STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 63-33907
Exam Date: 08/14/2019

1. Current Applicant:
   PLACES LLC PO BOX 300 PARMA ID 83660

2. Accompanied by: Jon Watson
   Phone No: 208-412-9600
   Address: 201 E. Main St, Parma, Idaho, 83660
   Relationship to permit Holder: Applicant of Places, LLC

3. **SOURCE:**
UNNAMED DRAIN

Tributary
SAND HOLLOW CREEK

Method of Determination: Field observation

B. OVERLAP REVIEW

1. Other water rights with the same place of use: 55 Shares from Farmer's Coop Canal Company
2. Other water rights with the same point-of-diversion: Farmer's Coop Canal water diverted from same PODs

C. DIVERSION AND DELIVERY SYSTEM

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

UNNAMED DRAIN NE¼ SW¼, Sec. 5, Twp 05N, Rge 05W, B.M. CANYON County
UNNAMED DRAIN SW¼ NE¼, Sec. 5, Twp 05N, Rge 05W, B.M. CANYON County
UNNAMED DRAIN SW¼ NW¼, Sec. 5, Twp 05N, Rge 05W, B.M. CANYON County

Method of Determination: GPS

SYSTEM 1 PLACE OF USE: IRRIGATION W.R. #63-33907

Twp	Rng	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
05N	05W	5			31	33			13	37	2				37	35			188

SYSTEM 2 PLACE OF USE: IRRIGATION W.R. #63-34791

Twp	Rng	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
05N	05W	5							5		30	15			2				52

SYSTEM 3 PLACE OF USE: IRRIGATION W.R. #63-34792

Twp	Rng	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
05N	05W	5							7.8										7.8

Total Acres: 247.8

Method of Determination: Aerial Imagery, Field Observation

3.

x Delivery System Diagram Attached (required). Indicate all major components and distances between components. Indicate weir size/pipe as applicable.

X Map Attached Showing Location(s) of point(s) of diversion and place(s) of use (required). Scale must be 1:24,000 or greater.

X Aerial Photo Attached (required for irrigation of 10+ acres).

x 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
935523 – 8 in	Baldor Reliance	30	39P023W960H2	Cornell 4RB-CC	TCO5541, 8"
935523 – 12 in	Baldor Reliance	75	42J022W453H2	Cornell	Unknown, 12"
935524	Goulds	Unknown	Unknown	Goulds 9WALC	IGT106

D. FLOW MEASUREMENTS

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date
Flow meter	Ultrasonic	GE Panametrics	PT878			

2. Measurements:

Well or Diversion ID No.*	WR #	Method	Discharge (cfs)	Description
935523 – 8 in	63-33907	Flowmeter	1.01	Transducer placed near beginning of buried section.
935523 – 12 in	63-33907	Flowmeter	2.29	Transducer placed near beginning of buried section.
935524	63-34792	Flowmeter	0.42	Automated system installed for lawn irrigation. Number reported on applicants system interface
935526	63-34791	Manning's Equation	26 to 86.57	Measured slope over 20 feet with a grade rod and laser level. Measured at middle of channel. Manning coefficient = 0.025

E. FLOW CALCULATIONS

x Additional Computation Sheets Attached

Measured Method: Flow meter

SYSTEM 1: W.R. #63-33907

POD 935523 – 8 in:

minute	Volume (gal/m)	(+)Total (gal)	Results	
0	456.72	246361.99	Average GPM	461.68
1	460.63	246790.32	Total Gallons	4600.24
2	461.19	247264.86	Average GPM from totalized gallons	460.02
3	461.89	247738.50	Flow rate (cfs)	1.01
4	459.85	248192.99		
5	458.84	248661.62		
6	461.76	249099.71		
7	465.19	249573.34		
8	461.52	250034.63		
9	465.13	250495.43		
10	465.81	250962.23		

POD 935523 – 12 in:

minute	(+)Total (gal)	Results	
0	1131345.7	Total Gallons	11467.69
1	1132331.62	Average GPM	1042.52
2	1133430	Flow rate (cfs)	2.29
3	1134433.58		
4	1135471.76		
5	1136527.83		
6	1137573.94		
7	1138611.86		
8	1139708.87		
9	1140733.18		
10	1141799.67		
11	1142813.39		

Standard Rate: 188 ac x 0.02 cfs = 3.76 cfs

Measured Rate: 3.3 cfs

Recommended Rate for W.R. #63-33907 : 3.3 cfs

System 2: W.R. #63-34791

POD 935526: 86.6 cfs. See attached Manning's equation sheet

Standard Rate: 52 acres x 0.02 cfs = 1.04 cfs

Measured Rate Range: 27 cfs to 87 cfs
Recommended Rate for W.R. #63-34791: 1.04 cfs

System 3: W.R. #63-34792
POD 935524: In-line flow meter read 189 GPM (0.42 cfs)
Standard Rate: 7.8 acres x 0.02 cfs = 0.16 cfs
Recommended Rate for W.R. # 63-34792: 0.16 cfs

Total recommend rate for all systems is 4.50 cfs, which is less than the originally permitted rate.

F. VOLUME CALCULATIONS

1. Volume Calculations for irrigation:

System 1: W.R. #63-33907
$V_{I.R.}$ = (Acres Irrigated) x (Irrigation Requirement) = 188 acres x 4.5 af/acre/yr = 846 af/yr
$V_{D.R.}$ = [Diversion Rate (cfs)] x (Days in Irrigation season) x 1.9835 = 3.30 cfs x 260 days x 1.9835 = 1701 af/yr
V = Smaller of $V_{I.R.}$ and $V_{D.R.}$ = 846 af/yr

System 2: W.R. #63-34791
$V_{I.R.}$ = (Acres Irrigated) x (Irrigation Requirement) = 52 acres x 4.5 af/acre/yr = 234 af/yr
$V_{D.R.}$ = [Diversion Rate (cfs)] x (Days in Irrigation season) x 1.9835 = 1.04 cfs x 260 days x 1.9835 = 526 af/yr
V = Smaller of $V_{I.R.}$ and $V_{D.R.}$ = 234 af/yr

System 3: W.R. #63-34792
$V_{I.R.}$ = (Acres Irrigated) x (Irrigation Requirement) = 7.8 acres x 4.5 af/acre/yr = 35 af/yr
$V_{D.R.}$ = [Diversion Rate (cfs)] x (Days in Irrigation season) x 1.9835 = 0.16 cfs x 260 days x 1.9835 = 83 af/yr
V = Smaller of $V_{I.R.}$ and $V_{D.R.}$ = 35 af/yr

G. NARRATIVE/REMARKS/COMMENTS

Jon Watson applied for water permit 63-33907 on January 29 2014 for Places, LLC from several unnamed drains, tributary to Sand Hollow Creek. The application was for 291 acres at a rate of 5.82 cfs. Proof was submitted June 10th, 2019 and we conducted the exam on August 14th 2019. The applicant developed three separate systems during the permit period, requiring the division of the water right permit into three separate water rights. The resulting rights are 63-33907 (system 1), 63-34791 (system 2), and 63-34792 (system 3).

Three PODs from the permit were removed because they were not in use or did not qualify as a POD. The POU was modified to remove dirt roads and areas not watered by the pivots, hand lines, or flood irrigation ditch and was split into separate POUs for each system. Areas in the western portion of the POU were not actively irrigated and the applicant stated future plans to pursue a permit for beneficial use not covered under irrigation. The applicant does have an overlapping recreational use permit approved for these plans. The change in the POU reduced the acreage to 248 acres and the overall diversion rate to 4.50 cfs.

The diversion works for this permit consist of the three remaining permit PODs that divert from the unnamed drain. Because the PODs are not connected to one another other than by the source drain, each POD should be considered a different system with a distinct POU.

The first POD (ID 935523) irrigates system 1 (WR 63-33907) and collects water from both an unnamed drain and the Farmers Coop Canal, which converge about 400 feet upstream from the POD. A bubbler filters the water which then is pumped underground by two separate centrifugal pumps to pivots and risers to the west and south. An 8" pipe supplies the

half-sweep pivot to the west at a rate of 1.01 cfs and a 12" pipe supplies the full sweep pivot and hand lines to the south at a rate of 2.29 cfs. The south eastern corner of the field is not being irrigated this season, but aerial imagery shows onions being irrigated in previous years during the development period for this permit.

POD (ID 935526) diverts water from the unnamed drain downstream of POD 935523 and provides flood irrigation for the pasture in the southwest section of the place of use, which I am calling system 2 (WR 63-34791). There was no diversion occurring here at the time of the exam, though we were able to confirm the presence of a concrete structure that would allow for the placement of a gate to move water into the ditch. Discharge was estimated using Manning's Equation. The ditch was trapezoidal and slope was determined using a grade rod and laser level. Estimated capacity in this ditch was 86.6 cfs. The ditch appears to have the capacity to divert up to the requested diversion rate.

POD (ID 935524) diverts water from an unnamed drain entering the POU in the northwest corner. A variable speed pump pulls water into a filtration system which is then used in a buried sprinkler system for lawn irrigation on system 3 (WR 63-34792). A measuring device is installed and was reading 189 gpm (0.42 cfs) with the largest zone running. The applicant stated that the typical operating rate for the sprinkler system is 80 gpm.

The applicant has 55 shares from Farmers Cooperative Canal Company, which irrigates 110 acres.

Have conditions of permit approval been met? _x_ Yes ____ No

H. RECOMMENDATIONS

1. Recommended Amounts

Beneficial Use	Period of Use	Rate of Diversion	Annual Volume
IRRIGATION WR #63-33907	03/01 to 11/15	3.30 CFS	846 AF
IRRIGATION WR #63-34791	03/01 to 11/15	1.04 CFS	234 AF
IRRIGATION WR #63-34792	03/01 to 11/15	0.16 CFS	35 AF
	Totals:	4.50 CFS	1,115.0 AF

2. Recommended Amendments

____ Change P.D. as reflected above ____ Add P.D. as reflected above _x_ None

____ Change P.U. as reflected above ____ Add P.U. as reflected above _x_ None

I. AUTHENTICATION

Alex Moody - Hydrogeologist, Staff

Field Examiner's Name [signature] Date 9/18/2019

Reviewer [signature] Date 9-19-19

Manning Flow Rate Calculation Summary Report

General Information:

Permit/Claim Number(s): 63-33907

Name of Claimant/Permit Holder: Places, LLC

Name of Ditch, Canal, or Stream:

Date of Measurement: Aug-19 Data Collect By: Alex Moody

Measurement Location: NE 1/4 SW 1/4 Section: 5 TWNS: 05N RNG: 05W

Channel Description Information:

Channel Type

- ○ Pipe Full
- ○ Circular
- ○ Rectangular
- ○ V-Notch
- ◉ Trapezoidal
- ○ User Defined

Channel Description: Moderately clean ditch diverting from unnamed drain from concrete check structure. Using a Manning's *n* representative of flow in a natural channel due to present of debris in ditch.

☐ Photo(s) Attached ☐ Map(s) Attached

Channel Cross Sectional Information:

Basis

- ◉ High Water Mark
- ○ Water Surface

Pipe Full

Radius:

Circular Channel

Radius:

Depth of Flow:

Rectangular Channel

Width:

Depth of Flow:

User Defined Channel:

Meas. No.	Distance (ft)	Depth (-ft)
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		

V-Notch Channel

Height:

Depth of Flow:

Top Width:

Trapezoidal Channel

Height: 0.6 ft

Depth of Flow: N/A

Top Width: 5 ft

Bottom Width: 2.5 ft

Channel Slope Information:

Basis

- ○ High Water Mark
- ◉ Channel Bottom
- ○ Land Surface

	Upstream Elevation Meas. (ft)	Downstream Elev. Meas. (ft)	Distance Between US & DS Points (ft)	Slope (ft/ft) |US - DS|/Dist.
Upper Alignment:	0	-0.43	20	0.0215
Middle Alignment:	N/A	N/A	N/A	N/A
Lower Alignment:	N/A	N/A	N/A	N/A

Manning Calculation Output

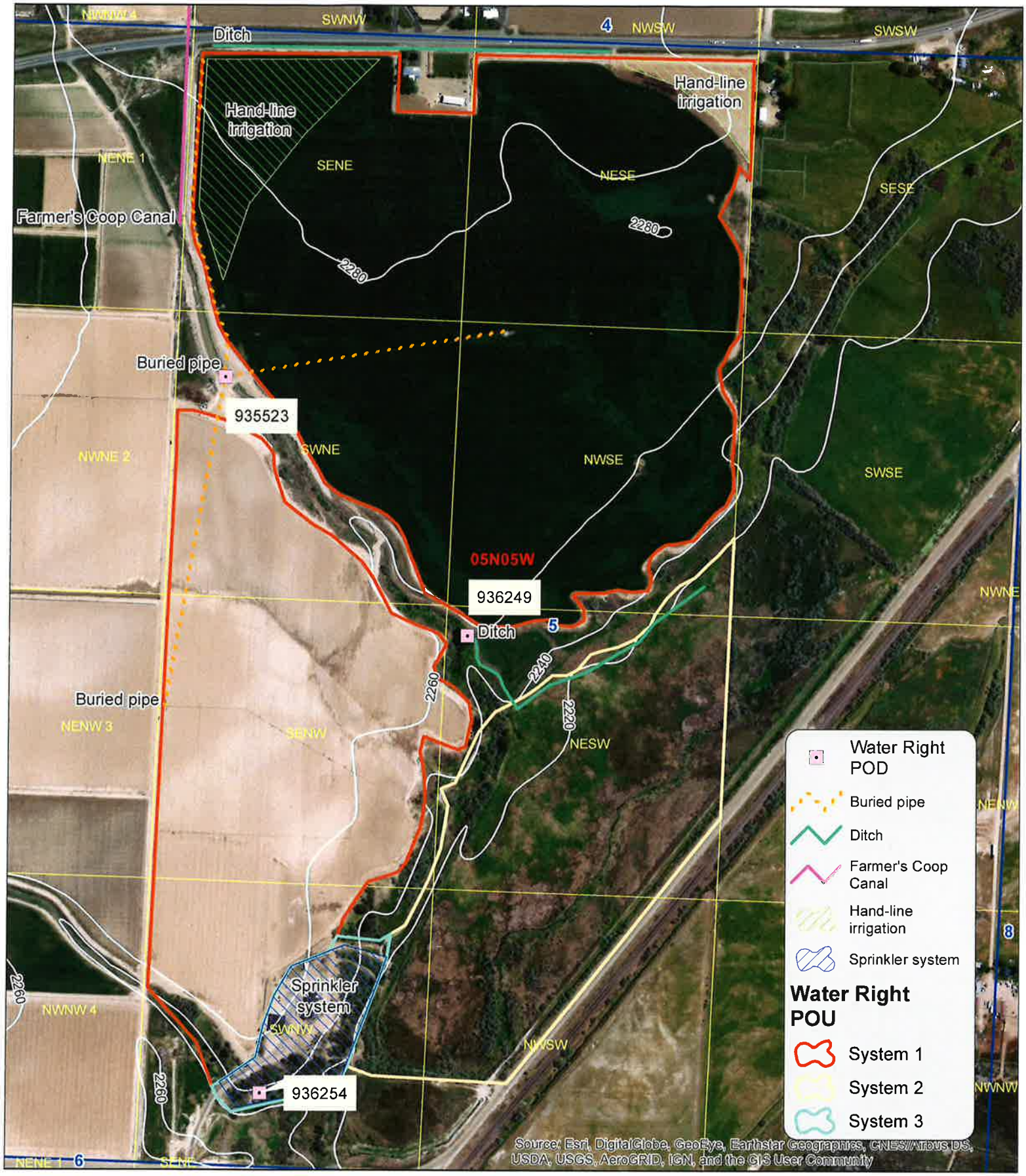
Q = 86.57 CFS

V = 9.9 FPS

A = 8.75 SF

S = 0.0215 FT/FT

n = 0.025



System Diagram

Permit No. 63-33907

0 0.05 0.1 0.15 0.2 0.25 Miles

POD 935523: Unnamed drain is seen at the top of the picture. Bubbler is behind the motor covering. The left pipe is the 8 inch pipe supplying the western pivot. The right pipe supplies the eastern pivot and hand lines.

Same as the above photo looking towards the SE. Drain continues under the road to the right.

Ditch and head gates in supplying SE corner of place of use.

One riser to the NE corner from POD 935523.

POD 935526: Diversion ditch to pasture.

Pasture irrigated by the ditch coming off of POD 935526. Red line shows the approximate path of the ditch.

POD 935524: Filtration system for lawn sprinkelrs. Motor and pump are to the right.

POD 935524: Unnamed drain water enters a stilling structure. Flow is to the left.