE: IRRIGATION

Twp	Rge	Sec	NE				NW				SW				SE				Totals
06N	06W	24	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
					6.5					13.5									20.0

Total Acres: 20

Method of Determination:

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.

<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>
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*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>
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2. Measurements:

Measurement and type of main pipeline for a Manning pipe flow calculation = 8-inch smooth plastic pipe

E. FLOW CALCULATIONS☐ Additional Computation Sheets Attached

Measured Method:

Measurement of main pipeline for a Manning pipe flow calculation

Manning pipe flow rate = 12.7 cfs

The diversion rate to be licensed under this right will be limited to 0.50 cfs

0.4

limited by acreage $(0.02 \text{ cfs})(20 \text{ ac}) = 0.4 \text{ cfs}$

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 20 \text{ acres} \times 3.5 \text{ AF/acre} = 70 \text{ AF}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 12.7 \text{ cfs} \times 259 \text{ days} \times 1.9835 = 6524 \text{ AF}$$

0.40 260 206 AF

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = 70 \text{ AF}$$

2. Volume Calculations for Other Uses:

C. Smith
3-8-13

G. NARRATIVE/REMARKS/COMMENTS

This permit was field examined on 9/20/12 by myself, Craig Tesch, and Jennifer Cuhacyan of IDWR. The owner Wayne Leigh accompanied us on the exam. This permit authorizes the diversion of drain water that flows through a different property to the south, the Pace-Nielsen Farms property, to be used for irrigation purposes. The drain flows through the Pace-Nielsen property from north to south, and discharges to the Snake River approximately 380 feet northwest of the point of diversion.

Water is diverted from the drain channel by two headgates positioned where the drain passes under a small dirt road. The headgates are located in the Pace-Nielsen property approximately 0.50 miles south of the Leigh property, and each diverts water into a single buried pipe, 15-inches and 18-inches in diameter, respectively. Both the 15-inch and 18-inch pipelines travel north for approximately 0.25 miles from the headgates to a bubbler system. The 18-inch line ends at the bubbler. The 15-inch line branches off and continues in two directions from the bubbler: (1) Branch #1 travels north approximately 0.40 miles where it irrigates 5 acres, and (2) Branch #2 travels northeast approximately 0.33 miles where it irrigates 15 acres.

Branch #1 travels north 200 feet through a 15-inch buried cement pipe and then the rest of the way through an open channel with short sections of 15-inch buried cement pipe. Branch #1 irrigates the 5 acre field via siphon tubes from the open channel to the field; there was no water in the channel at the time of the field exam. Branch #2 travels northeast 825 feet through 15-inch buried pipe where it turns north and travels the rest of the way above ground. Branch #2 irrigates the 15 acres via 15-inch gated pipe.

On average, the owner irrigates when needed during the irrigation season from March 1st through November 15th. Water that is released onto the property is consumptively used by vegetation or seeps into the subsurface. In summary, the beneficial use of this water right includes irrigation of 20 acres. No overlapping water rights exist on the place of use.

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>
IRRIGATION	3/01 to 11/15	0.500 CFS 0.4	
	<u>Totals:</u>	0.500 CFS 0.4	

C. Smith
3-8-13

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

I. AUTHENTICATION

Field Examiner's Name Craig Tesh Date 12/18/2012

Reviewer _____ Date _____

[List of Calculators](#)[Hydraulics](#)[Language](#)

Manning Formula Uniform Pipe Flow at Given Slope and Depth

[Can you help me translate this calculator to your language or host this calculator at your web site?](#)

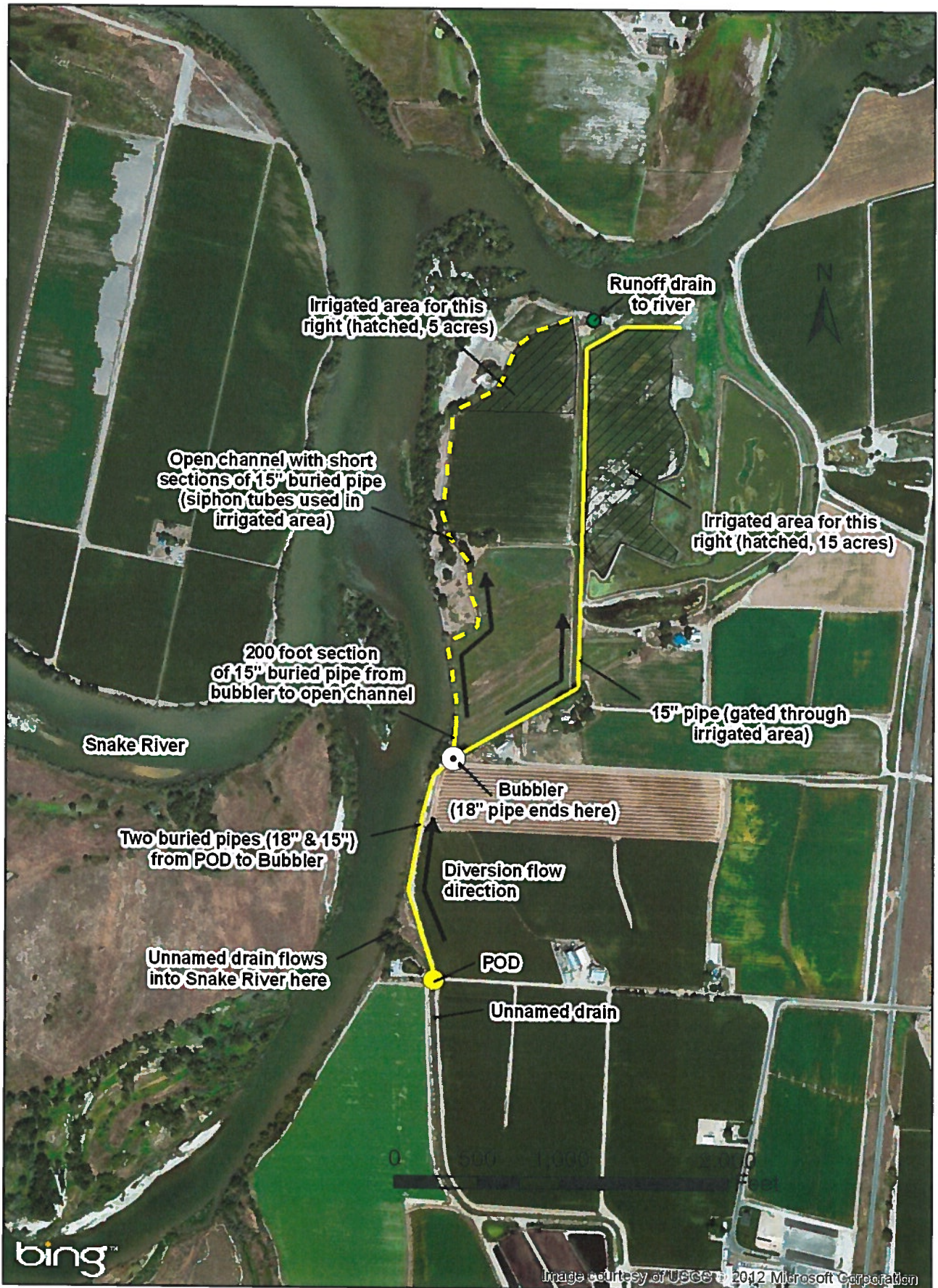
		Results:	
Pipe diameter, d_0	15 inches	Flow, q	12.7231 cfs
Manning roughness, n ?	.013	Velocity, v	10.3680 ft/sec
Pressure slope (possibly ? equal to pipe slope), S_0	.0388	Velocity head, h_v	1.6707 ft
	rise/run	Flow area	1.2272 ft ²
Percent of (or ratio to) full depth (100% or 1 if flowing full)	100 %	Wetted perimeter	3.9270 ft
		Hydraulic radius	0.3125 ft
		Top width, T	0.0000 ft
		Froude number, F	0.00
		Shear stress (tractive force), τ	3.0282 psf

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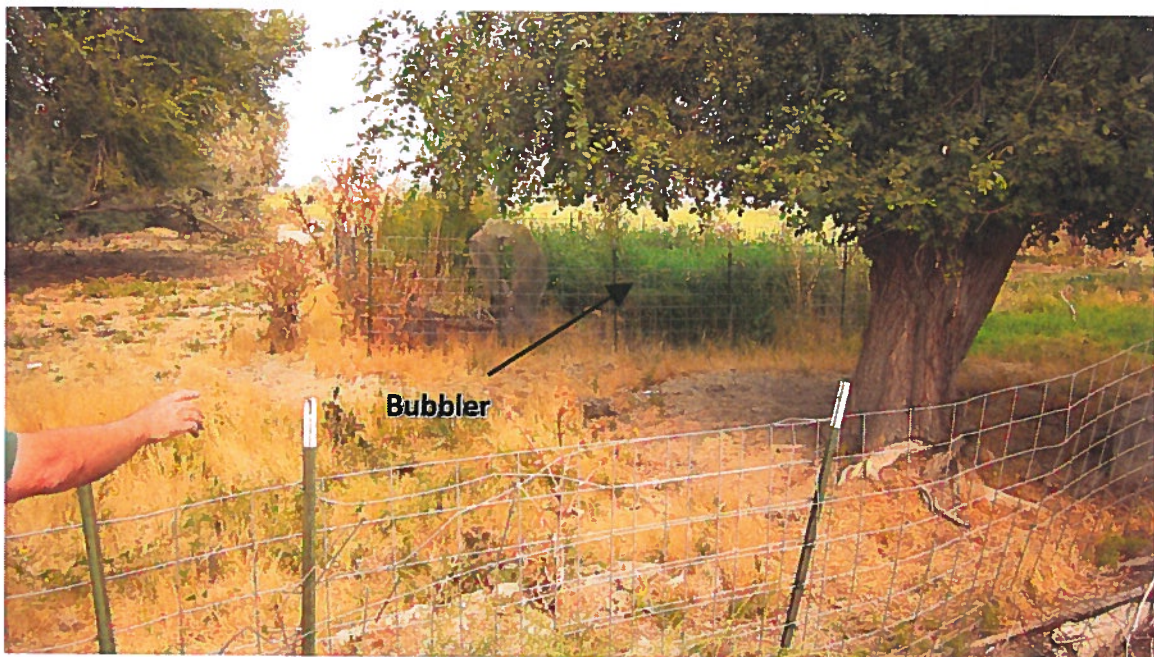
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Photos taken by Craig Tesch on 9/20/2012



Licensed POD – Looking east at the unnamed drain showing the headgates for the 18" and 15" lines that run from the drain to the bubbler.



Bubbler – Looking northeast at the bubbler where the 18" pipe ends, and the 15" pipe branches into two 15" lines that irrigate the fields for this water right.

Photos taken by Craig Tesch on 9/20/2012



Close-up of the bubbler, covered in vegetation.

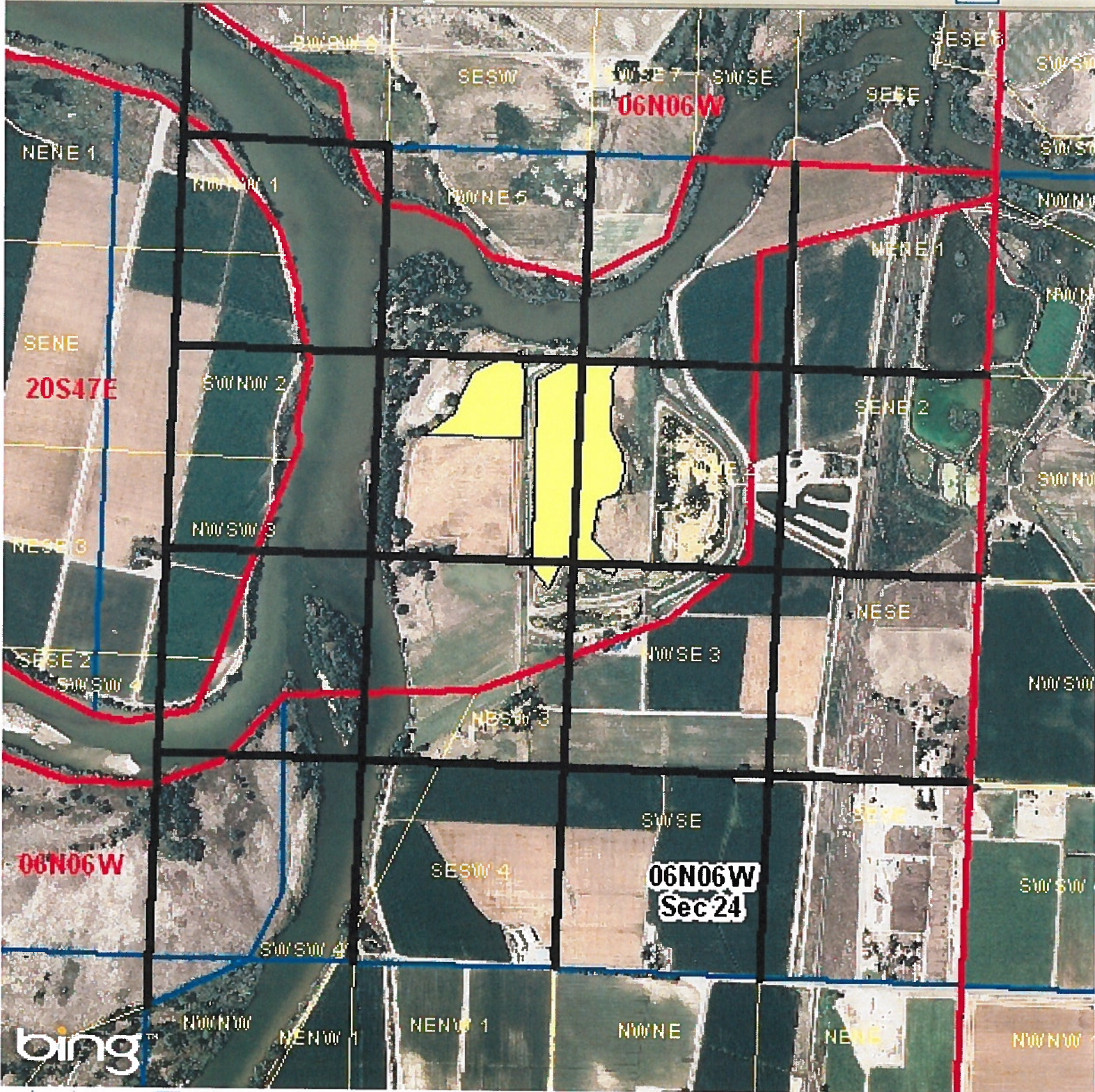


Licensed POU – Looking north at the 15" gated pipe used to irrigate the 15 acre field for this water right.

Photos taken by Craig Tesch on 9/20/2012



Runoff drain – Standing at the northeast corner of the 5 acre POU looking northwest at the drain that diverts field runoff to the river.



TOWNSHIP 6 NORTH, RANGE 6 WEST, OF THE BOISE MERIDIAN, IDAHO
SURVEY

SECTION	ACRES	FRAC.	W. 1/2
1	36.00	0.00	0.00
2	36.00	0.00	0.00
3	36.00	0.00	0.00
4	36.00	0.00	0.00
5	36.00	0.00	0.00
6	36.00	0.00	0.00
7	36.00	0.00	0.00
8	36.00	0.00	0.00
9	36.00	0.00	0.00
10	36.00	0.00	0.00
11	36.00	0.00	0.00
12	36.00	0.00	0.00
13	36.00	0.00	0.00
14	36.00	0.00	0.00
15	36.00	0.00	0.00
16	36.00	0.00	0.00
17	36.00	0.00	0.00
18	36.00	0.00	0.00
19	36.00	0.00	0.00
20	36.00	0.00	0.00
21	36.00	0.00	0.00
22	36.00	0.00	0.00
23	36.00	0.00	0.00
24	36.00	0.00	0.00
25	36.00	0.00	0.00
26	36.00	0.00	0.00
27	36.00	0.00	0.00
28	36.00	0.00	0.00
29	36.00	0.00	0.00
30	36.00	0.00	0.00
31	36.00	0.00	0.00
32	36.00	0.00	0.00
33	36.00	0.00	0.00
34	36.00	0.00	0.00
35	36.00	0.00	0.00
36	36.00	0.00	0.00

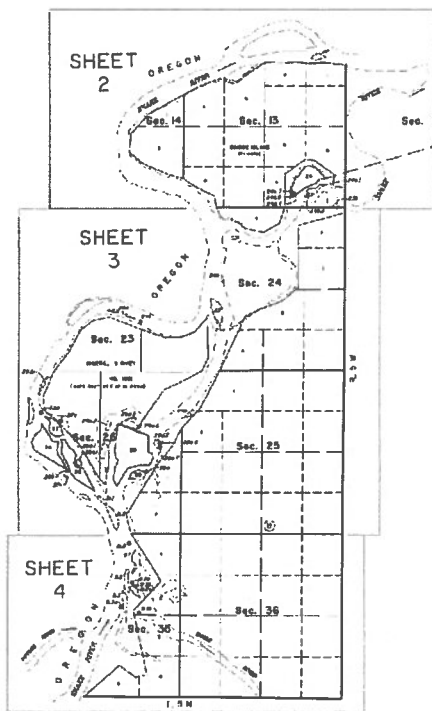


Report of the Surveyor, as to the accuracy of the survey, is hereby certified to be correct.

I, Mark L. Strayer, Cadastral Surveyor, HEREBY CERTIFY upon honor that I have surveyed the 2004 measures of carbon units in the Snake River, T. 6 N., R. 6 W., Boise Meridian, Idaho, beginning May 20, 2000 and completed June 9, 2000, and that the survey was made in strict conformity to the special instructions for Group 1344, Idaho, dated April 20, 2000, the subsequent instructions, dated April 24, 2000, the Manual of Surveying Instructions, 2000, and to the specific manner described and shown on the plat.

10/27/2011
Date

Mark L. Strayer
Cadastral Surveyor



Total Area of Federal Interest Land Surveyed in T. 6 N., R. 6 W., 79.32 Acres

The plat, on 4 sheets, constitutes the entire survey record of the survey of certain lands in the Snake River, T. 6 N., R. 6 W., Boise Meridian, Idaho.

History of surveys:

- 1867 1868 Allen W. Thompson surveyed the south and east "P. Thompson, subdivided land, and the Thompson of the Snake River, as shown on the plat approved December 12, 1868.
- 1902 Charles C. Rimmer surveyed the survey to the N.W. 1/4 of section 24, 25, 26, and 27, as shown on the plat approved January 24, 1903.
- 1907 Fred M. McCann independently resurveyed a portion of the south "P. Thompson, subdivided land, and surveyed the boundaries of the lands, as shown on the plat approved November 24, 1908.

The survey of these federal lands is the result of a settlement agreement between the Federal Government and the State of Idaho per the 2002 U.S. District Court (District of Idaho) decision CIV-02-00000-B.W. In the decree, some lands were awarded to the State of Idaho and some were awarded to the federal government.

To comply for all the federal lands in the settlement agreement, the State of Idaho lands are shown as they are surveyed lands as they are the survey nearest to the State of Idaho. The collective 2004 measures were also verified by comparison to 2003 NAD 83 survey.

National Aerial Photography Program (NAPP) 2004 images were used to verify the measures of the survey. The survey of these lands is the survey nearest to the State of Idaho. The collective 2004 measures were also verified by comparison to 2003 NAD 83 survey.

No monuments were set at the points for the 2004 auxiliary boundary corners (ABC) on the lands. The geographic coordinates for the survey were obtained from the plat, as in the NAD 83 (CONFORMABLE) and were determined by GPS measurements to an accuracy level of less than 0.10 meters. The survey was made in strict conformity to the Manual of Surveying Instructions, 2000, the subsequent instructions, dated April 24, 2000, the Manual of Surveying Instructions, 2000, and to the specific manner described and shown on the plat.

Except as indicated herein, the survey was made as shown on the plat approved December 12, 1868 and November 24, 1908.

For these lands not depicting bearings and distances as not surveyed as shown on the survey, refer to the plat approved December 12, 1868, January 24, 1903, and November 24, 1908.

Field Assistants:
Daniel S. Young, Cadastral Surveyor
Craig D. Dwyer, Surveying Technician
Michael S. Dwyer, Surveying Technician
Joshua W. Briggs, Surveying Aid

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
Boise, Idaho October 22, 2011

The survey represented by this plat, having been correctly executed in accordance with the requirements of the law and regulations of the Bureau, is hereby accepted.

For the Director

Mark L. Strayer
Chief Cadastral Surveyor for Idaho