



State of Idaho

DEPARTMENT OF WATER RESOURCES

Western Region, 2735 Airport Way • Boise, Idaho 83705-5082

Phone: (208) 334-2190 • Fax: (208) 334-2348 • Web Site: www.idwr.idaho.gov

C. L. "BUTCH" OTTER
Governor

GARY SPACKMAN
Director

August 28, 2013

JOSEPH L PARKINSON
123 W HIGHLAND VIEW DR
BOISE ID 83702

RE: Water Right Permit No. 02-7431

Dear Permit Holder:

The Department of Water Resources is reviewing the permit referenced above prior to issuing a water right license. By issuing a license, the Department confirms the extent of development that has been established in compliance with the terms of the permit. The examiner who verified your water use reported that certain elements of the permit have been developed differently than described on your permit. Changes that do not increase the authorized use of water under the permit can be requested and approved in accordance with Section 42-211, Idaho Code. Before a license can be issued, your permit must be amended to depict your water use as it was actually developed.

Please note that we have included a copy of the field examination of this system pursuant to your request. Based on the examiner's report, the following elements were developed differently than described on your permit:

✓ **Points of Diversion**

The enclosed Application for Amendment form depicts the elements of the water right as they will appear on the license when it is issued. Please review the amendment form carefully. If you concur with the information presented, please sign the form and return it with the \$100.00 filing fee within 14 days.

If you have any questions, please call me at (208)334-2190.

Sincerely,

KAY WALKER
Sr. Water Resource Agent

Enclosures

Kay ^{9/10/13}

Re check and signed
form are enclosed.
Thanks,

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 2-7431
Exam Date: 6/4/2013

1. Current Owner: JOSEPH L PARKINSON
123 W HIGHLAND VIEW DR
BOISE ID 83702
(208)250-1033
2. Accompanied by: Joe Parkinson
Phone No: Same
Address: Same
Relationship to Permit Holder: Same
3.

<u>SOURCE</u>	<u>TRIBUTARY</u>
SNAKE RIVER	COLUMBIA RIVER
WASTE WATER	SNAKE RIVER

B. OVERLAP REVIEW

1. Other water rights with the same place of use: 2-2384 and 57-7186
2. Other water rights with the same point of diversion: 2-2384, 57-7186, and 57-7222

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

SNAKE RIVER L2 (NE1/4NW1/4) Sec. 22, Twp 04S, Rge 02E, B.M.
OWYHEE County

WASTE WATER SW1/4SW1/4 Sec. 15, Twp 04S, Rge 02E, B.M.
OWYHEE County

Method of Determination: Garmin model GPSmap 76 Datum NAD 83 GPS Location N 43° 4.119' W 116° 12.507' (Snake River POD) & N 43° 4.372' W 116° 12.759' (Wastewater POD)

2. PLACE OF USE: WILDLIFE & RECREATION STORAGE

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
04S	02E	15									X								

Method of Determination: Esri (2012) Aerial Photography w/ field verification.

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. Well or Diversion

ID No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
#1 (Snake Rv)	General Electric	50	PWJ316331	Johnston	10" discharge
#2 (Snake Rv)	Franklin Electric	15	unknown	unknown submersible	4" discharge
#3 (Wastewater)	Emerson Electric	100	V11V273E154B-1	unknown turbine	10" discharge
#4 (Wasterwater)	unknown	30	40G37Z52	unknown centrifugal	6" discharge
#5 (Wastewater)	unknown	20	unknown	unknown centrifugal	6" discharge

*Code to correspond with No. on map and aerial photo

D. FLOW MEASUREMENTS1. **Measurement**

<u>Equipment</u>	<u>Type</u>	<u>Make/Model No.</u>	<u>Serial No.</u>	<u>Size</u>	<u>Calib. Date</u>
No physical measurement @ exam	N/A	N/A	N/A	N/A	N/A

See Flow Calculations Section below for Theoretical HP Equation and Discharge Pipe Diameter Flow Estimations.

2. Measurements: None taken. Water being diverted for irrigation not filling of storage reservoir at time of exam.

E. FLOW CALCULATIONS

 X Additional Computation Sheets Attached

Measured Method: Theoretical HP Equation Snake River POD:

$$HP = 50 + 15 = 65$$

PSI = 60 (est. pressure closed system irrigation)

Z = 1 ft (est. lift from river to land surface)

$$Q = (8.8 \times 0.7 \times HP) / [Z + (2.31 \times PSI)] = (8.8 \times 0.7 \times 65) / [1 + (2.31 \times 60)] = \mathbf{2.87 \text{ cfs}}$$
 est. capacity of Snake River pumping system

Measured Method: Pipe Diameter Flow Estimation Snake River POD:

Discharge Pipe Diameters = 10 in. & 4 in. $\Rightarrow Q = 2.73 \text{ cfs} + 0.44 \text{ cfs} = \mathbf{3.17 \text{ cfs}}$ (see attached "Expected Flows For Pipe Diameters")

Measured Method: Theoretical HP Equation Wastewater POD:

$$HP = 100 + 30 + 20 = 150$$

PSI = 60 (est. pressure closed system irrigation)

Z = 1 ft (est. lift from wastewater ditch to land surface)

$$Q = (8.8 \times 0.7 \times HP) / [Z + (2.31 \times PSI)] = (8.8 \times 0.7 \times 150) / [1 + (2.31 \times 60)] = \mathbf{6.62 \text{ cfs}}$$
 est. capacity of Wastewater pumping system

Measured Method: Pipe Diameter Flow Estimation Wastewater POD:

Discharge Pipe Diameters = 10 in. & 6 in. & 6 in. $\Rightarrow Q = 2.73 \text{ cfs} + 0.98 \text{ cfs} + 0.98 \text{ cfs} = \mathbf{4.69 \text{ cfs}}$ (see attached "Expected Flows For Pipe Diameters")

Theoretical HP Equation est. capacity of pumping system (both diversions) = 2.87 cfs + 6.62 cfs = **9.49 cfs**

Pipe Diameter Flow Estimation (both diversions) = 3.17 cfs + 4.69 cfs = **7.86 cfs**

Permitted Rate = **1.00 cfs**

Beneficial Use Limit = **No standard/policy rate for Diversion to Storage use.**

Proof of Beneficial Use fee paid = \$100.00 = up to **1.00 cfs**

Recommend Permitted Rate for Diversion to Storage Use = 1.00 cfs

Overlapping Rights Rate Analysis:

Total rate authorized under licensed rights: $Q = 8.29 \text{ cfs (2-2384)} + 6.82 \text{ cfs (57-7186)} + 1.42 \text{ cfs (57-7222)} = 16.53 \text{ cfs}$

Total rate current system can produce (estimation): $Q = 7.86 \text{ cfs to } 9.49 \text{ cfs}$

No new capacity added to system under permit 2-7431. Recommend use limit condition this right (2-7431) when used in combination with overlapping POD rights 2-2384, 57-7186, and 57-7222 diversion rate shall not exceed that licensed under existing rights (16.53 cfs). See Narrative section for further details.

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation: **N/A** (no irrigation use permitted).

2. Volume Calculations for Storage (Wildlife & Recreation):

Capacity based on general shape, surface area (SA) & average depth data:

General Shape = Flat Bottomed

SA = 2 ac

Avg Depth = 15 ft

2 ac x 15 ft = **30 af**

Evaporation/Seepage Losses & Refill Volume:

Reservoir filled and maintained by running pump(s) for a few hours every 2-3 days. Overlapping POU rights 2-2384 and 57-7186 authorize total diversion of 0.37 cfs and/or 45 afa for wildlife and aesthetic uses associated with maintenance of the same reservoir. Wildlife and aesthetic uses were added to those rights via a nature of use transfer approved in 1989. At time of transfer approval, common to use rate of flow terminology in describing these uses for a reservoir rather than describing as a storage volume. The amount of water authorized by the overlapping rights for wildlife/aesthetic uses is more than enough water to cover evaporation/seepage losses, refill, and the small amount of reservoir capacity in excess of the storage volume permitted by 2-7431.

F. VOLUME CALCULATIONS CONTINUED

Calculated Reservoir Capacity Volume = **30 af**

Permitted Volume = **25.0 af**

Proof of Beneficial Use fee paid = \$100.00 = up to **100.0 af**

Recommend Permitted Volume (for both storage uses) = 25.0 afa

Overlapping Rights Volume Analysis:

Total volume authorized under licensed rights:

$V = 1953.0 \text{ afa} (2-2384, 57-7186 + 57-7222 \text{ combo limit} - \text{irrigation } 1908.0 \text{ afa} + 45.0 \text{ afa wildlife/aesthetic uses})$

Total volume to be authorized under licensed rights + new right 2-7431:

$V = 1953.0 \text{ afa} + 25.0 \text{ afa} = 1978.0 \text{ afa}$

Total volume current system able to divert (only during irrigation season and smallest rate used for conservative estimate):

$V = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 7.86 \text{ cfs} \times 260 \times 1.9835 = 4053.5 \text{ afa}$

Current system capable of diverting enough water for all uses. No combined use volume limitation necessary for licensing of 2-7431. However, because rights 2-2384 and 57-7186 authorize diversion for wildlife and aesthetic uses for the same reservoir described in this right, recommend a condition be used illustrating the current capacity of the reservoir to avoid enlargement. See Narrative section for further details.

G. NARRATIVE/REMARKS/COMMENTS**SYSTEM DESCRIPTION:**

System consists of a 15 ft high dam built in a natural, otherwise dry, draw adjacent to Jackass Butte. The reservoir is filled by diversions from a wastewater ditch and the Snake River. The PODs and system also serve rights 2-2384, 57-7186, and 57-7222 for irrigation of 424 acres and additional wildlife/aesthetic uses associated with the reservoir. The POD on the Snake River has 2 motors/pumps that the permit holder typically runs one at a time. The discharge pipe(s) run into a 14 inch line that pipes water up to the wastewater POD location where it connects to a 4 inch line that diverts water into the reservoir. Wastewater at the other POD is diverted into a vault directly adjacent to the ditch where up to 3 pumps/motors can be used to divert water to the system. One of the 6 inch discharge lines runs into a 4 inch line that pipes water to the reservoir (connects to the 12 inch line coming from the Snake River). See System Diagram for details.

Typically, the permit holder diverts water from either the Snake River POD or wastewater POD to the reservoir for a few hours every 2-3 days. Various wildlife such as antelope, deer, pheasants, quail, and ducks use reservoir.

POD OVERLAP:

The Snake River POD is used for both this permit (2-7431) and right 2-2384. The wastewater POD is used for this permit (2-7431) and rights 57-7186 and 57-7222. The license and field examination for 2-2384 indicate at one time the Snake River POD had a diversion capacity of 8.29 cfs with a 100 hp diesel motor. The license and field examination for 57-7222 indicate at one time the wastewater POD had a diversion capacity of 8.88 cfs with 4 motors (150 hp, 100 hp, 30 hp, and 20 hp). The capacity has been reduced at both PODs based on the diversion works found during this examination. Therefore, a combined use limitation is recommended limiting the diversion rate from this system to the rate(s) authorized by the previously licensed rights 2-2384, 57-7186, and 57-7222. Instinctually, it seems to make sense to have two different conditions to illustrate the rate limit when used with this permit (2-7431); one for the Snake River POD (8.29 cfs) and another for the wastewater POD (8.24 cfs). However, one long condition listing all four rights limited to no more than 16.53 cfs would also be accurate.

POU OVERLAP:

Right 2-2384 authorizes diversion of Snake River water (0.18 cfs) and right 57-7186 authorizes diversion of wastewater (0.19 cfs and/or 45 afa) for wildlife and aesthetic uses for the same reservoir as this permit (2-7431). See Volume Calculations section for explanation of uses. As overlapping POU rights, conditions are necessary to describe the nature of the overlap and ensure future enlargement is avoided. The current reservoir capacity is approximately 30 af. This right is recommended for 25 af. The other 5 af plus any additional water needed for refill due to evaporation/seepage losses is provided via licensed rights 2-2384 and 57-7186. Right 2-2384 does not specify a volume for wildlife/aesthetic uses. Right 57-7186 specifies a volume of 45.0 afa for wildlife/aesthetic uses. The 45.0 af volume resulted from a nature of use transfer where 10 acres were retired. Considering rights 2-2384 and 57-7186 authorize irrigation of the same acreage (POU overlap), it is reasonable to assume that the 45.0 af described on 57-7186 would also be the same 45.0 afa if volume was described on right 2-2384. Recommend a condition (#219) be placed on the license for this permit (2-7431) stating: "Rights 2-2384, 57-7186, and 2-7431 authorize the diversion of an annual total of 70 af to be used for the initial filling of the pond or reservoir and for the replacement of losses caused by seepage and evaporation." Also recommend a condition (#164 modified) stating: "The capacity of the storage reservoir is 30 af."

COMPLIANCE WITH PERMIT CONDITIONS:

The permit is conditioned that measuring devices capable of measuring the water entering the reservoir and released from the reservoir shall be installed. Weirs are in place on the wastewater ditch where the total amount of water

G. NARRATIVE/REMARKS/COMMENTS CONTINUED

being diverted from the ditch (all uses including irrigation) can be measured. If the amount of water entering the reservoir from the wastewater ditch needs to be measured, all other diversions from the wastewater POD could be closed allowing for measurement of water diverted solely to the reservoir. Standard condition stating the measuring device shall be maintained should be placed on the license specific to the wastewater diversion.

There are no measuring devices currently in place on the Snake River POD, but the owner is working with the WD 02 Watermaster (confirmed with watermaster Corbin Knowles) to determine a proper measuring device for the diversion that will be installed to comply with pending IDWR order requiring installation of measurement devices on diversions from the Snake River for Water District 02. Standard water district conditions related to maintenance of measurement device(s) and lockable controlling works should be placed on the license specific to the Snake River diversion. Also, addition of a condition stating the Snake River diversion is within Water District 02 should be on the license.

There is no measuring device in place to measure releases from the reservoir. Considering there are no uses from the reservoir, any water diverted to the reservoir in excess of the capacity would discharge directly back into the wastewater ditch, and there are no other users of wastewater from the ditch between the wastewater POD and the Snake River, it is not necessary to require the permit holder to install a measurement device for reservoir releases. This portion of the measurement device condition shall be waived per discussion with Water Right Supervisor (8/15/13).

The permit is conditioned that storage of water is contingent upon certification/authorization per the dam safety provisions of Idaho Code. This reservoir and dam are actively regulated by the Dam Safety program and are in good standing.

The permit is conditioned that water shall not be diverted until written agreement from the irrigation district is filed with IDWR. An Agreement with Grandview Irrigation District for use of the wastewater POD is in the backfile of overlapping right 57-7222.

To the best of my knowledge, the owner has complied with all other conditions.

Have conditions of permit approval been met? Yes X No – Modification of measurement device condition as discussed above approvable per supervisor 8/15/13. All other conditions met.

H. RECOMMENDATIONS**1. Recommended Amounts**

<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>DIVERSION RATE</u>	<u>ANNUAL VOLUME</u>
WILDLIFE STORAGE	01/01 to 12/31		25.0 AF
RECREATION STORAGE	01/01 to 12/31		25.0 AF
DIVERSION TO STORAGE	01/01 to 12/31	1.00 CFS	
<u>Totals:</u>		1.00 CFS	25.0 AF

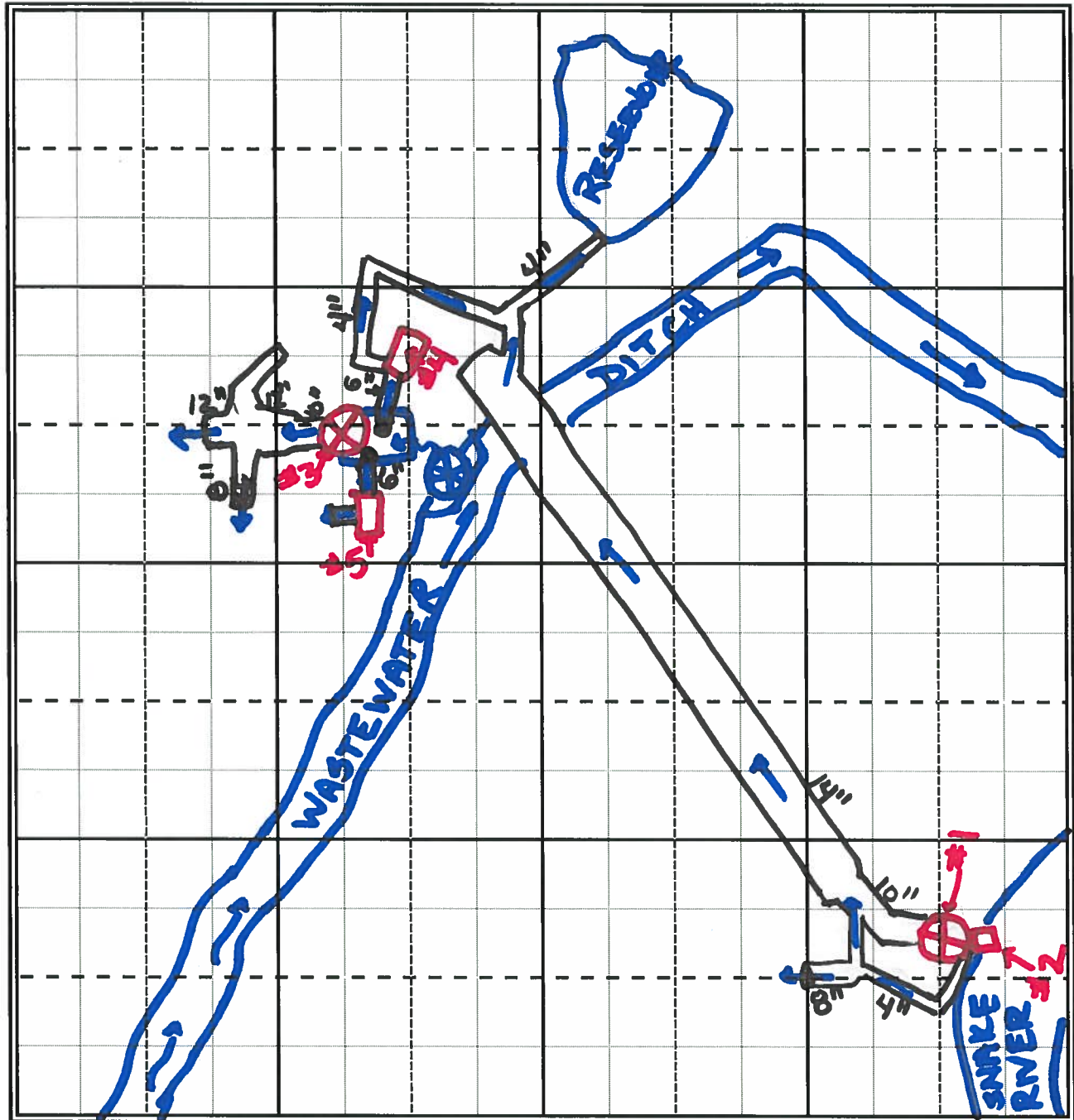
2. Recommended Amendments

X 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 Angela M. Quinn Date 8/16/2013
 Reviewer _____ Date _____

2-7431 Beneficial Use Field Report Diversion System Diagram



Not to Scale

2-7431 Beneficial Use Field Report System Diagram & Map

02E



USDA FSA

● Point of Diversion

□ Place Of Use Boundary

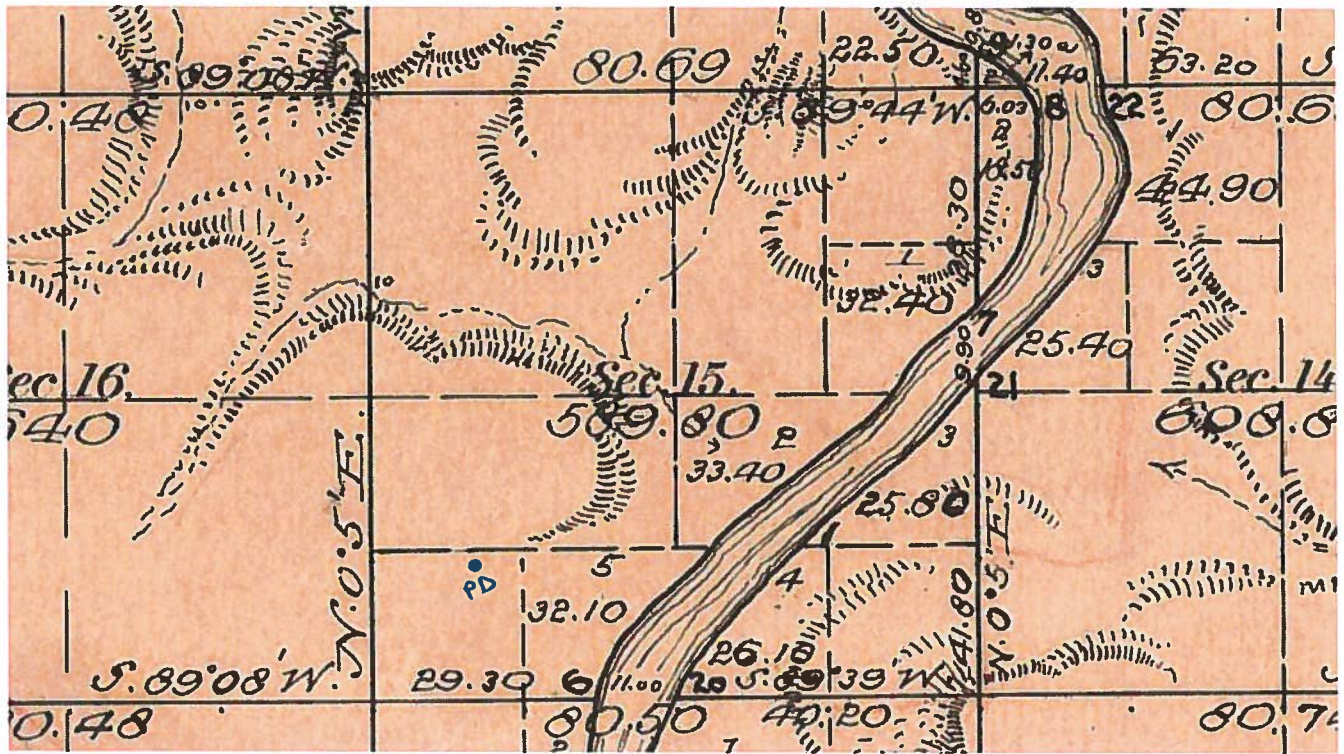
□ Townships

□ PLS Sections

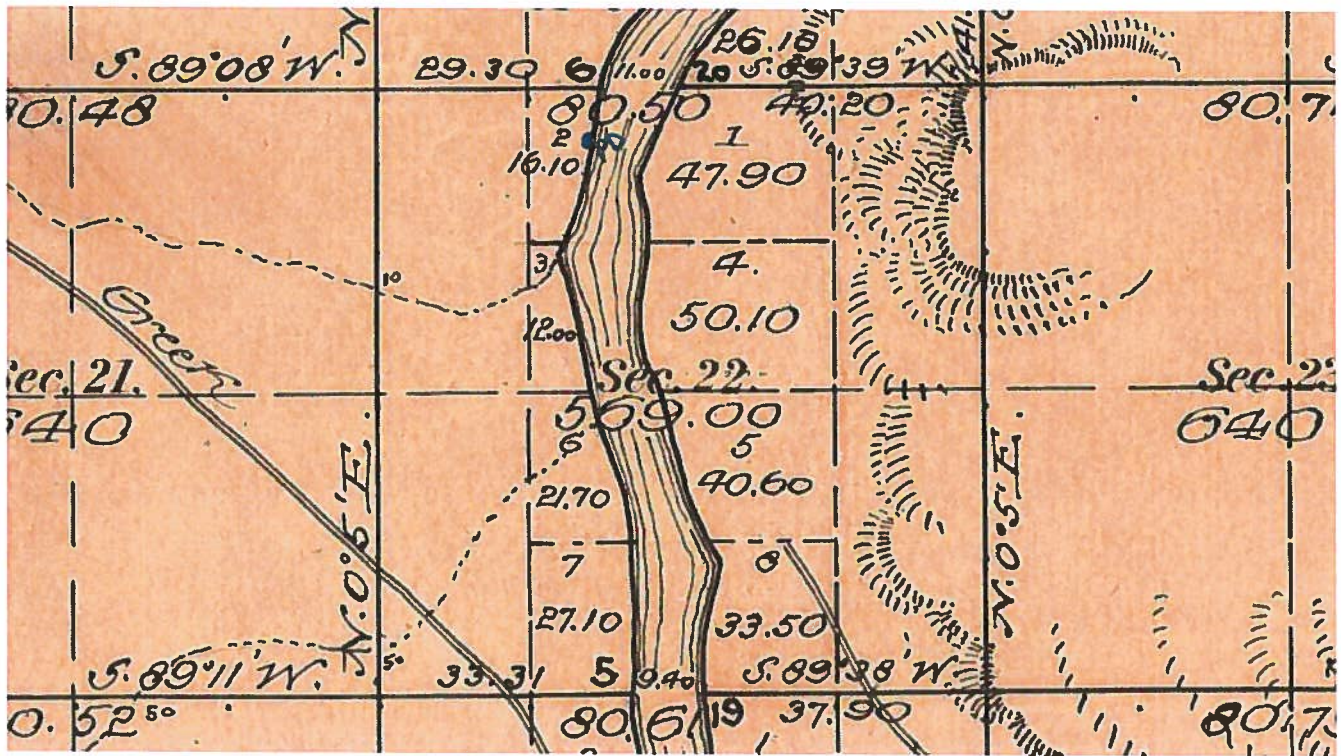
□ Quarter Quarters

0 0.05 0.1 0.2 Miles





THIS R2E SECTION 15



T4S R2E SECTION 22

EXPECTED FLOWS FOR PIPE DIAMETERS

This is for rough estimate for **pump & closed pipeline** system.

Use to double check other measurements/estimates.

Assumes optimum design.

$$Q = VA \quad \text{where: } V = 5 \text{ ft/sec} \quad A = \pi r^2 \quad (\text{radius in ft.})$$

DIAMETER (INCHES)	RATE (CFS)
01	0.03
02	0.11
03	0.25
04	0.44
06	0.98
08	1.74
10	2.73
12	3.93
14	5.34
16	6.98
18	8.83
20	10.90
22	13.19
24	15.70
36	35.34
48	62.83

2-7431 Beneficial Use Field Report Photos



2-7431 Exam 6/4/2013: Snake River POD facing east.



2-7431 Exam 6/4/2013: Water wheel/screen inside ditch at Wastewater POD. Water through screen goes into vault from which three motors/pumps pull water. Downstream weir in photo background. Upstream weir outside of photo.

2-7431 Beneficial Use Field Report Photos Continued



2-7431 Exam 6/4/2013: Wastewater POD 100 hp turbine motor/pump and 30 hp motor/pump. 20 hp motor/pump just outside of photo view in foreground. 4 inch line in photo background diverts water to reservoir.



2-7431 Exam 6/4/2013: Location where 14 inch line from Snake River POD intersects 4 inch line from Wastewater POD connects to 4 inch line diverts water to reservoir.

2-7431 Beneficial Use Field Report Photos Continued



2-7431 Exam 6/4/2013: Wildlife and Recreation reservoir with Jackass Butte in background facing northeast.

Grimm, Angie

From: Grimm, Angie
Sent: Monday, May 13, 2013 8:12 AM
To: 'Joe Parkinson'
Subject: RE: Parkinson Ranch directions

Good morning Joe!

Thanks for the map and directions. We should have NO problems finding your place now. See you on June 4th at the Stone House @ 10 am.

Angela M. Grimm, P.G.
Water Resource Agent, Sr.
IDWR - Western Region
2735 Airport Way
Boise, ID 83705-5082
(208)334-2190 phone
(208)334-2348 fax

From: Joe Parkinson [<mailto:joe.parkinson@qwestoffice.net>]
Sent: Friday, May 10, 2013 3:19 PM
To: Grimm, Angie
Subject: Fw: Parkinson Ranch directions

Corrected email address. Please confirm receipt. Thanks, Joe

Joe & Becky Parkinson
123 West Highland View Drive
Boise, ID 83702
Cell 208-250-1033; fax 208-433-0415
joe.parkinson@qwestoffice.net

----- Original Message -----

From: Joe Parkinson
To: Angie Grimm
Sent: Friday, May 10, 2013 11:14 AM
Subject: Parkinson Ranch directions

Angie, I will meet you at the stone house. The secret here is to be sure as you go through the green gate facing the canal to turn right and it dips down to the canal to a bridge and then within a 100 yards you are driving along the Snake River to the stone house about another mile from that canal. See you there. June 4, 10 a.m. Thanks, Joe
P.S. Please confirm receipt

Joe Parkinson
Bonus Cove Ranch
208-834-7060 cell 208-250-1033

From Boise, take Interstate east toward Mountain Home; take Simco Road exit and head south on it to Air Base Road and past the Simplot feedlot and the bridge across the Snake River to Grand View. Then take Highway 78 west 7.5 miles to the paved road (E-Museum sign) at just past milepost 53; turn right on that paved road and go 2/10 mile to the gravel road, Parkinson Road where you turn left and proceed on it for 2 miles to the Bonus Cove Ranch entrance sign; from there it is another 2 miles past the houses and shop (and as you face the canal, please go right to the bridge and then proceed along the Snake River to the Stone house over looking the river (with a dock)).

