

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
IN-OFFICE REVIEW/BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATIONPermit No: 75Exam Date: 07/02/13

95-16805
12/11/2014

1. Does this qualify for an in-office field exam (IDAPA 035.02.r)? X Y N
- Irrigation of 5 acres or less
 - Storage of up to 14.6 AF for stockwater purposes only
 - Any use other than irrigation or storage, if the combined diversion rate is 0.24 cfs or less
 - Other < >

2. Current Owner: Name: Thomas and Jennifer Servine
Owner of Record Correct? X Y N
Address of Record Correct? Y N
If No: Address

3. Beneficial Use Fees have been paid: X Y N Receipt No: C0

4. **SOURCE** **TRIBUTARY**
Couer D Alene Lake Spokane River

Method of Determination: GIS and Taxlot DataChange in Source: Y X N**B. OVERLAP REVIEW**

1. Other water rights with the same place of use: NO Overlap

Water Right No.	Source	Purpose of Use	Basis
NONE			

Comments: It appears as though there are several water rights overlapping this place of use. However, water rights 95-4064, 95-4065 are for the marina to the northwest of the property. Water rights 95-4100 and 95-7305 are for water rights on the other side of the small bay. Water right 95-8598 is for the property next door on the northwest side. Water right 95-8751 is for the two lots at the end of the driveway.

2. Other water rights with the same point of diversion: NO Overlap

Water Right No.	Source	Purpose of Use	Basis
NONE			

Comments: There are no other rights that are really close to this diversion point except for water right 95-8598, which is next door.

C. DIVERSION AND DELIVERY SYSTEM**1. LOCATION OF POINT(S) OF DIVERSION:**

Source	Govt. Lot	1/4	1/4	1/4	Sec.	Twp.	Rge.		County
Lake Pump	4		NW	SW	19	48N	4W	B.M.	Kootenai
								B.M.	
								B.M.	

Method of Determination: GIS and Taxlot data.

Change in POD? X N Amendment Required? X N2. **PLACE OF USE:** 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	
48N	4W	19										D							
		Lot #																	
Total Acres =																			

Method of Determination: GISChange in POU? X N Amendment Required? X N Delivery System Diagram Attached (required). Indicate all major components and distances between components.

Indicate weir size/pipe as applicable.

 Aerial Photo Attached (required for irrigation of 10+ acres). 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
Unknown					

*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: No measurement is required for an in-house exam, but a theoretical calculation was used to determine if the diversion rate is reasonable.**E. FLOW CALCULATIONS** X Additional Computation Sheets Attached

Measured Method:

A theoretical analysis shows that a diversion rate of 0.04 cfs is possible with a 1 Hp pump. The owner didn't know the size of pump that they had, so I will recommend a diversion rate of 0.04 cfs, which is what was requested on their application for permit.

Measurement = 0.4 cfs**Permit allowed = 0.4 cfs****License recommend for 0.4 cfs.****F. VOLUME CALCULATIONS**

1. Volume Calculations for Irrigation:

$$V = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = \underline{\quad X 3.5 \quad} = \underline{\hspace{2cm}}$$

$$V_{I.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = \underline{X 214 X 1.9835} = \underline{\hspace{2cm}}$$

$$V_{D.R.} = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = \underline{\hspace{2cm}}$$

2. Volume Calculations for Other Uses:

This is a domestic use. According to processing memo #22, and Domestic use for in-house and yard irrigation can have up to 1.2 acre feet of annual water use. I am recommending 1.2 af for this permit.

G. PURPOSE OF USE

Irrigation ☒ Y ☐ N # Stock ☐ Domestic # of Homes ☐ 1

Other: < >

Change in Purpose of Use? ☐ Y ☐ N

Method of Determination: Taxlot data and conversations with owner.

If Yes: From Use ☐ To Use ☐ Amount ☐ CFS ☐ AFA ☐

H. NARRATIVE/REMARKS/COMMENTS

This permit is qualified for an in-house exam. I did receive confirmation from the owner that the fish screen was installed, so it appears as though everything is in order. The owner couldn't remember the size of the pump they had, and this is a vacation home, so they weren't able to supply that information. All of the conditions have been met, and it is reasonable to believe that the owners are using water for this system. Therefore, I am recommending a diversion rate of 0.04 cfs and 1.2 af, which is the standard for domestic uses. The Taxlot data shows the home was built in 1977, so the owners are just now catching the water rights up to the actual use on the ground.

I am going to leave the conditions 004, X01, and 187 on the license, but I am going to remove condition X15 since the owner confirmed that this condition has been complied with.

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

I. RECOMMENDATIONS

1. Recommended Amounts

BENEFICIAL USE	PERIOD OF USE	DIVERSION RATE	ANNUAL VOLUME
Irrigation	04/01 to 10/31	0.04 CFS	1.2 AF
<u>Totals:</u>		0.04 CFS	1.2 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

Other: < >

J. AUTHENTICATION

Field Examiner's Name  Date 12-11-14

Reviewer ☐ Date ☐

THEORETICAL HORSEPOWER EQUATION WORKSHEET (cjh 1/92)

Water Right No.: 95-16805
 Reviewer: Dan Nelson
 Date of Review: 12/11/2014

P/D No.:	Well #1	Well #2	Well #1 Full Drawdown
PUMP HORSEPOWER	0.75	1	1.5
BOOSTER HORSEPOWER	0	0	0
PUMPING LEVEL	50	50	50
DISCHARGE PRESSURE	40	50	60
RATE OF FLOW (cfs)	0.03 15	0.04 17	0.05 22
			0.04 17.75

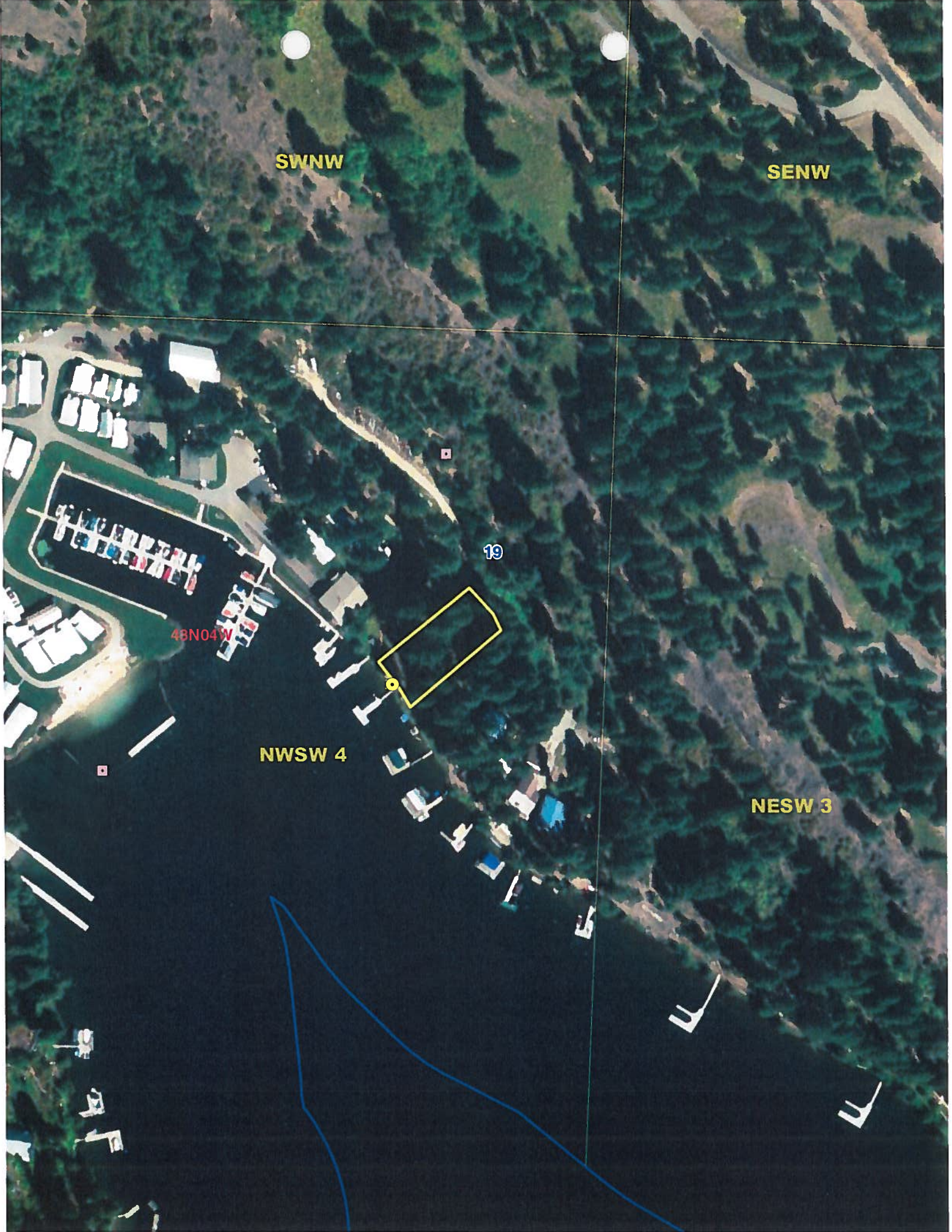
The above calculates the formula =

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

Assumptions: %70 efficiency.
 No Friction

Examiners Notes:

I used the standard domestic pressure based on the pressure tank ratings of 40 to 60 psi. I used a lift of 50 feet based on the topo maps. It would take a 1 Hp pump to deliver the flow rate allowed by this permit. A 1 Hp pump is a pretty standard domestic pump, so I will recommend the entire 0.04 cfs for this system.



SWNW

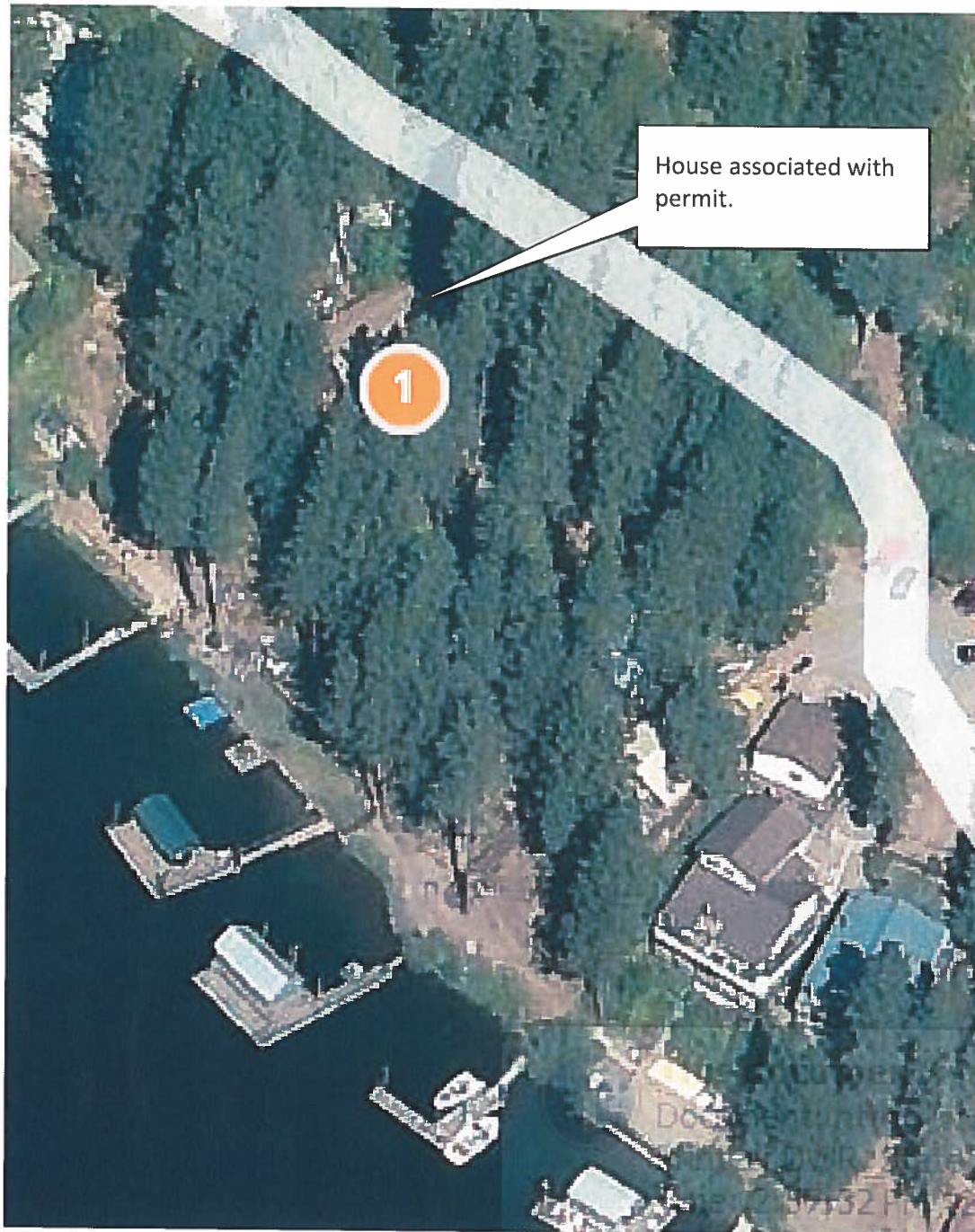
SENW

19

48N04W

NWSW 4

NESW 3



This is a map showing the property with this permit from Bing Maps. It shows the house associated with the Domestic use.