

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

A. GENERAL INFORMATIONPermit No: 65-23638

Exam Date: 12/20/2016

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: Pasquale and Karen Mastantuono
- Owner of Record Correct? X Y N
- Address of Record Correct? Y N
- If No: Address

Tax lot data shows Pasquale Alexander Mastantuono and Karen Ann Mastantuono Revocable Trust as the owners of the property.

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

4. **SOURCE** **TRIBUTARY**

Ground Water

Method of Determination: Well Driller's Manual GPS Readings, GIS, and Tax Parcel 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

Comments: There are numerous water rights that are in the same 40 acre tract, but the majority of them are on the south side of the river. The only rights that are on the same side of the river are the neighbor's right 65-11061, and canal company water rights. The application states that this land was acquired from the Idaho Department of Transportation. Review of past aerial photos confirm that this area has been used as a staging area for bridge construction and road work. The aerial photos show that this land hasn't been irrigated since at least the 1990's, therefore, I don't believe that there is any canal company water available to this ground.

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

Water Right No.	Source	Purpose of Use	Basis

Comments: The only active water right points of diversion on the north side of the river are for the neighbor to the east and the property on the west side of the highway. This is a new point of diversion and has not been used by anyone else. It appears by the photos in the application file, that they have built a structure next to an older USGS Gauging Station, which I confirmed in GIS as being the Payette River NR Payette ID gauging site 13251000 which has been in place since at least 1935.

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
River Diversion			SE	SW	10	8N	5W	B.M.	PAYETTE
								B.M.	
								B.M.	

Method of Determination: GIS and Tax Lot data.Change in POD? X N Amendment Required? X N**2. 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	
8N	5W	10												0.7					0.7
		Lot #																	
Total Acres =																			0.7

Method of Determination: GIS and Tax Lot Data Please Note: A very small portion of the irrigated land (less than 0.023 acres) could possibly be in government Lot 3 (SESW), but there is not enough irrigated ground in the government lot to warrant an amendment to correct the place of use. Without an official survey of the irrigated ground, it would be impossible to confirm if any of the land in Government Lot 3 is actually irrigated.

Change 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.

 X 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
River Pump	Unknown	1.5			

*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. I did perform a theoretical calculation based on the pump horsepower and estimated lift and pressure to determine if the diversion rate was reasonable.

E. FLOW CALCULATIONS X Additional Computation Sheets Attached

Measured Method:

The application for permit stated that the pump being used was a 1.5 Hp pump. I performed a theoretical calculation to determine if the pump could provide the needed diversion rate. Please see the attached theoretical sheet. I also used the standard irrigation requirements allowed for the irrigation of property less than 5 acres of 0.03 cfs per acre allowed in Processing Administrative Memorandum #17 to provide an estimated flow rate.

Acre Limits per Administrative Memorandum #17 = 0.7 acres X 0.03 cfs per acre = 0.021 cfs

Theoretical Calculation = 0.08 cfs average pump capacity

Permit allowed = 0.3 cfs

I am recommending a diversion rate of 0.03 cfs, since the system was clearly designed to operate at or above the permitted amounts. Most yard sprinkler systems are designed for an average diversion rate of 12 gpm or 0.0267 cfs, so reducing the diversion rate based on the acre amount would not allow the permit holder to properly operate their system, and would put them immediately out of compliance with their water right.

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 0.7 \text{ acres} \times 4.5 = 3.2 \text{ af}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.03 \text{ cfs} \times 260 \times 1.9835 = 15.5 \text{ af}$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = 3.2 \text{ af}$$

2. Volume Calculations for Other Uses:

N/A

G. PURPOSE OF USE

Irrigation X Y N # Stock _____ Domestic # of Homes _____

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 qualifies for an in-house exam. This permit is for a small park at a boat take in/out area on the Payette River. The park area was originally a Idaho Department of Transportation staging area for working on roads and bridges. Aerial photography provides no evidence that this ground has ever been irrigated. This ground is within the border of Lower Payette Ditch Company and Lake Reservoir Canal Company, but there is nothing in the file or aerial photography to suggest that there has been access to the water provided by these two organizations.

The point of diversion and place of use is located on the bank of the Payette River. The Government Plat map shows this ground in the old river bed and not in the Government Lot 3. It does appear as though a very small portion of the irrigated ground may be in Government Lot 3, but the amount of irrigated ground is so small that it doesn't make sense to require an amendment of the permit to add less than 0.023 acres onto the permit

Conditions 2 (R05), 4 (01R), and 5 (185) will be carried forward to licensing. Condition 1 (R69) will be changed to condition X31 as is standard for irrigation uses less than 1 acre. Condition 3 (01H) will be changed to condition R02 and condition 6 (121) will be changed to condition 103 as is standard. The proof beneficial use statement stated that they have installed their lockable controlling works, so they have complied with all of the conditions of the permit.

Have conditions of permit approval been met? X Yes No

I. RECOMMENDATIONS**1. Recommended Amounts**

<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>DIVERSION RATE</u>	<u>ANNUAL VOLUME</u>
Irrigation	03/01 to 11/15	0.03 CFS	

Totals: 0.03 CFS

Please Note: This is a surface water irrigation water right, so no volume is required on the license.

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 – DANIEL A. NELSON – STAFF HYDROLOGIST

Field Examiner's Name  Date 12-20-16

Reviewer _____ Date _____



Place of Use

Point of Diversion

Permit 65-23638 Field Exam Map

The place of use is for a small park area at the local boat ramp. The permit states that the park has a buried sprinkler system used to irrigate the park. The point of diversion is next to the USGS Gauge.

Permit 65-23638 Google Earth Aerial Photo for 2016.



You can see the lands being irrigated in the Google Earth 2016 aerial photography. It is a relatively small park by the boat ramp.

THEORETICAL HORSEPOWER EQUATION WORKSHEET (cjh 1/92)

Water Right No.: 65-23638
 Reviewer: Dan Nelson
 Date of Review: 12/19/2016

P/D No.:

PUMP HORSEPOWER
 BOOSTER HORSEPOWER

PUMPING LEVEL

DISCHARGE PRESSURE

RATE OF FLOW (cfs)

Scenario 1
1.5
0
10
40
0.09
40

Scenario 2
1.5
0
10
50
0.07
33

Scenario 2
1.5
0
10
60
0.06
28

Average
 0.08
 36.77

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 fairly flat area, so I used an estimated 10 feet of lift. This system is set up specifically for sprinklers, so I used pressure reading of 40 to 60 psi. Most sprinklers operate in the 40 to 45 psi range, so this seems more than adequate. The permit allowed a diversion rate of 0.03 cfs, so a 1.5 Hp pump is more than adequate to supply the 0.03 cfs requested in the permit.