

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 63-31142

Exam Date: 8/23/2012

1. Current Owner: F J WILSON
33138 FORT LN
PARMA ID 83660
(208)577-1647
and
SARAH WILSON
33138 FORT LN
PARMA ID 83660
(208)412-6648
2. Accompanied by: FJ Wilson
Phone No: (208)577-1647
Address: 33138 Fort Ln, Parma, ID 83660
Relationship to Permit Holder:

3. **SOURCE**

WASTE WATER

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: 63-33368, 63-33369

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

WASTE WATER L4 SE 1/4 SW 1/4 Sec. 18, Twp 06N, Rge 05W, B.M. CANYON County

Method of Determination: GPS

2.

PLACE OF USE: IRRIGATION

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	
06N	05W	18												12.0					12.0
														LY					

Total Acres: 12

CAS

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 = 2.09 cfs

The diversion rate to be licensed under this right will be limited to 0.20 cfs

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) =$$

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

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

No volume calculations required for waste water irrigation

2. Volume Calculations for Other Uses:

G. NARRATIVE/REMARKS/COMMENTS

This permit was field examined on 8/23/12 by myself, Craig Tesch, and Jennifer Cuhacyan of IDWR. The owner FJ Wilson and his neighbor, Chris Cullen, accompanied us on the exam. This permit authorizes the diversion of waste water to be used for irrigation purposes. The water source is waste water runoff from the end of an unnamed ditch maintained by the Farmers Cooperative Ditch Company (Farmers Coop). This permit does not involve any shares from the Farmers Coop. Water in the ditch flows east to west along the north side of Grandview Road towards the POU.

At the first of two permitted POD locations (approximately 450 feet east of the POU along the north side of Grandview Road), water was diverted by collecting waste water in a corrugated pipe and bubble screen system, which was then piped west to the POU in an 8-inch plastic pipe. Two riser pipes and a diverter along the north side of Grandview Road were then used to move water north from this 8-inch pipeline to sprinkler systems in the POU to irrigate fields of hay, alfalfa, or oats. The 8-inch pipeline then continues west under Fort Lane Road where the next users can hook into the system. At the time of our field exam, the irrigation system was not running because the collection system at the first permitted POD location had been removed by the Farmers Coop within the last year. As a result, sprinkler lines and sprinklers were also removed due to a lack of access to water. Because this field information was not available, a 2004 aerial photo was used to verify irrigation use for this permit.

At the second permitted POD location, which is 300 feet east of the first permitted POD and is also the location of the licensed POD, the Farmers Coop constructed a concrete sharp-crested weir. Water at the location of the licensed POD flows down the weir into a piping system that travels 600 feet west where it emerges, combines with waste water runoff from the southeast (from the Giardelli property), and continues around the POU in a natural ditch. The water turns away from the POU at its northern peak, flows past one more waste water user, and discharges to the Snake River 250 feet north/northwest of the Wilson property. Additionally, the irrigated fields within the POU drain to a pipe that discharges to the Snake River along the western boundary of the POU near the Cullen residence.

In summary, the beneficial use of this water right extends from May 1st through November 15th and includes irrigation of 12 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	03/01 to 11/15	0.200 CFS	
<u>Totals:</u>		0.200 CFS	

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 *Gregory T. Smith* Date 9/5/2012

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?

Pipe diameter, d_0	8	inches
Manning roughness, n ?	0.013	
Pressure slope (possibly ? equal to pipe slope), S_0	0.0298	rise/run
Flow depth fullness (1 or 100% for full pipe)	100	%

Results:		
Flow, q	2.0858	cfs
Velocity, v	5.9757	ft/sec
Velocity head, h_v	0.5550	ft
Flow area	0.3491	ft ²
Wetted perimeter	2.0944	ft
Hydraulic radius	0.1667	ft
Top width, T	0.0000	ft
Froude number, F	0.00	
Shear stress (tractive force), τ	1.2404	psf

Please give us your valued words of suggestion or praise. Did this free calculator exceed your expectations in every way?

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Last Modified 09/11/2012 10:11:11

System Diagram for 63-31142



Photos taken by Craig Tesch on 8/23/2012



Licensed POD (also the permitted POD farthest from the POU) – Looking west along the waste water ditch and Grandview Road showing the new concrete sharp-crested weir at the licensed POD.

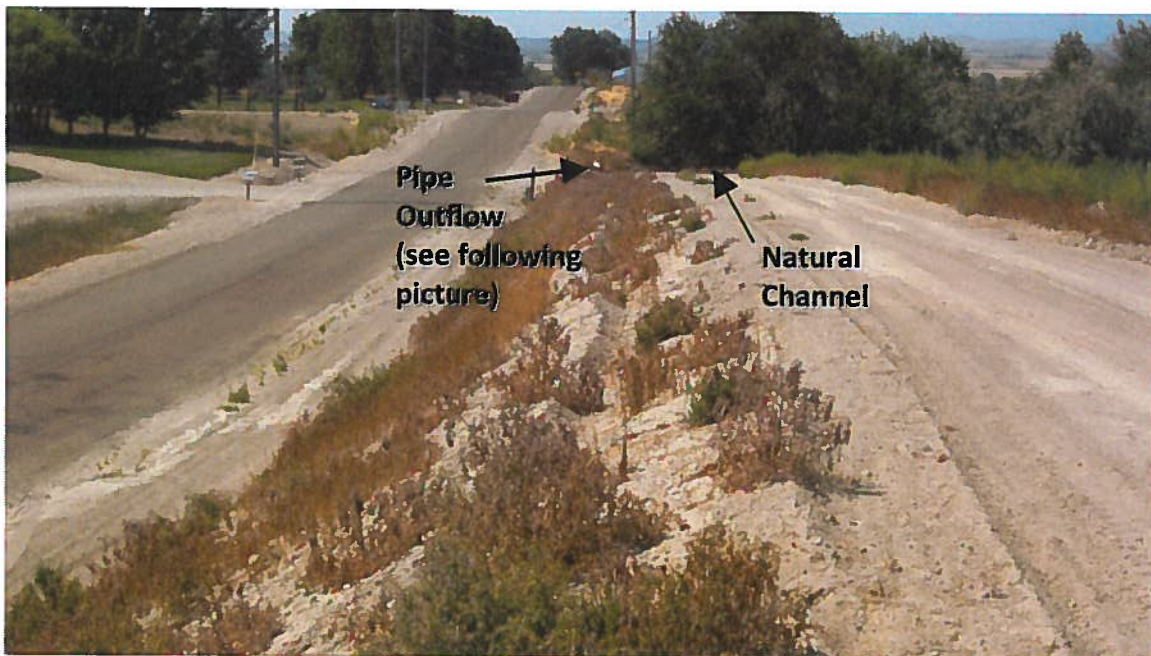


Permitted POD nearest the POU (2007 image from Google Maps) – Looking west along Grandview Road, 150 feet west of the licensed POD, showing a corrugated pipe collection system (no longer used, see next picture).

Photos taken by Craig Tesch on 8/23/2012



Old, unused, irrigation equipment (sitting behind Wilson's house) – Corrugated pipe and bubble screen previously used to collect and transmit waste water to the irrigation system from one of the permitted PODs.



Permitted POD location nearest the POU (2012 image by Tesch, after pipe and bubbler were removed) – Looking west along Grandview Road, 150 feet west of the licensed POD, showing the outflow location after waste water travels from the licensed POD through buried pipe to a natural channel.

Photos taken by Craig Tesch on 8/23/2012



Outflow location and flow junction – Looking southeast, at the southeast corner of the McCallum property and approximately 600 feet west of the licensed POD, showing where water emerges from the buried pipe along Grandview Road and meets up with wastewater flow from the Giardelli property. The combined water enters into a natural channel just several feet northwest of this picture.



First riser pipe – Looking north at the first riser pipe in the irrigation system approximately 1,000 feet west of the licensed POD on Grandview Road.

Photos taken by Craig Tesch on 8/23/2012



Diverter – Continuing west on Grandview Road from the above picture, looking north at the diverter for the irrigation system approximately 110 feet west of the first riser pipe.



Second riser pipe – Continuing west on Grandview Road from the above picture, looking north at the second riser pipe for the irrigation system approximately 110 feet west of the diverter.