

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 2-7470

Exam Date: 7/12/2012

1. Current Owner: CITY OF GLENNS FERRY
PO BOX 910
GLENNS FERRY ID 83623-0910
(208)366-7418
2. Accompanied by: Jeff Cook
Phone No: (208)599-3741
Address: PO Box 910, Glenns Ferry, ID 83623
Relationship to Permit Holder: Certified PWS Operator for the City of Glenns Ferry
Email: Jeffcook@rtci.net

3. **SOURCE**

SNAKE RIVER

TRIBUTARY

COLUMBIA RIVER

B. OVERLAP REVIEW

1. **Other water rights with the same place of use:** All of the following are within the service area of the City of Glenns Ferry: 2-7470 (City of Glenns Ferry municipal, Snake River source), 61-7679 (City of Glenns Ferry municipal, expansion of the original infiltration system), 2-2209E (City of Glenns Ferry municipal irrigation system), 61-4141 (City of Glenns Ferry municipal, original infiltration system), and 61-7228 (City of Glenns Ferry municipal groundwater source)

2. **Other water rights with the same point of diversion:** None. 61-4141 is the original infiltration gallery that is supplied by springs source. 61-7679 is an expansion of 61-4141, but what makes the source different is that the collection area was dug down into the shallow groundwater and extended out, expanding the infiltration gallery collection area. The other PODs in the same QQ do not overlap: 2-2209E (City of Glenns Ferry municipal irrigation system), and 61-7228 (City of Glenns Ferry municipal groundwater source)

C. DIVERSION AND DELIVERY SYSTEM

1. **LOCATION OF POINT(S) OF DIVERSION:**

SNAKE RIVER L4 SW1/4NW1/4 Sec. 32, Twp 05S, Rge 10E, B.M. ELMORE County*

**An amendment will be required since the POD was found to be in L4 and not in L3.*

NOTE: The Garfield pipe and cistern that were initially planned for, were not developed. They installed the pipe but never put in any pumps, so this POD was not included on this water right.

Method of Determination: Garmin GPS Map 76S, ArcMap esri and 2004 – 2013 Imagery

2. **LOCATION OF PLACE OF USE:**

CITY OF GLENNS FERRY SERVICE AREA BOUNDARY (see attached map)

Method of Determination: Garmin GPS Map 76S, ArcMap esri and 2004 – 2013 Imagery

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 (*Photo's were lost when my computer crashed and IT was unable to retrieve them when they rebuilt my computer. For this reason, additional ArcMap imagery and drawings are being used for this field examination*).

4.

Well or Diversion

<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 Size</u>
(2) identical US Turbine Motor 3-phase, 20 Hp model (N/A), ID#Z HD3 03031490 100F, to boost water through a 8" C900 buried pipe to the treatment plant located to the northeast (60 ft lift), 24 psi at the time of the field examination.					

Booster Pumps that pump water out into the Distribution System:

(2) identical US Motor booster pumps for pumping water out to the distribution. They are both 3 phase, 60 Hp each, model #6213-JC3, ID#H02-03019866-100R, with 8" discharge (each) to the 10" steel buried pipe running out to the distribution system.

D. FLOW MEASUREMENTS

1.

Measurement

<u>Equipment</u>	<u>Type</u>	<u>Make</u>	<u>Model No.</u>	<u>Serial No.</u>	<u>Size</u>	<u>Calib. Date</u>
10" water specialties flow meter 20033520-10, that measured 444.0 gpm (0.99 cfs) at the time of the field examination.						

2. Measurements:
None.

E. FLOW CALCULATIONS

Measured Method:

INSERT HERE (insert flow measurement from Jeff Cook, if he submits them, otherwise the only thing that can be recommended is 0.99cfs, as was found during the field examination.

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation: N/A

2. Volume Calculations for Other Uses:

N/A. Not required on licensing due to permit being approved prior to Administrative Memo #1 Licensing.

G. NARRATIVE/REMARKS/COMMENTS

At the POD there are 4 intakes: (2) 8" and (2) 10", with 1/8" torpedo screens, model #Rex Style, Order #31142-01, that runs through a 800um filter after roughing screens. The intakes are located about 100' from the bank, and sit about 1' from the bottom. All four intakes are in a staggered configuration. The actual location of the intakes was

determined by back-flushing the system causing surface bubbling in the Snake River. Water is diverted into the Wet Well within the cinderblock pump house, where there are (2) identical US Turbine Motor 3-phase, 20 Hp model (N/A), ID#Z HD3 03031490 100F, to boost water through a 8" C900 buried pipe to the treatment plant located to the northeast (60 ft lift). At the time of the field examination, the system runs between 400gpm (0.89 cfs) and 600 gpm (1.34 cfs) at 24 psi, since that is what is required to get the water to the treatment plant (any lower, and they cannot push it there). There is a 60' lift to the treatment plant. Flow from the Snake River surface water source and the infiltration gallery both discharge into the treatment plant on the northeast corner of the building. Both sources go through a series of tanks and chambers (pack basin with activated carbon for taste, the introduction of chloride, the flock basin, through the membranes, and contact chamber before being discharged to the distribution through a 10 inch steel main, converting to 12" C900 under Highway 184 (north of town) , then reducing to 10" high density to the 500,000 gallon storage tank (details about the storage tank are under water right 61-7679 field exam).

Inside the treatment plant on the upper level is a 10" water specialties flow meter 20033520-10, that measured 444.0 gpm (0.99 cfs) at the time of the field examination. There are (2) identical US Motor booster pumps for pumping water out to the distribution. They are both 3 phase, 60 Hp each, model #6213-JC3, ID#H02-03019866-100R, with 8" discharge (each) to the 10" steel buried pipe running out to the distribution system.

The Lower Level of the treatment plant is where the membranes, flock, vacuum pumps from the membranes to the contact chamber, the back pulse to back flush the membrane, the clean and place tank (recovery to clean membranes), and (3) identical permeate pump Advantage Plus pumps, each are 6 Hp, cat. APR01506T84, with 6 inch discharge (these pumps keep the water moving around between the tanks).

The entire system is controlled and monitored through a SCADA system, that is run basically on a "demand use" within the system.

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

H. RECOMMENDATIONS

1. Recommended Amounts

BENEFICIAL USE

MUNICIPAL

PERIOD OF USE

1/01 to 12/31

DIVERSION RATE

0.00 CFS

ANNUAL VOLUME

Totals:

0.00 CFS

2. Recommended Amendments

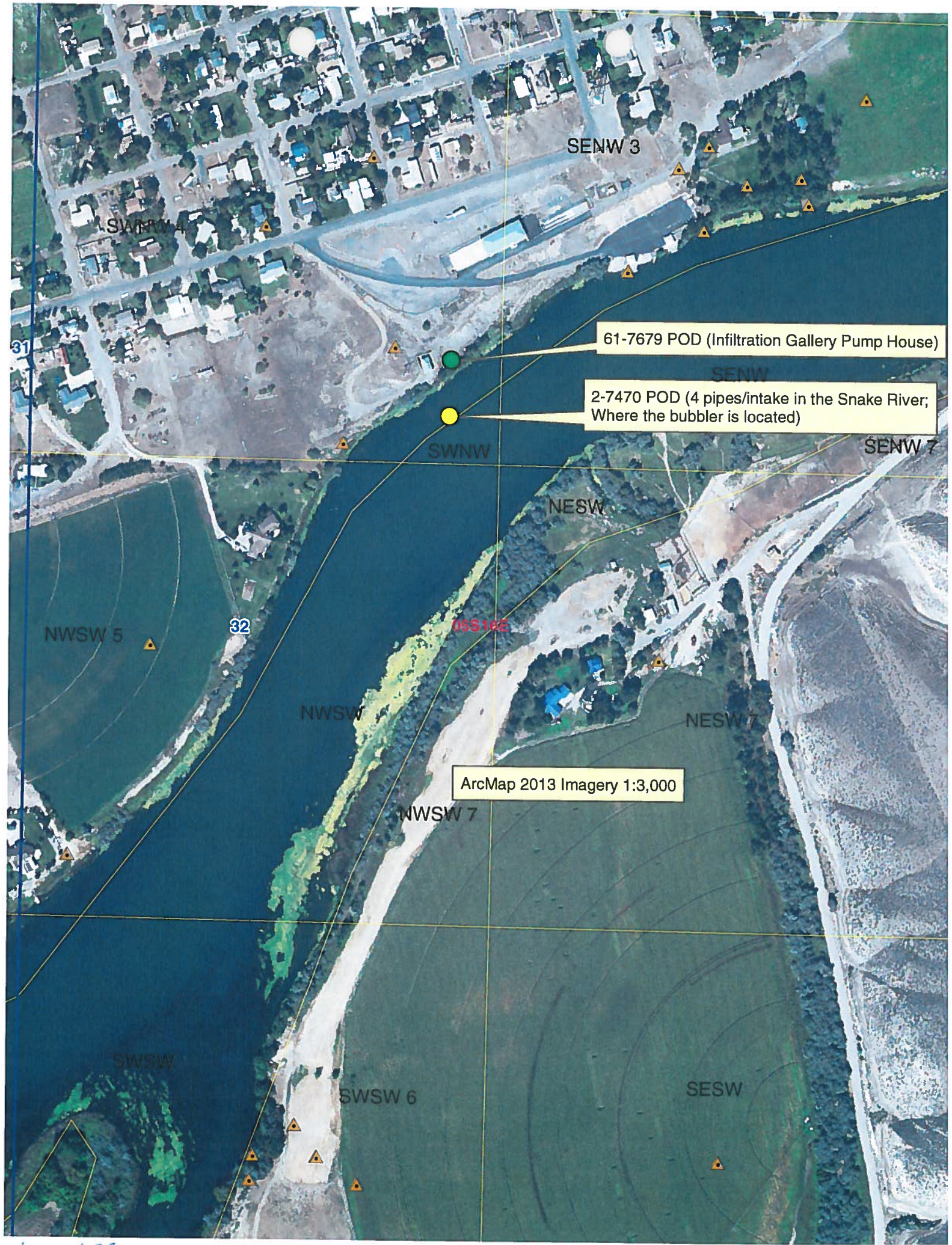
☒ Change P.D. as reflected above* ☐ Add P.D. as reflected above ☐ None

☐ Change P.U. as reflected above ☐ Add P.U. as reflected above ☐ Other

****The location for the POD was found to be located in the SWNE L4 (the location of the intakes on the bottom of the Snake River, when they back-washed the system this location was very evident at the time of the field examination).***

I. AUTHENTICATION

Field Examiner's Name _____ Date _____



SENW 3

SENW 4

61-7679 POD (Infiltration Gallery Pump House)

SENW

2-7470 POD (4 pipes/intake in the Snake River;
Where the bubbler is located)

SSWW

SENW 7

NESW

NWSW 5

32

05S142

NWSW

NESW 7

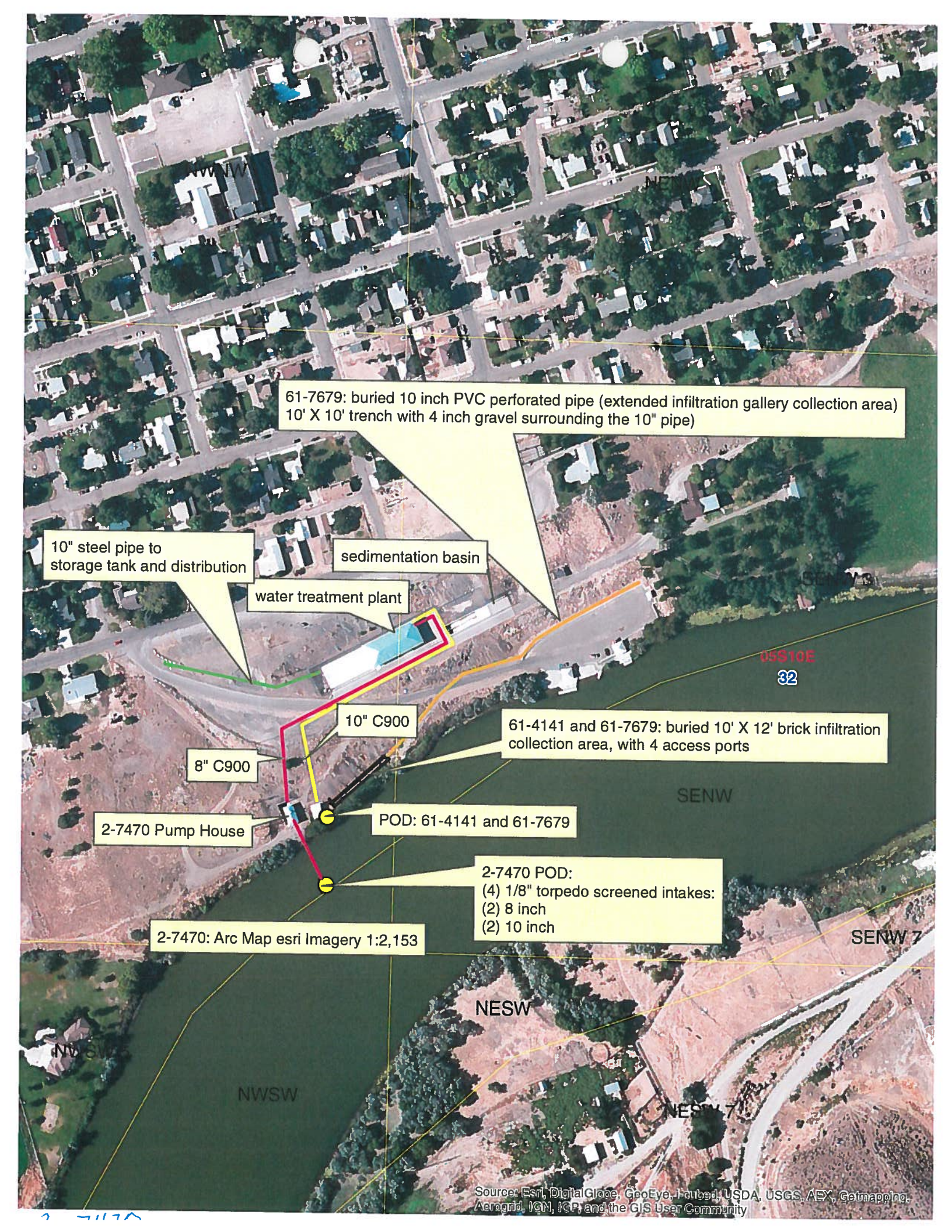
ArcMap 2013 Imagery 1:3,000

NWSW 7

SWSW

SWSW 6

SESW



61-7679: buried 10 inch PVC perforated pipe (extended infiltration gallery collection area)
10' X 10' trench with 4 inch gravel surrounding the 10" pipe

10" steel pipe to
storage tank and distribution

sedimentation basin

water treatment plant

10" C900

61-4141 and 61-7679: buried 10' X 12' brick infiltration
collection area, with 4 access ports

8" C900

2-7470 Pump House

POD: 61-4141 and 61-7679

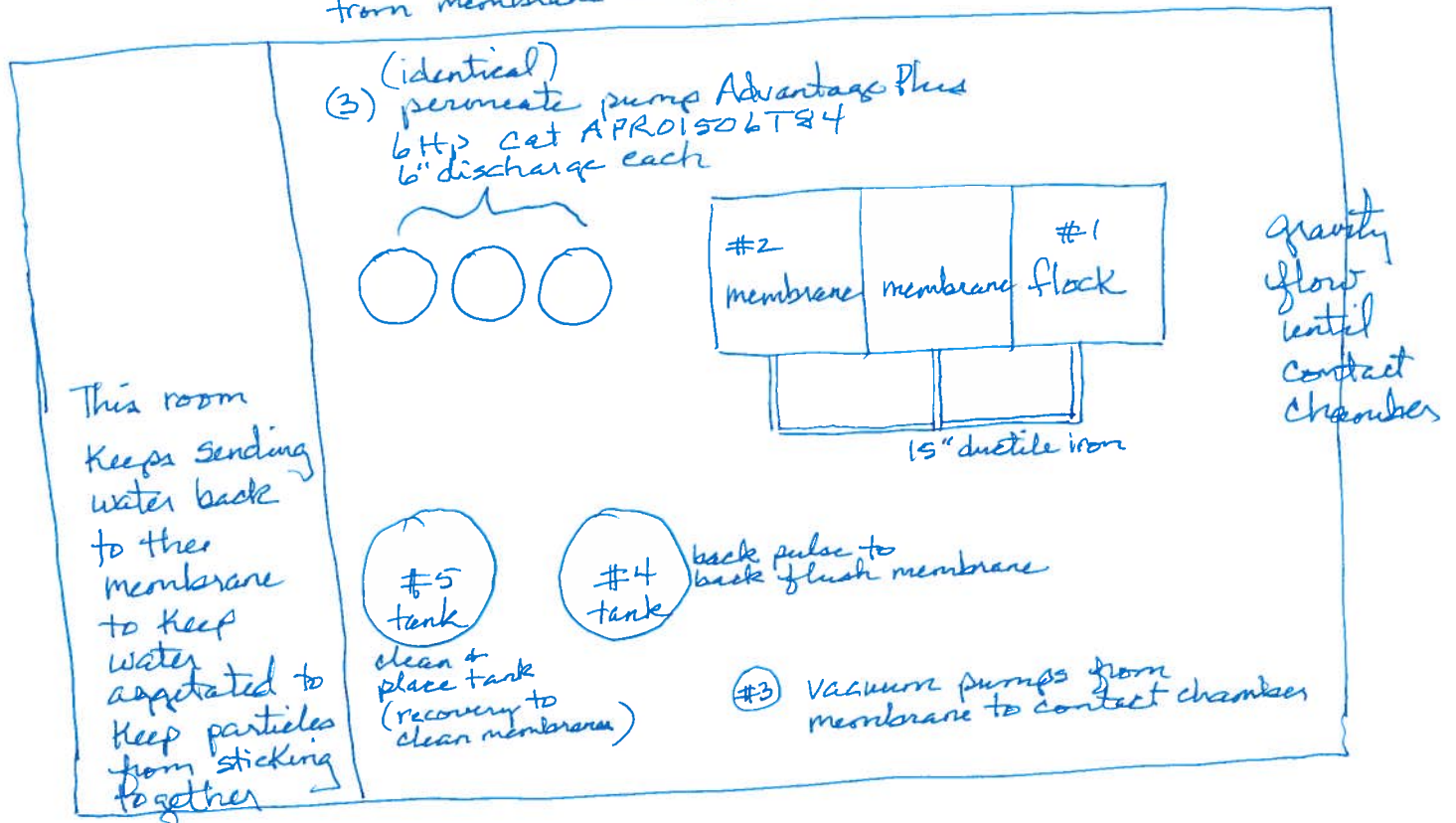
2-7470 POD:
(4) 1/8" torpedo screened intakes:
(2) 8 inch
(2) 10 inch

2-7470: Arc Map esri Imagery 1:2,153

NESW

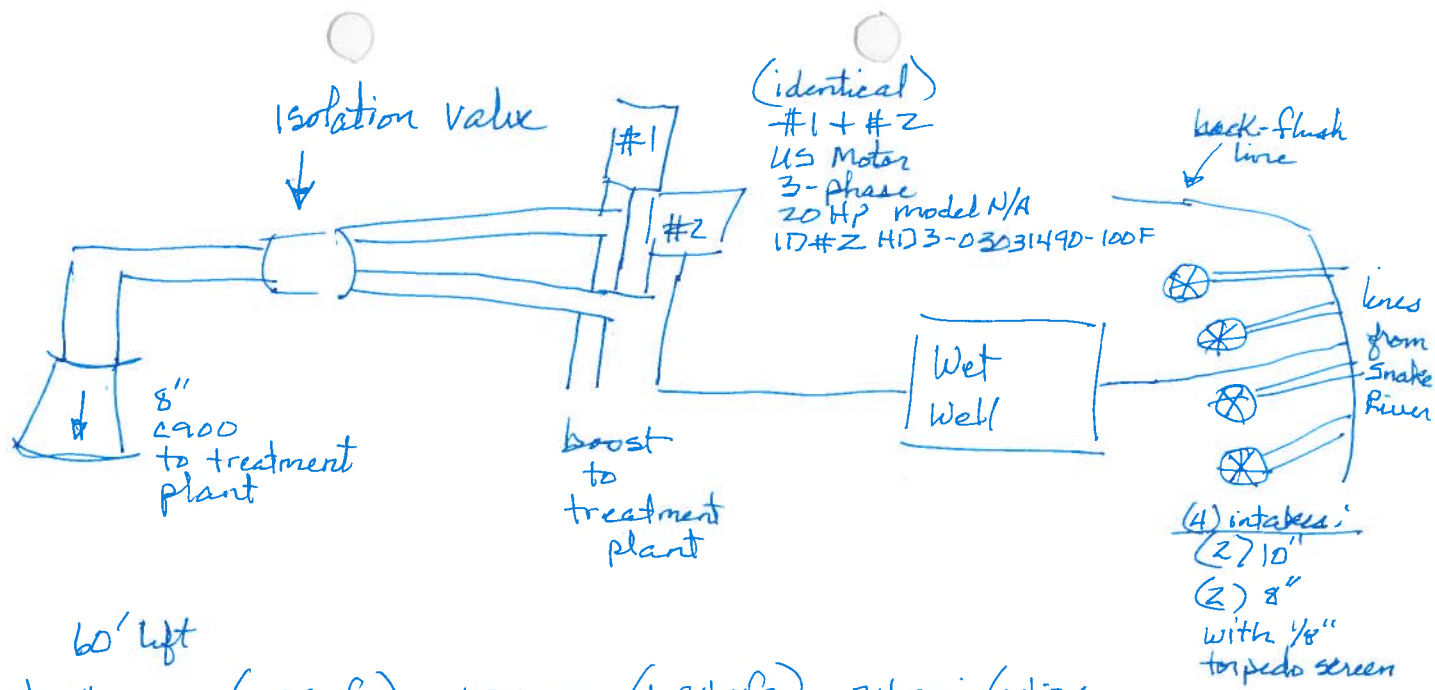
SENW 7

from membrane + #4 + #5:



Treatment Plant (lower level)

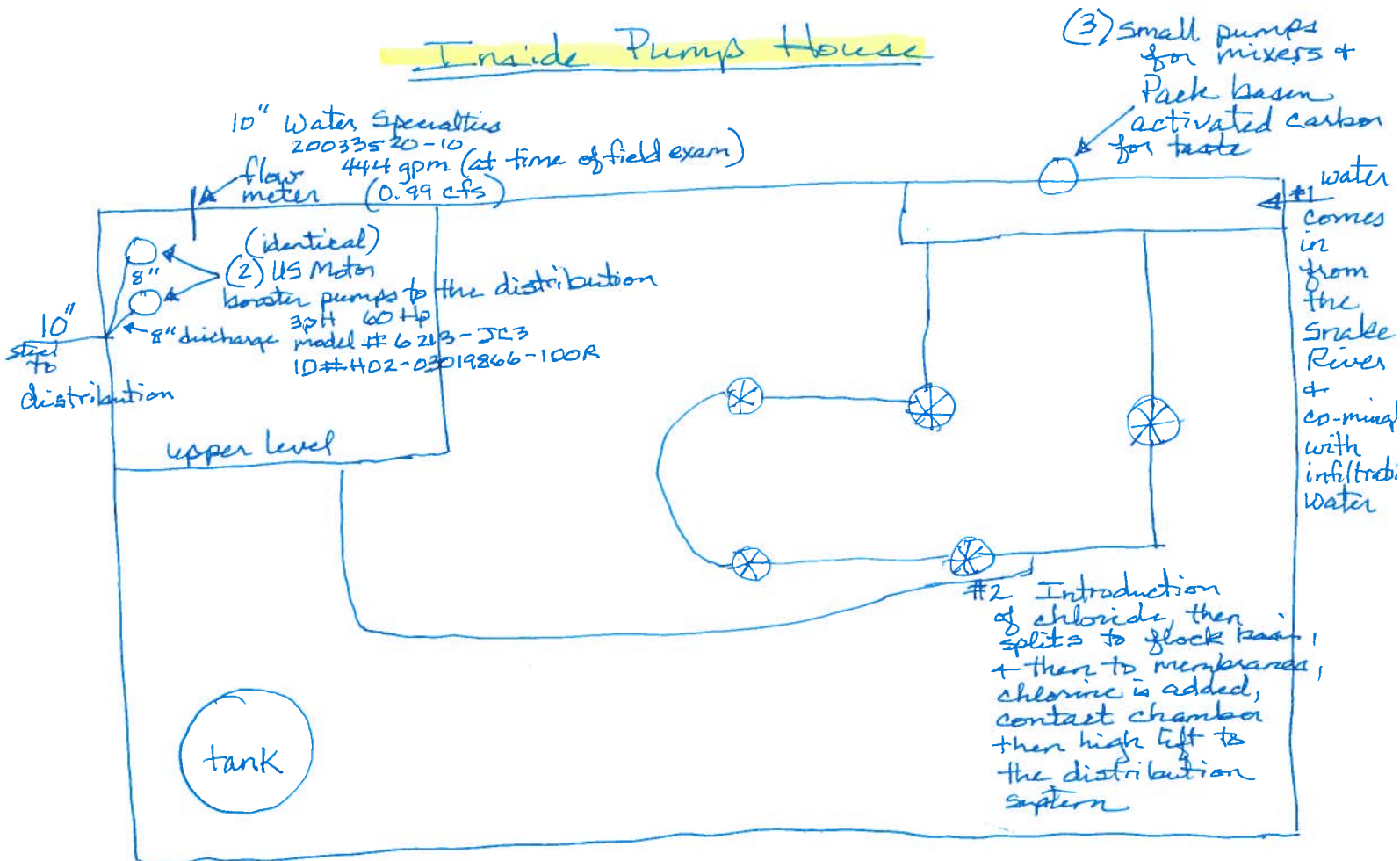
- 10" steel to distribution, to 12" Δ 900 under I84 to 10" high density to 500,000 gallon storage tank
- with 13" overflow (flapper valve)
- level controlled by demand / SCADA system



60' lift

- runs at 400 gpm (0.99 cfs) - 600 gpm (1.34 cfs), 24 psi (at time of F.E)
in order to be able to pump flow to treatment plant

Inside Pumps House



Treatment Plant (70 Joseph Ferry Dr.)
SCADA controlled
upper level



NWNW

NENW

2 Storage Tanks: 500,000 gallon total storage

29

Q5S10E

SWNW

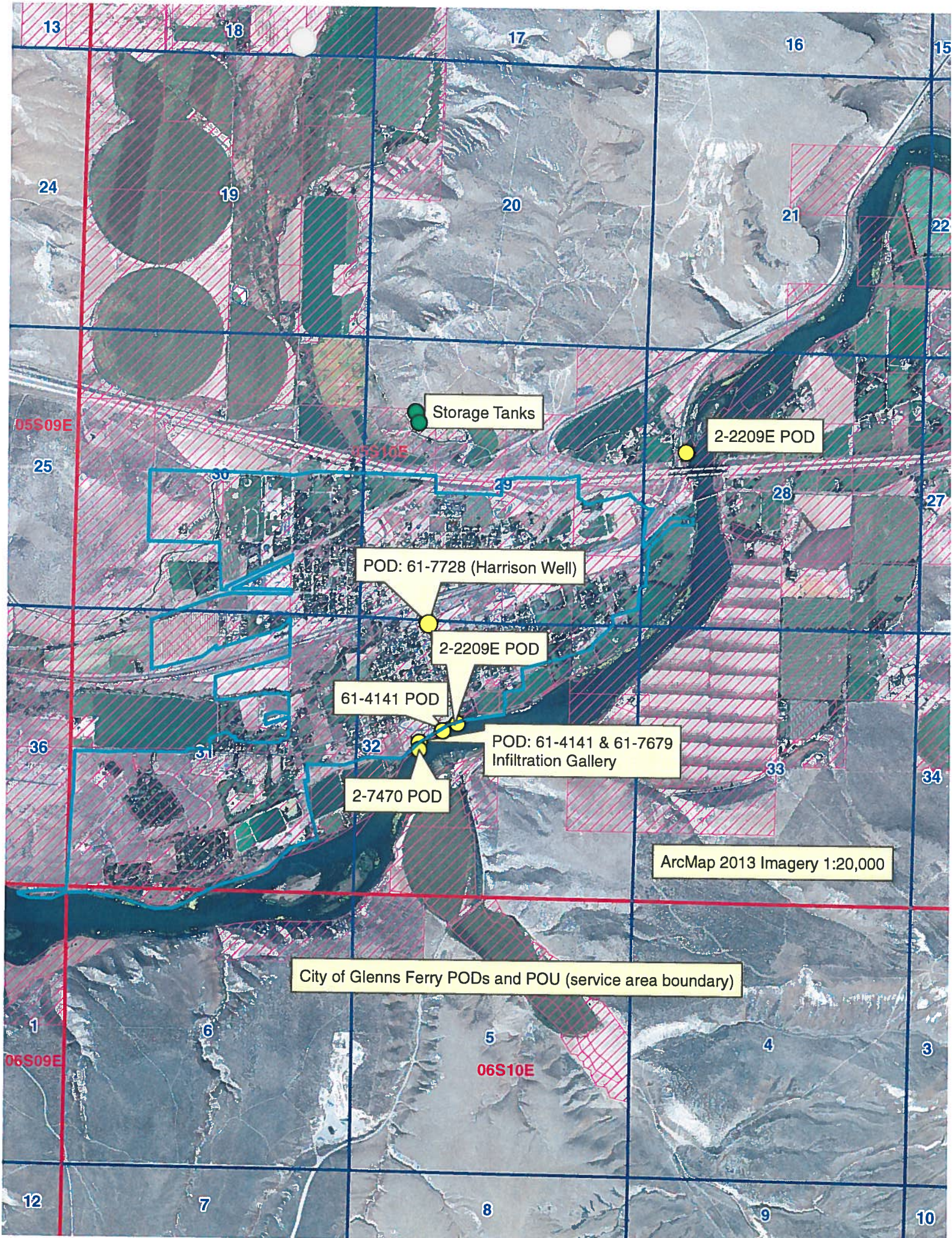
61-7679: Arc Map esri Imagery 1:1,250

POD: 61-7728 (Harrison Well)
12" casing, extending 12" above ground
6" discharge, runs manually if high demand
in the summer (A0018537, tag on casing)

2 Storage Tanks: 500,000 gallon total storage
13" overflow (flapper valve)
10" high density, changing to 12" C900 under the
interstate to the tank; ID# T4200022TS1
SCADA system; level measured with transducer
tank installed in 2000

POD: 61-4141 & 61-7679
Infiltration Gallery

POU (City of Glens Ferry, service area boundary):
ArcMap 2013 1:20,000



City of Glenns Ferry PODs and POU (service area boundary)

ArcMap 2013 Imagery 1:20,000

POD: 61-4141 & 61-7679
Infiltration Gallery

61-4141 POD

2-2209E POD

POD: 61-7728 (Harrison Well)

2-2209E POD

Storage Tanks

Basin	Sequence	Suffi	Process	Basis	Status	Draft	Priority	Date	Diversion	Rate	Source	List	Water Use	List	Current Owner	Volume	System	Decreed	POU/POD Overlap
2	2209	E	Water Right	Decreed	Active	N	2/25/1963		2.400		SNAKE RIVER	MUNICIPAL	CITY OF GLENNS FERRY	401.7	surface H2O for irrigation			Decreed 9/28/2009	POD Sec 28, Sec 32L3ENW
2	7470		Water Right	License	Active	Y	3/30/1996		1.000		SNAKE RIVER	MUNICIPAL	CITY OF GLENNS FERRY		surface water treatment plant				
61	4141		Water Right	Decreed	Active	N	1/1/1917		2.540		SPRINGS	MUNICIPAL	CITY OF GLENNS FERRY		Infiltration Gallery			Decreed 10/26/2000	
61	7228		Water Right	Decreed	Active	N	5/21/1975		0.450		GROUND WATER	MUNICIPAL	CITY OF GLENNS FERRY		E006756/supp. High demand			Decreed 10/26/2000	
61	7679		Water Right	License	Active	Y	12/10/1992		2.680		GROUND WATER	MUNICIPAL	CITY OF GLENNS FERRY		Infiltration Gallery*				
2	7471		Water Permit		Active	N	12/9/1996		3.000		SNAKE RIVER	MUNICIPAL	CITY OF GLENNS FERRY		for City's irrigation water				
37	8851		Water Application		Active		10/12/1995		5.500		BANCROFT SPRINGS	MUNICIPAL	CITY OF GLENNS FERRY						

*This water right is an expansion of 61-4141 (nothing was deepened, only the 10' X 10' trench with 4" gravel around 10" perforated pipe, extended 600 - 650 ft from the existing collection area, to the northeast.

POU Overlap

Basin	Sequence	Suffix	Process	Basis	Status	Draft	Priority Date	Diversion Rate	Source List	Water Use List	Current Owner	Volume	System	Decreed	POU/POD Overlap
2	2209	E	Water Right	Decreed	Active	N	2/25/1963	2.400	SNAKE RIVER	MUNICIPAL	CITY OF GLENNS FERRY	401.7	surface H2O for irrigation	Decreed 9/28/2009	POD Sec 28, Sec 32L3SENW
2	7470		Water Right	License	Active	Y	3/30/1998	1.000	SNAKE RIVER	MUNICIPAL	CITY OF GLENNS FERRY		surface water treatment plant		
61	4141		Water Right	Decreed	Active	N	1/1/1917	2.540	SPRINGS	MUNICIPAL	CITY OF GLENNS FERRY		Infiltration Gallery	Decreed 10/26/2000	
61	7228		Water Right	Decreed	Active	N	5/21/1975	0.450	GROUND WATER	MUNICIPAL	CITY OF GLENNS FERRY		E006756/supp. High demand	Decreed 10/26/2000	
61	7679		Water Right	License	Active	Y	12/10/1992	2.680	GROUND WATER	MUNICIPAL	CITY OF GLENNS FERRY		Infiltration Gallery*		
2	7471		Water Permit		Active	N	12/9/1996	3.000	SNAKE RIVER	MUNICIPAL	CITY OF GLENNS FERRY		for City's irrigation water		
37	8851		Water Application		Active		10/12/1995	5.500	BANCROFT SPRINGS	MUNICIPAL	CITY OF GLENNS FERRY				

*This water right is an expansion of 61-4141 (nothing was deepened, only the 10' X 10' trench with 4" gravel around 10" perforated pipe. extended 600 - 650 ft from the existing collection area, to the northeast.

POU Overlaps

AGI-04141



7-21-94 LRU

Spring(s) diversion system. 2 Pumps, pipeline

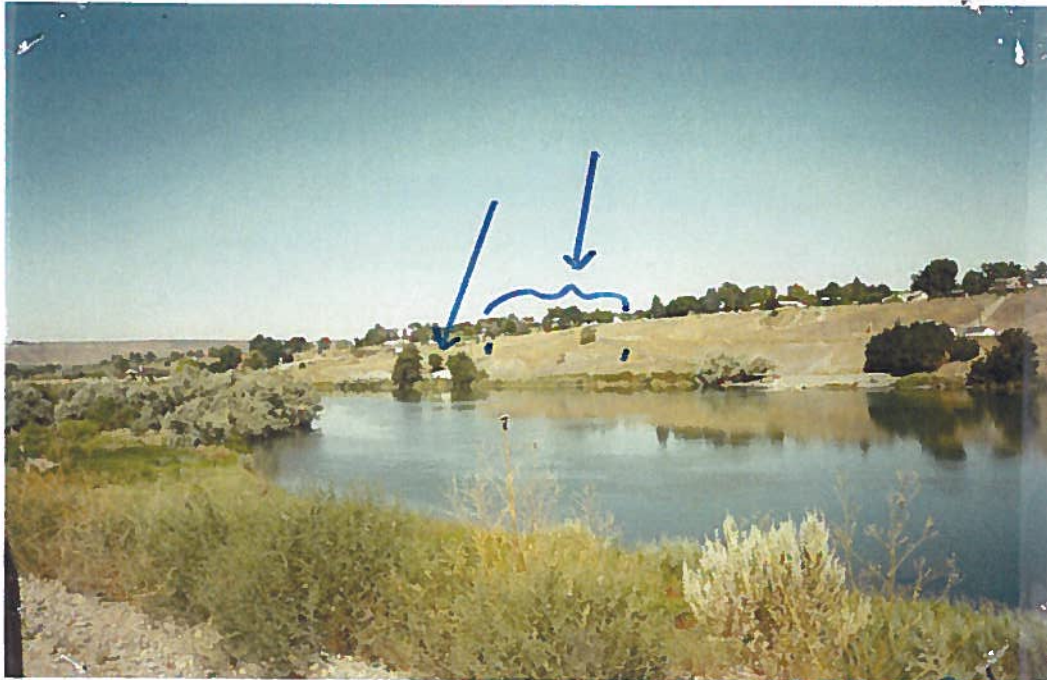


7-21-94 LRU

Pipeline from above pumps, Flowmeter

61-4141 + 61-7679

AGI-04141



7-21-94 LRW

View of pump house & infiltration gallery
from south side of the river.



7-21-94

Access ports to infiltration gallery.

61-4141 + 61-7679

AGI-04141



7-21-94 LRW

Close-up of access port.

61-4141 + 61-7679