

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 1-10626
Exam Date: 7/31/2020

1. Current Owner:
SNAKE RIVER VALLEY IRRIGATION DISTRICT
PO BOX 70
BASALT ID 83218-0070
2. Accompanied by: Steve Nielson, Manager of Snake River Valley Irrigation District

3. **SOURCE:**
SNAKE RIVER

Tributary
COLUMBIA RIVER

Method of Determination: Snake River Valley Irrigation District's irrigation water rights diverted from same point of diversion on the Snake River.

B. OVERLAP REVIEW

1. Other water rights with the same place of use: YES Overlap

SNAKE RIVER VALLEY IRRIGATION DISTRICT is an irrigation water delivery entity that owns irrigation rights 1-38, 1-171, 1-250, 1-328, and 1-10247. However, this ground water recharge right is separate from the irrigation rights.

2. Other water rights with the same point-of-diversion: YES Overlap

SNAKE RIVER VALLEY IRRIGATION DISTRICT's water rights 1-38, 1-171, 1-250, 1-328, and 1-10247 are diverted at the same POD.

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

SNAKE RIVER L2 (NE¼ SW¼ NW¼), Sec. 15, Twp 01N, Rge 37E, B.M. BONNEVILLE County

Method of Determination: Previously decreed Snake River Valley Irrigation District Irrigation water rights.

PLACE OF USE: GROUND WATER RECHARGE

Twp	Rng	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
01N	37E	15						X L5	X L2										
01N	37E	16				X L1									X L1	X L2		X	
01N	37E	16													X L8	X L9			
01N	37E	21	X			X									X			X	
01N	37E	22											X						
01N	37E	27						X					X						
01N	37E	28	X		X	X				X				X	X	X		X	
01N	37E	32																X	
01N	37E	33					X			X	X	X	X					X	
01N	37E	34						X	X		X	X		X					
01S	36E	36												X	X	X	X	X	

01S	37E	2						X L4	X			X	X					
01S	37E	4	X L1	X L2	X						X			X		X	X	
01S	37E	8				X									X		X	X
01S	37E	9		X	X		X	X	X					X		X	X	
01S	37E	11						X	X	X	X	X	X					
01S	37E	14						X	X									
01S	37E	15				X								X	X	X	X	X
01S	37E	16		X	X		X	X	X							X	X	
01S	37E	17		X		X	X		X	X				X	X	X	X	
01S	37E	20					X			X	X	X	X					
01S	37E	21		X			X								X			X
01S	37E	22	X			X	X		X	X		X			X			X
01S	37E	27	X			X									X			X
01S	37E	28	X	X	X				X		X			X		X		
01S	37E	29				X		X	X			X	X	X	X	X	X	
01S	37E	30													X			X
01S	37E	31		X			X		X	X		X	L3					X
01S	37E	32	X			X	X		X	X		X	X			X		
01S	37E	33			X	X	X	X	X	X					X	X		
01S	37E	34	X		X	X			X	X								
02S	36E	1	X L1		X	X	X	X	L3	L4			X		X	X		
02S	36E	2	X L1	X L2			X	L3			X	X		X	X			
02S	36E	10													X			X
02S	36E	11						X	X			X						
02S	36E	12						X										
02S	36E	14						X	X									
02S	36E	15	X			X												
02S	37E	4					X	L3	X	L4								
02S	37E	5	X L1															
02S	37E	6	X L1	X L2														

Method of Determination: ArcMap and aerial photography

System Description: Snake River Valley Irrigation District accomplishes recharge in two ways. The district can recharge by allowing water to seep out of its canals, when water is not being delivered for irrigation use. In addition, the district has two dedicated recharge sites: the Steffler Pit and the Frandsen Pit. These sites have been actively used since at least 2017.

D. FLOW MEASUREMENTS/CALCULATIONS

87.3 cfs is the assigned diversion rate based on the best available evidence to the Department.

The development period for this water right was October 16, 2014 – October 15, 2019. The permit came into priority in the spring of 2017, 2018, and 2019. The permit holder diverted water under Permit 1-10626 for recharge in 2017. In 2018 and 2019 the permit holder only diverted recharge water under the Idaho Water Resource Board's ("IWRB") Managed Aquifer Recharge Program's ("Program") water right (1-7054).

The permit owner supplied data from Water District 1 to support its recharge activities in 2017. However, Water District 1 only monitors the diversion from the Snake River, leaving water spilled from the conveyance system unmonitored. Therefore, flow measurements were ascertained from IWRB Program data in 2018 and 2019. The IWRB Program uses diversion data from Water District 1, but also monitors spills from systems. Based on IWRB Program data, the highest rate recharged in Snake River Valley's system in one day occurred on October 22, 2018. The recorded recharge flow for that day was **87.3 cfs** (92.8 cfs spilled – 10.5 cfs spilled into Sand Creek [4.4 spilled from the East Branch, and 6.1 cfs spilled from the West Branch]). Therefore, for purposes of this analysis only, Snake River Valley Irrigation District's system is capable of recharging a maximum of 87.3 cfs per day.

E. VOLUME CALCULATIONS

In 2017 (the year that this right was diverted), Snake River Valley diverted water for recharge for 53 days, from March 9 – April 30, 2017. Irrigation deliveries began on May 1, 2017, ceasing in-canal recharge operations. No information was provided regarding the use of off-canal sites after April 30, 2017.

$$87.3 \text{ cfs} * 53 \text{ days} * 1.9835 \text{ cfs/AF/day} = 9,180 \text{ AF}$$

G. NARRATIVE/REMARKS/COMMENTS

During times when irrigation operations are not occurring, this right is for in-canal recharge and recharge at dedicated off-canal sites. When irrigation operations are occurring, this right can be used at dedicated off-canal recharge sites. The two off-canal sites used during the development period were the Frandsen and Steffler pits. The IWRB Program has given credit of up to 28.33 cfs/day at the Frandsen Pit and 27.4 cfs/day at the Steffler Pit. However, measurements of the inlets into those two sites in subsequent years indicates that those rates may not be accurate. The accuracy of the inflow data for the dedicated sites is not critical, however, because the rate and volume calculated for this right is based on the total amount diverted at the headgate minus the total amount spilled from the SRVID system.

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

H. RECOMMENDATIONS**1. Recommended Amounts**

<u>Beneficial Use</u>	<u>Period of Use</u>	<u>Rate of Diversion</u>	<u>Annual Volume</u>
GROUND WATER RECHARGE	01/01 to 12/31	87.30 CFS	9,180 AF

Totals: 87.30 CFS 9,180 AF

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 ☒ None

I. AUTHENTICATION

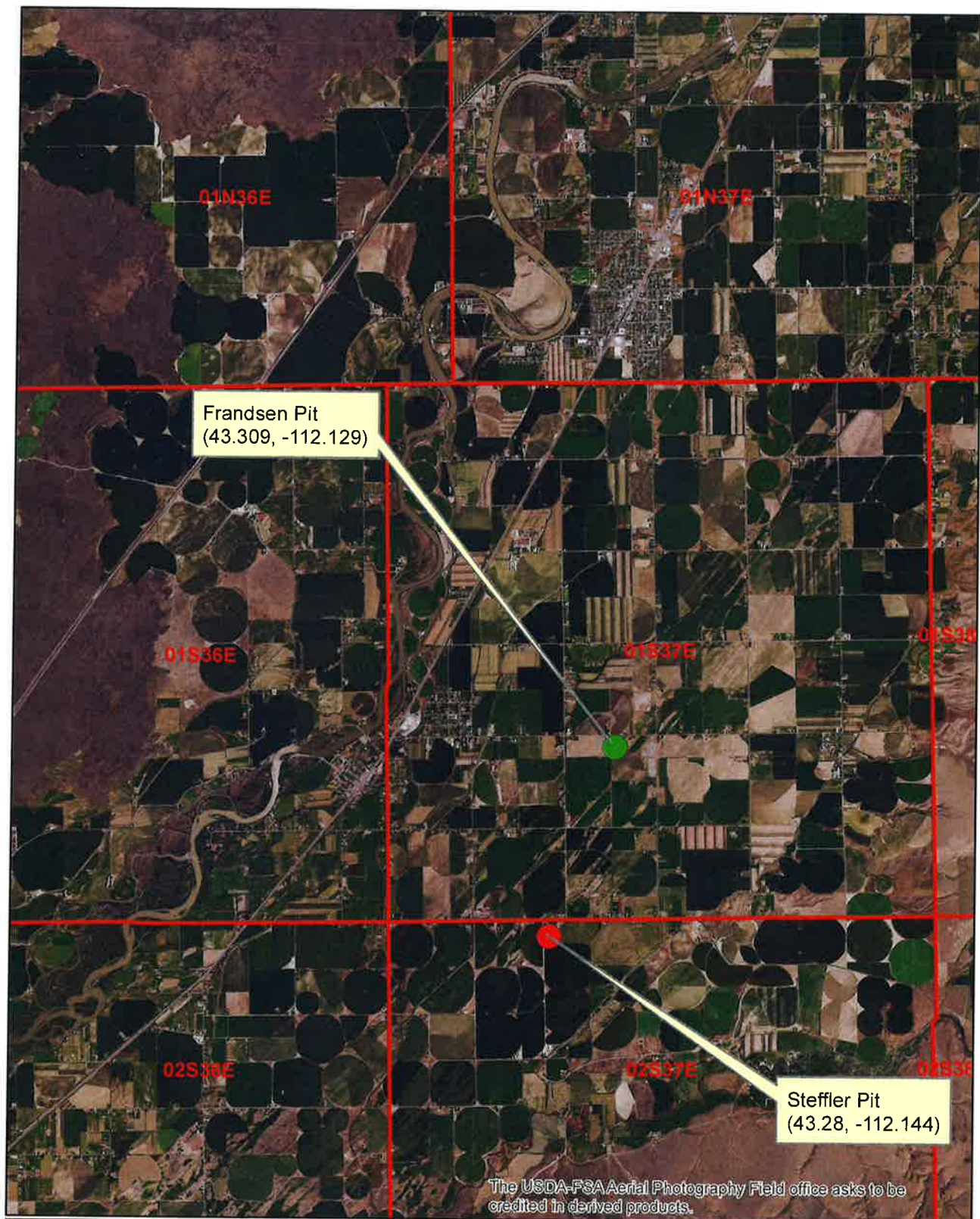
Cooper Fritz - Water Resource Agent, Senior

Steffler Pit



Frandsen Pit

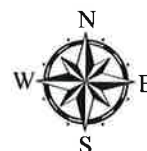




Legend

- Water Right POD
- Water Right POU
- Township/Range
- Sections

Quarter-quarters covered in the place of use are those in which Snake River Valley Irrigation District canals and laterals can convey water for Groundwater Recharge



Miles

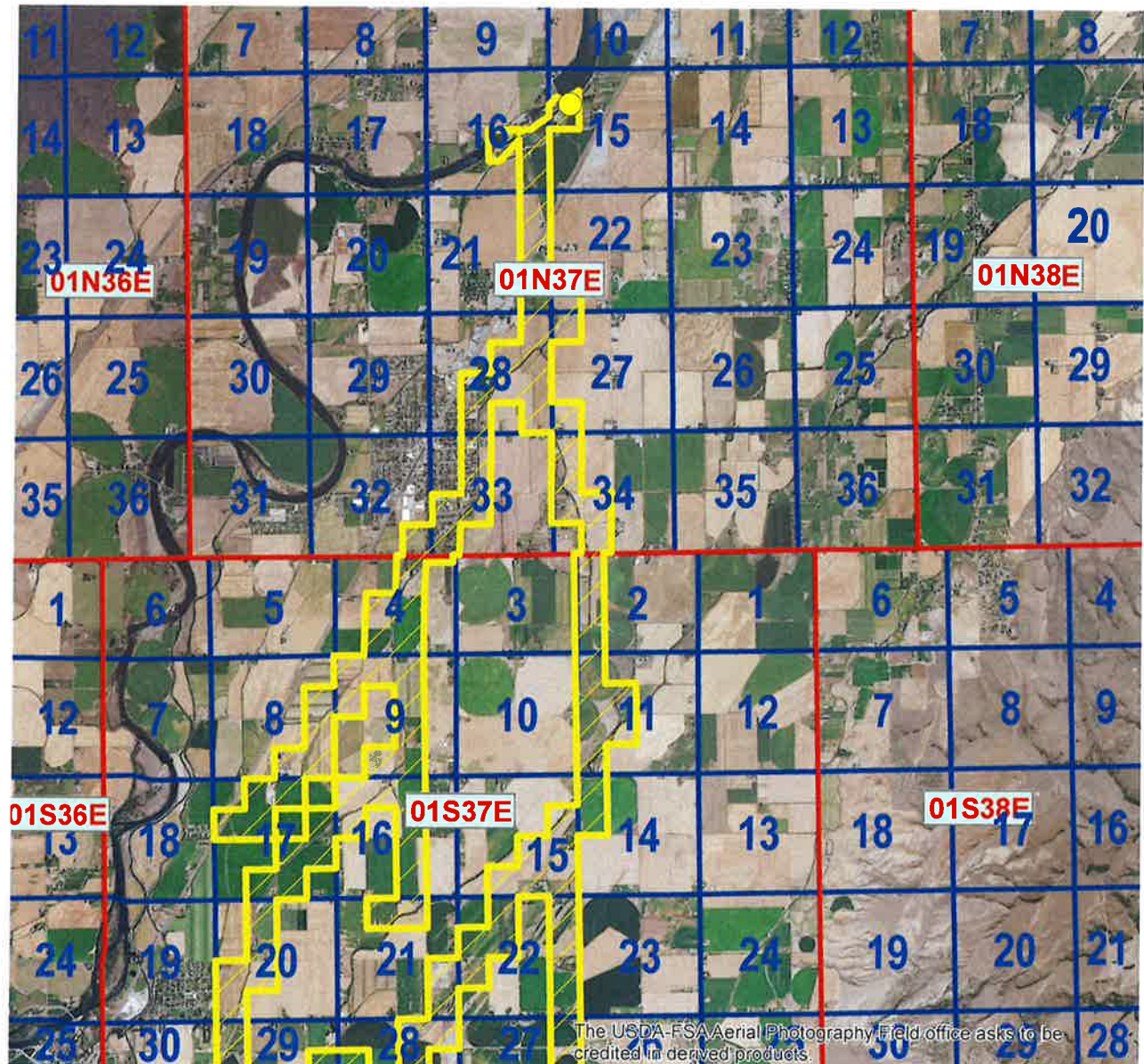
13059525 SNAKE RIVER VALLEY CANAL

DAILY MEAN VALUES FOR DISCHARGE IN CUBIC FEET PER SECOND, IRRIGATION YEAR, NOVEMBER 2016 To OCTOBER 2017

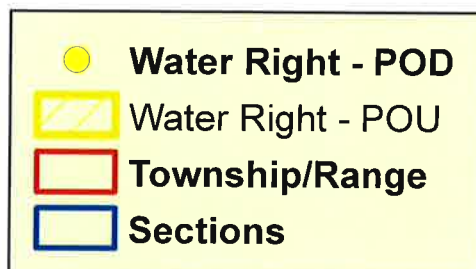
DAY	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT
1	--	--	--	--	--	103	150	459	526	445	408	193
2	--	--	--	--	--	103	168	468	517	430	419	193
3	--	--	--	--	--	103	198	460	559	452	420	193
4	--	--	--	--	--	103	221	459	571	445	409	199
5	--	--	--	--	--	103	220	452	576	449	413	204
6	--	--	--	--	0	103	219	458	557	444	409	204
7	--	--	--	--	0	103	225	475	530	435	404	186
8	--	--	--	--	0	103	330	481	529	439	396	174
9	--	--	--	--	61	103	324	482	523	453	393	173
10	--	--	--	--	62	110	338	480	528	430	398	174
11	--	--	--	--	61	116	344	476	537	414	391	173
12	--	--	--	--	61	116	365	417	549	415	391	173
13	--	--	--	--	64	116	362	291	546	415	374	173
14	--	--	--	--	71	127	363	142	523	420	356	85
15	--	--	--	--	82	137	359	246	533	443	317	20
16	--	--	--	--	86	137	350	273	518	443	295	39
17	--	--	--	--	86	136	351	298	516	448	284	50
18	--	--	--	--	86	136	352	308	510	445	265	50
19	--	--	--	--	86	136	354	408	517	439	260	49
20	--	--	--	--	86	154	354	488	517	450	260	48
21	--	--	--	--	86	164	360	486	504	454	238	48
22	--	--	--	--	86	165	392	501	496	453	178	48
23	--	--	--	--	86	165	413	518	495	454	174	59
24	--	--	--	--	86	165	418	521	497	449	174	65
25	--	--	--	--	86	164	413	531	491	434	171	64
26	--	--	--	--	86	165	402	544	478	436	172	77
27	--	--	--	--	86	165	406	581	466	430	182	95
28	--	--	--	--	97	165	412	545	447	429	192	94
29	--	--	--	--	104	127	430	522	430	448	192	94
30	--	--	--	--	104	19	459	510	431	444	192	94
31	--	--	--	--	104	--	477	--	440	422	--	94
TOTAL	--	--	--	--	1899.68	3810.32	10526.99	13280.40	15856.38	13611.06	9127.27	3583.64
MEAN	--	--	--	--	73	127	340	443	511	439	304	116
MAX	--	--	--	--	103.89	165.38	476.66	580.89	575.88	454.14	419.53	204.49
MIN	--	--	--	--	0	19.18	150.31	141.59	429.78	414.31	171.49	20.37
AC-FT	--	--	--	--	3768	7558	20880	26342	31451	26998	18104	7108

IRRIGATION YEAR 2017 TOTAL 71696 MEAN 299 AC-FT 142209

Water Right License 1-10626



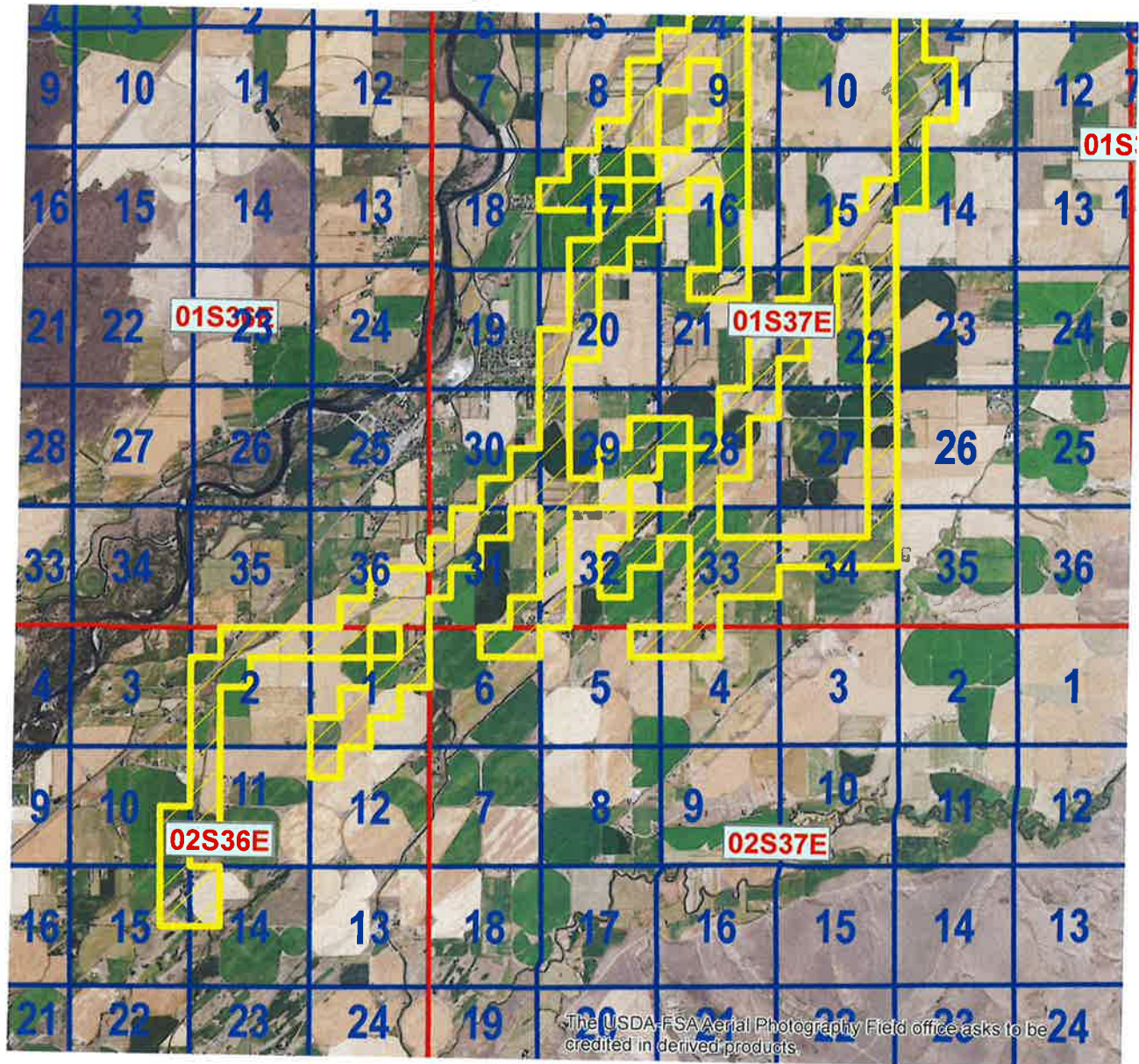
2013 Satellite Imagery



0 2 4 Miles



Water Right License 1-10626



2013 Satellite Imagery

