

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 3-7063

Exam Date: 5/29/2012

1. Current Owner: IDAHO POWER CO
C/O RALPH GRAHAM
PO BOX 70
BOISE ID 83707
(208)388-2905
2. Accompanied by: Kory Allred
Phone No: 541-785-3323 Cell: 541-785-7209
Address: same as above
Relationship to Permit Holder: Manager – Woodhead Park at Brownlee Reservoir

3. SOURCE

SNAKE RIVER

TRIBUTARY

COLUMBIA RIVER

B. OVERLAP REVIEW

1. Other water rights with the same place of use: none
2. Other water rights with the same point of diversion: 03-10162

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

SNAKE RIVER

L3 SE1/4SW1/4

Sec. 15, Twp 17N, Rge 05W, B.M.

WASHINGTON County

Method of Determination: GPS and visual inspection

2.

PLACE OF USE: IRRIGATION

Twp	Rge	Sec	NE				NW				SW				SE				<u>Totals</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>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	
17N	05W	14											2.1						2.1
17N	05W	15															.3		.3

Total Acres: 2.4

Method of Determination: GIS and visual inspection

3. YES Delivery System Diagram Attached (required). Indicate all major components and distances between components. Indicate weir size/pipe as applicable.
- YES Map Attached Showing Location(s) of point(s) of diversion and place(s) of use (required). Scale must be 1:24,000 or greater.
- 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 Model No.	Pump Make	Pump Serial No. or Discharge Size
Site Tag # A0018525	Grundfos	25	MS6000	Submersible	4.5" discharge

*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
Thyme Flyte	Polysonic					3/28/2012

2. Measurements: Measurement taken on outflow of pipe, outside east side of pump house. Flow measurement determined to be 188 GPM. Sprinklers on fields are 5/32" rain bird heads and Hunter PGP #9 heads. Each supply 6.1 GPM at 70 psi for 30 heads which equal 188 GPM which correlates with observed measurements.

E. FLOW CALCULATIONS X Additional Computation Sheets Attached

Measured Method:

Average flow rate from Thyme Flyte equals 188 GPM or 0.42 cfs.

Water use is limited by permitted amount of 0.06 cfs.

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 4 \times 2.4 = 9.6 \text{ AF}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.06 \times 231 \text{ days} \times 1.9835 = 27.5 \text{ AF}$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = 9.6 \text{ AF}$$

2. Volume Calculations for Other Uses: N/A

G. NARRATIVE/REMARKS/COMMENTS

The land covered under this permit primarily uses sewage waste water from facilities located at Woodhead Park at Brownlee Reservoir on the Snake River. Water from waste treatment is land applied onto three fields described in this permit. There is insufficient land application water to maintain a growing crop on these fields as required by DEQ. Therefore, the irrigation of these fields is supplemented by Snake River water under this permit.

This permit is diverted from the Snake River in Lot 3 (SWSE) of Sec. 15, Twp 17N, Rge 05W. The water from the point of diversion travels in a southeasterly direction along the park road to the main highway, crossing under the road and following north running parallel to the highway to the three fields. The land application water T's into the main line with a valve which allows either Snake River water or land application water to be used. Both Snake River water and land application water cannot be used at the same time.

In 2011, 2.5 af was diverted from the Snake River and 1.3 af was land application water for a total of 3.8 af. 2.5 tons of grass hay was harvested off the three fields and after September, three horses were pastured on the fields. Year 2011 was an extremely wet year so full irrigation was not required. Therefore, I am recommending the full 4.0 af per acre for this permit with a condition that limits the use of this permit with the land application to be limited to 4.0 af per acre.

Water Right 03-10162 uses the same point of diversion, but irrigates only the ground west of the highway. It uses the same main lines and delivery system shown in the system diagram. Water Right 69-7098 is a ground water right which provides the culinary water for the park and is not used for irrigation. Sewage water is the only water used to irrigate the lands covered by this permit.

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	03/15 to 10/31	0.060 CFS	
<u>Totals:</u>		0.060 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 Glen Gardiner

Field Examiner's Name Glen Gardiner Date 13 June 2012

Reviewer _____ Date _____

State of Idaho
Department of Water Resources

Attachment To Water Right License

3-7063

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.



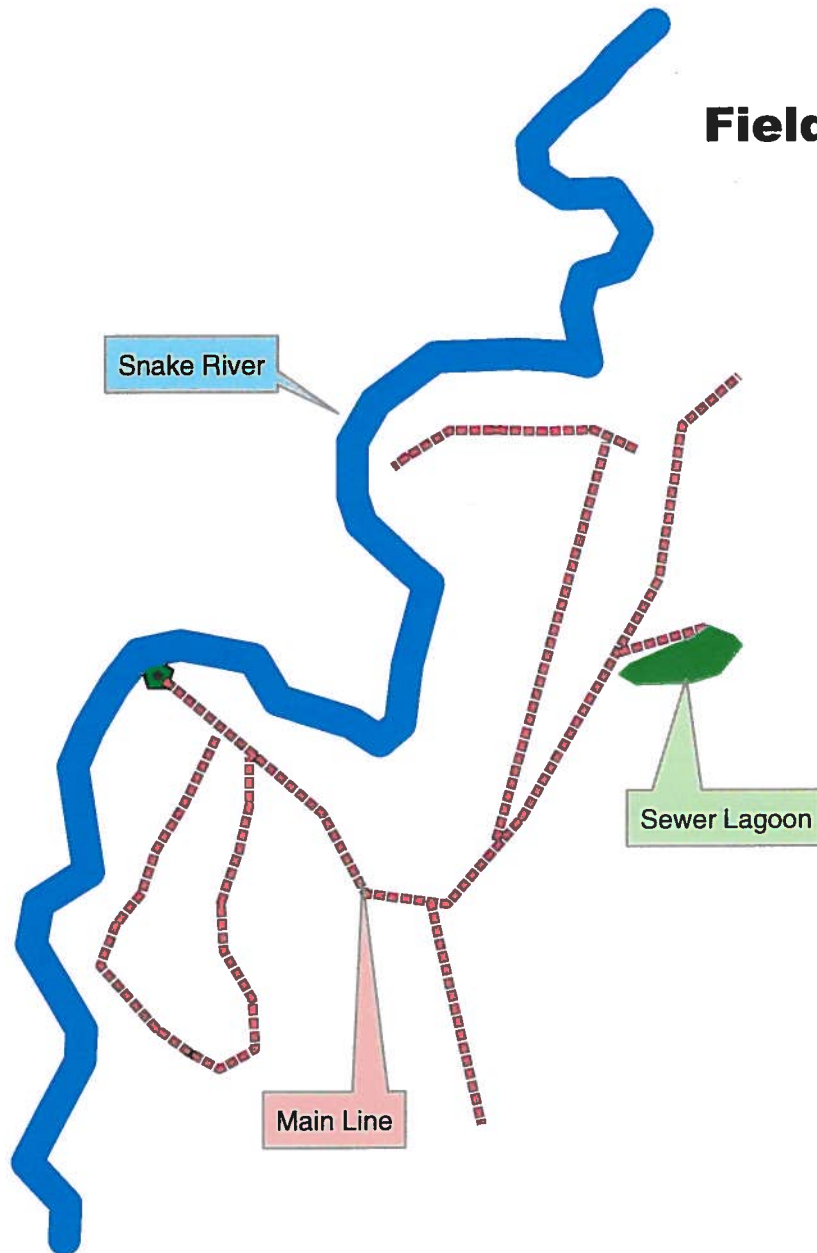
0 0.05 0.1 0.2 Miles

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



Field Exam Map for 03-07063

System Diagram



The land covered under this permit primarily uses sewage waste water from facilities located at Woodhead Park at Brownlee Reservoir on the Snake River. Water from waste treatment is land applied onto three fields described in this permit. There is insufficient land application water to maintain a growing crop on these fields as required by DEQ. Therefore, the irrigation of these fields is supplemented by Snake River water under this permit.

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03-07063

MODE SELECT
INPUTOUTER DIAMETER
4.5201 INPIPE MATERIAL
?WALL THICKNESS
0.3200 ININNER LINING
? NO LING.KIND OF FLUID
? WATERSENSOR MOUNTING
? UTYPE OF SENSOR
? SMALLSPACING
3.141 IN UZERO MODE
CLEARZERO MODE
AUT ZEROZERO MODE
ZERO OPR05-29 13:1500 *R
+002.70 % AI2MODE SELECT
TO CHECK0148.0 MMSEC
102.11 % TO05-29 13:1600 *R
+002.70 % AI2

03-07063

MODE SELECT
INPUTOUTER DIAMETER
4.5201 INPIPE MATERIAL
?WALL THICKNESS
0.3200 ININNER LINING
? NO LING.KIND OF FLUID
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AUT ZEROZERO MODE
ZERO OPR05-29 13:1500 *R
+002.70 % AI2MODE SELECT
TO CHECK0148.0 MMSEC
102.11 % TO05-29 13:1600 *R
+002.70 % AI213:31+ 1.888E 26PM 00R
+ 5.124E 0FPS 00R
+00007 *10 G 00R
-00000 *10 G 00R13:20+ 1.880E 26PM 00R
+ 5.104E 0FPS 00R
+00000 *10 G 00R
-00000 *10 G 00R13:21+ 1.859E 26PM 00R
+ 5.045E 0FPS 00R
+00018 *10 G 00R
-00000 *10 G 00R13:22+ 1.854E 26PM 00R
+ 5.032E 0FPS 00R
+00037 *10 G 00R
-00000 *10 G 00R13:23+ 1.900E 26PM 00R
+ 5.183E 0FPS 00R
+00056 *10 G 00R
-00000 *10 G 00R13:24+ 1.900E 26PM 00R
+ 5.157E 0FPS 00R
+00075 *10 G 00R
-00000 *10 G 00R13:25+ 1.930E 26PM 00R
+ 5.239E 0FPS 00R
+00094 *10 G 00R
-00000 *10 G 00R13:26+ 1.895E 26PM 00R
+ 5.144E 0FPS 00R
+00113 *10 G 00R
-00000 *10 G 00R13:27+ 1.890E 26PM 00R
+ 5.131E 0FPS 00R
+00132 *10 G 00R
-00000 *10 G 00R13:28+ 1.849E 26PM 00R
+ 5.019E 0FPS 00R
+00151 *10 G 00R
-00000 *10 G 00R13:29+ 1.883E 26PM 00R
+ 5.111E 0FPS 00R
+00170 *10 G 00R
-00000 *10 G 00R13:30+ 1.876E 26PM 00R
+ 5.091E 0FPS 00R
+00188 *10 G 00R
-00000 *10 G 00R13:31+ 1.888E 26PM 00R
+ 5.124E 0FPS 00R
+00207 *10 G 00R
-00000 *10 G 00R

Woodhead Park Irrigation 2011

December 1, 2011

May Irrigation Total

All irrigation was from supplemental irrigation. Beginning reading was 63224, ending reading was 63584. Total irrigation was 36,000 gallons. Fields 1 & 2 totaled 23,600. Field 3 totaled 12,400.

June irrigation total

All irrigation was supplemental irrigation. Beginning reading was 63584, ending reading was 64952. Total irrigation was 136,500 gallons. Fields 1 & 2 totaled 70,400. Field 3 totaled 66,100.

July irrigation total

All irrigation was supplemental irrigation. Beginning reading was 64952, ending reading was 68942. Total irrigation was 399,000. Field 1 totaled 68,000. Field 2 totaled 137,300. Field 1 & 2 irrigated together totaled 28,200. Field 3 totaled 165,500.

August irrigation total

Irrigation was waste water, and supplemental irrigation. For the supplemental irrigation, beginning reading was 68942, ending reading was 69414. Supplemental total was 47,200. For the waste water, beginning reading was 77301, ending reading was 82832. Total waste water was 413,718.8. Total irrigation for field 1 was 133,125.6. Field 2 totaled 161,828.8. Field 3 totaled 165,964.4. Total combined irrigation was 460,918.8.

September irrigation total

All irrigation was supplemental irrigation. Beginning reading was 69414, ending reading was 71487. Total irrigation was 207,300 gallons. Field 1 totaled 40,400. Field 2 totaled 76,100. Field 3 totaled 90,800.

Approximately 2.5 tons of grass was taken off in July. July 31 and August 1, 2 horses were on fields. Since September 23, 3 horses have been on fields.

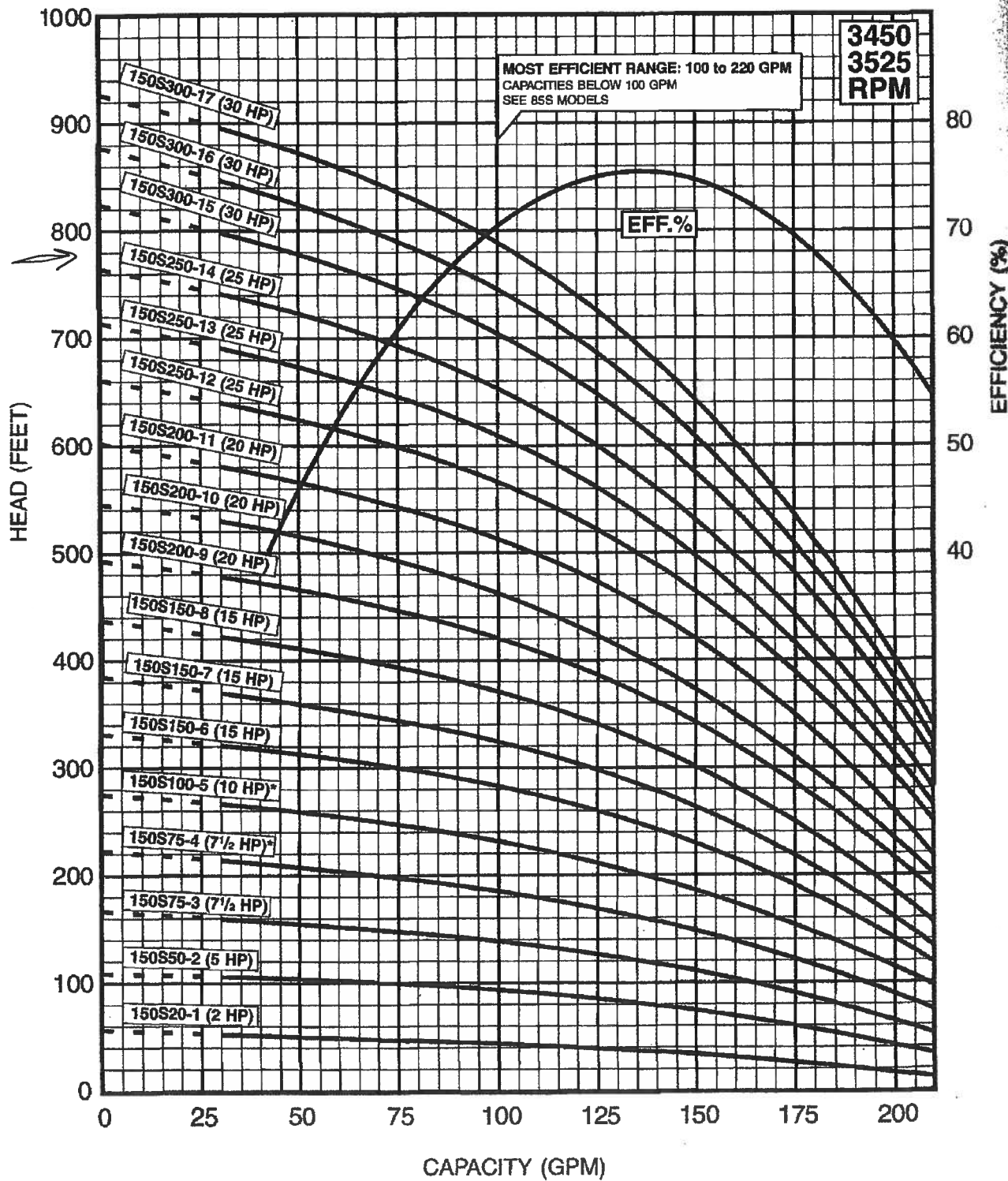
Lagoon depth at manhole on August 24, was 68 inches at manhole, and 15' 4" down the side of the lagoon.

Woodhead irrigation

FLOW RANGE: 30 - 220 GPM

OUTLET SIZE: 3" NPT

NOMINAL



SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE.

4" MOTOR STANDARD, 2-10 HP/3450 RPM

6" MOTOR STANDARD, 7.5-60 HP/3450 RPM.

8" MOTOR STANDARD, 75 HP/3525 RPM.

* Alternate motor sizes available.

Performance conforms to ISO 9906 Annex A
@ 5 ft. min. submergence.

9/22/08

Woodhead Park

Changed out both pump & motor.

HR meter reading @ time of change is 15667 hrs.

Pump Casing 4 1/2" O.D. (4") 9-20' sections.

Surround Casing 10"

All new gaskets on flanges in pump house

Motor Info.

Grundfos MS6000

3 ~ 60 Hz

25 HP

SF: 1,15

Code H

VAC

DOL 440

- 460

Max S.F Amps

42,0

41,0

cos ϕ

0,85

0,83

P. Max Amb.

60 Bar

IP58

Cont. Duty 86°F

0,5 Ft/s

Ins. CL.F IEC34

Weight 58,0 kg / 128 lb

Model B

Running Amps taken after installation.

T1 - Yellow

T2 - Black

T3 - Red

37.8

36

36.5

PHOTOGRAPHER AND DATE OF PHOTOS Glen Gardiner May 29, 2012

FILE NUMBER 03-07063



This photo shows the pump house. This is a submersible pump that goes out into the river below the pump house.



This photo shows the power panel where water comes into the pump house.



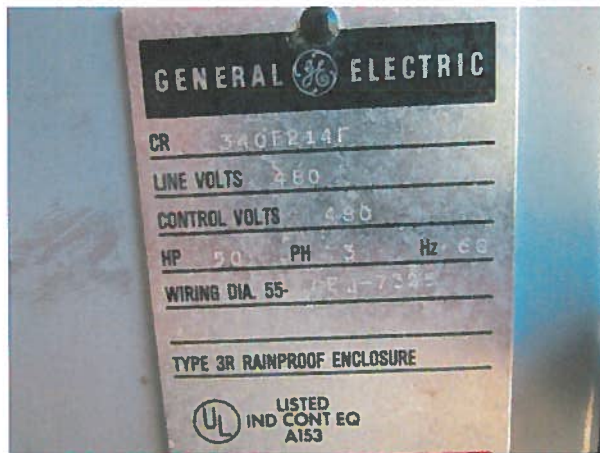
This photo shows where the water exits the pump house.

PHOTOGRAPHER AND DATE OF PHOTOS Glen Gardiner May 29, 2012

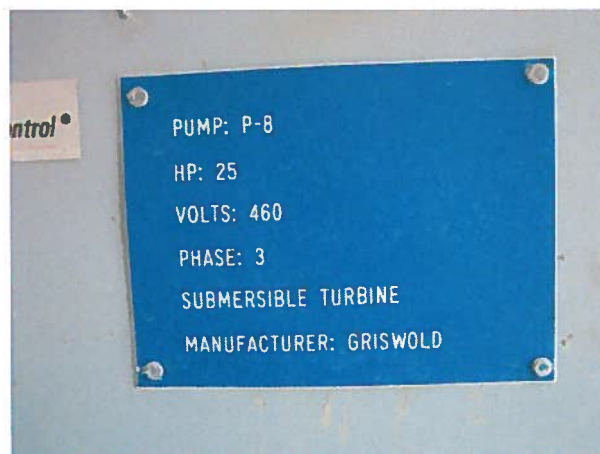
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This photo shows the pressure gauge at 78 psi.



This photo shows the name plate on the power panel.



This photo shows the pump name plate that was placed on the panel by the water user.

PHOTOGRAPHER AND DATE OF PHOTOS Glen Gardiner May 29, 2012

FILE NUMBER 03-07063



This above photo shows the southernmost field located closest to the sewage pond.



The above photos show the northernmost two fields.