

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 96-9331

Exam Date: 5/23/2013

1. Current Owner: RICHARD J GENDREAU
1040 RED CEDER LN
SANDPOINT ID 83864
(208)265-8886
2. Accompanied by: Ms. Gendreau
Phone No: Same as Above
Address: Same as Above
Relationship to Permit Holder: Owner's Wife

3. SOURCE

POND

TRIBUTARY

LOST LAKE

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:

POND SW1/4NW1/4 Sec. 25, Twp 58N, Rge 01W, B.M. BONNER County

Method of Determination: GPS and Visual Inspection

2.

PLACE OF USE: IRRIGATION

Twp	Rge	Sec	NE				NW				SW				SE				Totals
58N	01W	25	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
									.8										.8

Total Acres: 0.8

Method of Determination: Visual Inspection and GIS

3. YES Delivery System Diagram Attached (required). Indicate all major components and distances between components. Indicate weir size/pipe as applicable.
YES Aerial Photo Attached (required for irrigation of 10+ acres).
YES Photo of Diversion and System Attached

4.

Well or Diversion Identification No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
Pond Pump	Flotec	1.5	C48L2EC11C3	Flotec	21 inch

*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
NONE						

2. Measurements: The pump wasn't operational at the time of the exam, so a theoretical calculation was used.**E. FLOW CALCULATIONS** X Additional Computation Sheets Attached

Measured Method:

Measurement = 0.06 cfs (See Theoretical Calculation Sheet)

Acres = 0.02 cfs (0.03 cfs per acre X 0.8 acres = 0.014 cfs)

Permit allowed = 0.02 cfs

License recommend for 0.02 cfs for irrigation of 0.8 acres.

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 0.8 \text{ acres} \times 3 \text{ af} = 2.4 \text{ af.}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.02 \text{ cfs} \times 214 \times 1.9835 = 8.5 \text{ af}$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = 2.4 \text{ af}$$

2. Volume Calculations for Other Uses:

G. NARRATIVE/REMARKS/COMMENTS

This a fairly simple system. Water is diverted from the lake by a ^{1.5}~~1.75~~ Hp pump and diverted into an underground sprinkler system that irrigates a 0.7 acre yard and a 0.1 acre garden. The garden is downhill from the house.

I clarified the source as a pond tributary to Lost Lake. The original permit listed this as a pond tributary to an unnamed stream. There is a small channel between the pond and Lost Lake, but Lost Lake is the only named water body. The channel is very short, less than 50 feet, so this pond is actually tributary to Lost Lake. Standard data entry protocol asks agents to identify the tributary to the next named water body, so I clarified the source on the license.

There are no significant overlapping water rights. All of the other water rights in this area are for different owners from different sources.

Have conditions of permit approval been met? X 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	04/01 to 10/31	0.020 CFS	2.40 AF
<u>Totals:</u>		0.020 CFS	2.40 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 Other

I. AUTHENTICATION Daniel A. Nelson – Staff Hydrologist

Field Examiner's Name Daniel A. Nelson Date

Reviewer Date

State of Idaho
Department of Water Resources
Field Exam Map
96-9331

This map depicts the IRRIGATION place of use boundary for this water right at the time of this approval and is attached to the approval document solely for illustrative purposes.

01W



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

0 0.0125 0.025 0.05 Miles

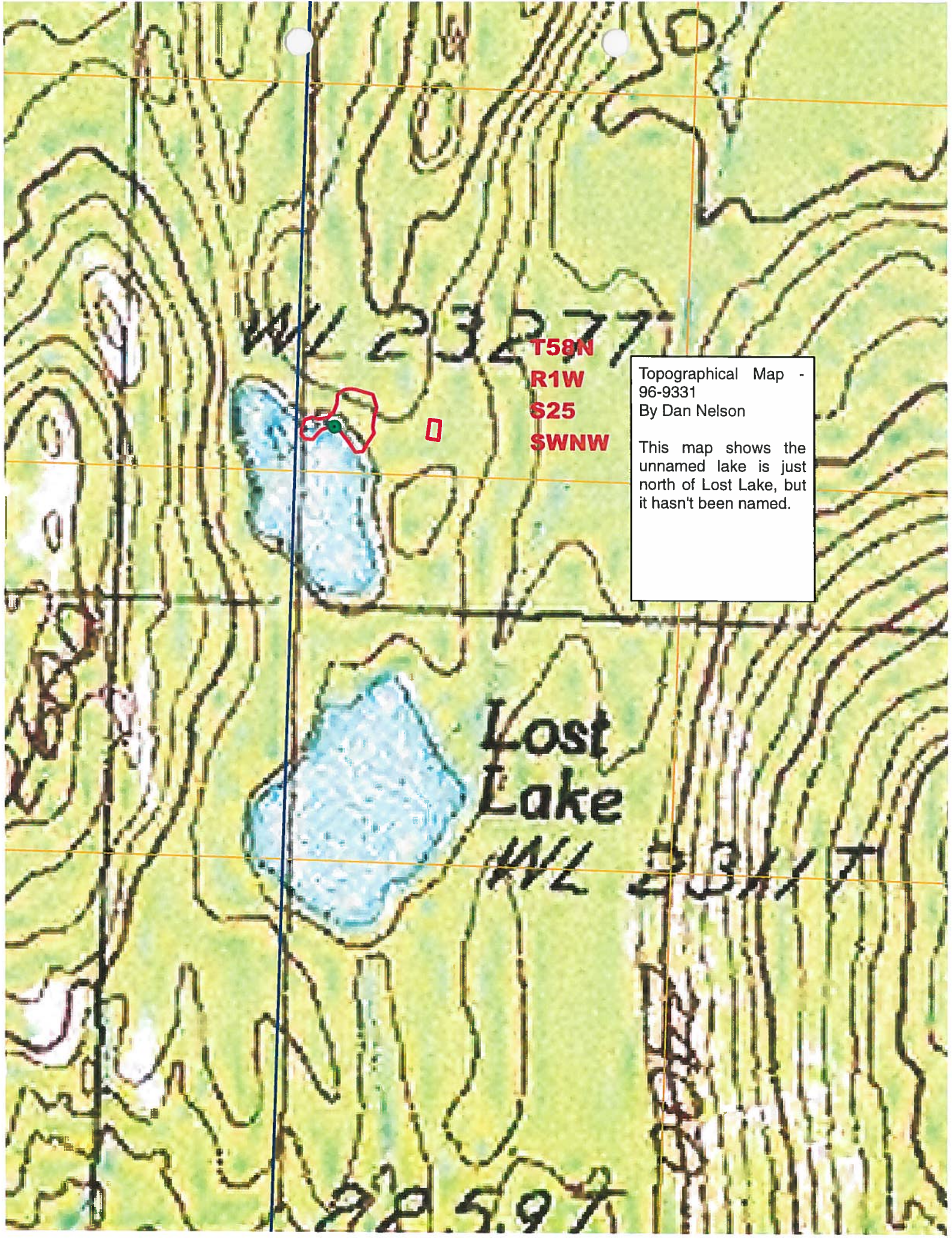




**T58N
R1W
S25
SWNW**

System Diagram - 96-9331
By Dan Nelson

This is a fairly simple system of a 1.5 Hp pump diverting water from the unnamed lake into a buried sprinkler system. There is a single line that runs downhill to a small garden spot that is irrigated with hoses and sprinklers.



T58N
R1W
S25
SWNW

Topographical Map -
96-9331
By Dan Nelson

This map shows the
unnamed lake is just
north of Lost Lake, but
it hasn't been named.

**Lost
Lake**

WL 23117

22597

THEORETICAL HORSEPOWER EQUATION WORKSHEET (cjh 1/92)

Water Right No.: 96-9331
 Reviewer: Dan Nelson
 Date of Review: 5/23/2013

P/D No.:	Senerio 1	Senerio 2	Senerio 3	
PUMP HORSEPOWER	1.5	1.5	1.5	
BOOSTER HORSEPOWER	0	0	0	
PUMPING LEVEL	10	10	10	
DISCHARGE PRESSURE	57	67	77	
RATE OF FLOW (cfs)	0.07	0.06	0.05	AVE
	29	25	22	26

The above calculates the formula =

$$Q = \frac{8.8 * (\text{Efficiency}) * \text{hp}}{\text{depth to water} + 2.31 * (\text{psi}) + \text{friction}}$$

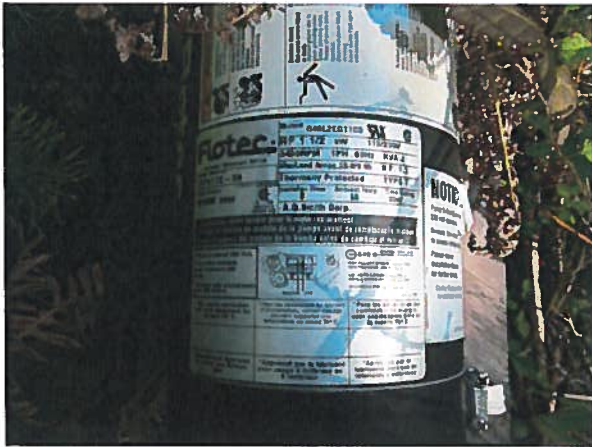
Assumptions: %70 efficiency.
 No Friction

Examiners Notes:

This is a 1 1/2 Hp pump that lifts the water from the lake approximately 5 to 10 feet. The pump delivers the water to the yard which is uphill approximately 40 feet in elevation. The sprinklers need between 40 and 60 psi to operate, so an additional 17 psi needs to be added to the standard pressure at the pump (40 ft / 2.31 = 17.3 feet. This system is more than capable of delivering the 0.02 cfs allowed under this permit.

PHOTOGRAPHER AND DATE OF PHOTOS DANIEL A NELSON 5/23/2013

FILE NUMBER 96-9331



This first photo shows the pump nameplate. This is a 1.5 Hp pump.



This photo shows the pump at an extended view. The pipeline coming out of the front of the pump is the intake line, and the 2 inch pipe coming out of the top of the pump is the line to buried sprinkler system.



This photo shows the intake from the lake. It is a basic PVC pipeline into the lake with a small screen on the end of the pipe.

PHOTOGRAPHER AND DATE OF PHOTOS DANIEL A NELSON 5/23/2013

FILE NUMBER 96-9331



The photos above show the yard that is irrigated from this system. The yard is approximately 0.7 acres.

The photos below show the garden area. The garden area is located in the trees to the east of the home and yard. The garden area is approximately 0.1 acres. With the yard and the garden area are combined, the total irrigated ground is approximately 0.8 acres.

