

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 15-7399
Exam Date: 8/9/2021

1. Current Owner:
GERALD BEETON 36 W 550 S CENTERVILLE UT 84014 OR
DALE BEETON 36 W 550 S CENTERVILLE UT 84014
2. Accompanied by: David Harris
Relationship to permit Holder: Renter

3. SOURCE:
GROUND WATER

Method of Determination: _____ Observation of pumping well _____

B. OVERLAP REVIEW

1. Other water rights with the same place of use: **NO** Overlap

Water Right No.	Source	Purpose of Use	Basis

Comments: _____

2. Other water rights with the same point-of-diversion: **NO** Overlap

Water Right No.	Source	Purpose of Use	Basis

Comments: _____

C. DIVERSION AND DELIVERY SYSTEM

1. **LOCATION OF POINT(S) OF DIVERSION:**
GROUND WATER SW¼ NE¼, Sec. 16, Twp 16S, Rge 36E, B.M. ONEIDA County

Method of Determination: GPS, and ArcMap aerial photography

PLACE OF USE: IRRIGATION

Twp	Rng	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
16S	36E	16		40.0	40.0		40.0			40.0									160.0

Total Acres: 160.0

Method of Determination: GPS and ArcMap aerial photography.

3. 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. Pump Information

150 HP turbine pump. Metal tag no. D0068258.

D. FLOW MEASUREMENTS AND CALCULATIONS

At the time of examination, the pivot was able to be measured and the hand lines were unable to be measured although they were running.

The pivot was using 998.3 gpm as demonstrated on the attached spreadsheet, measuring using a Panametric portable flow meter.

6 handlines were being run at the time – two per corner on three corners. The six lines combine for a total of 32 sprinkler heads with 3/16" nozzles. The pressure of the system was 78 psi.

One 3/16" sprinkler head discharges 9.39 gpm, according to the attached worksheet.

9.39 gpm/sprinkler head * 32 sprinkler heads = 300.5 gpm.

300.5 gpm handlines + 998.3 gpm pivot = **1298.8 gpm/system** / 448.83 gpm/cfs = 2.89 cfs.

 X Additional Computation Sheets Attached

E. VOLUME CALCULATIONS

1. Volume Calculations for irrigation:

$$V_{IR} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 3.5 \text{ AF/A} \times 160 \text{ acres} = 560 \text{ AF.}$$

$$V_{DR} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 2.89 \times 214 \times 1.9835 = 1226.72 \text{ AF}$$

$$V = \text{Smaller of } V_{IR} \text{ and } V_{DR} = 560 \text{ AF.}$$

2. Volume Calculations for Other Uses: N/A

F. NARRATIVE/REMARKS/COMMENTS

One pump to pivot and handlines in the corners.

Have conditions of permit approval been met? X Yes No

G. RECOMMENDATIONS**1. Recommended Amounts**

<u>Beneficial Use</u>	<u>Period of Use</u>	<u>Rate of Diversion</u>	<u>Annual Volume</u>
IRRIGATION	04/01 to 10/31	2.89 CFS	560.0 AF

Totals: 2.89 CFS 560.0 AF

2. Recommended Amendments

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

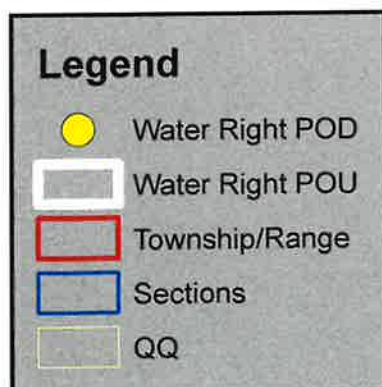
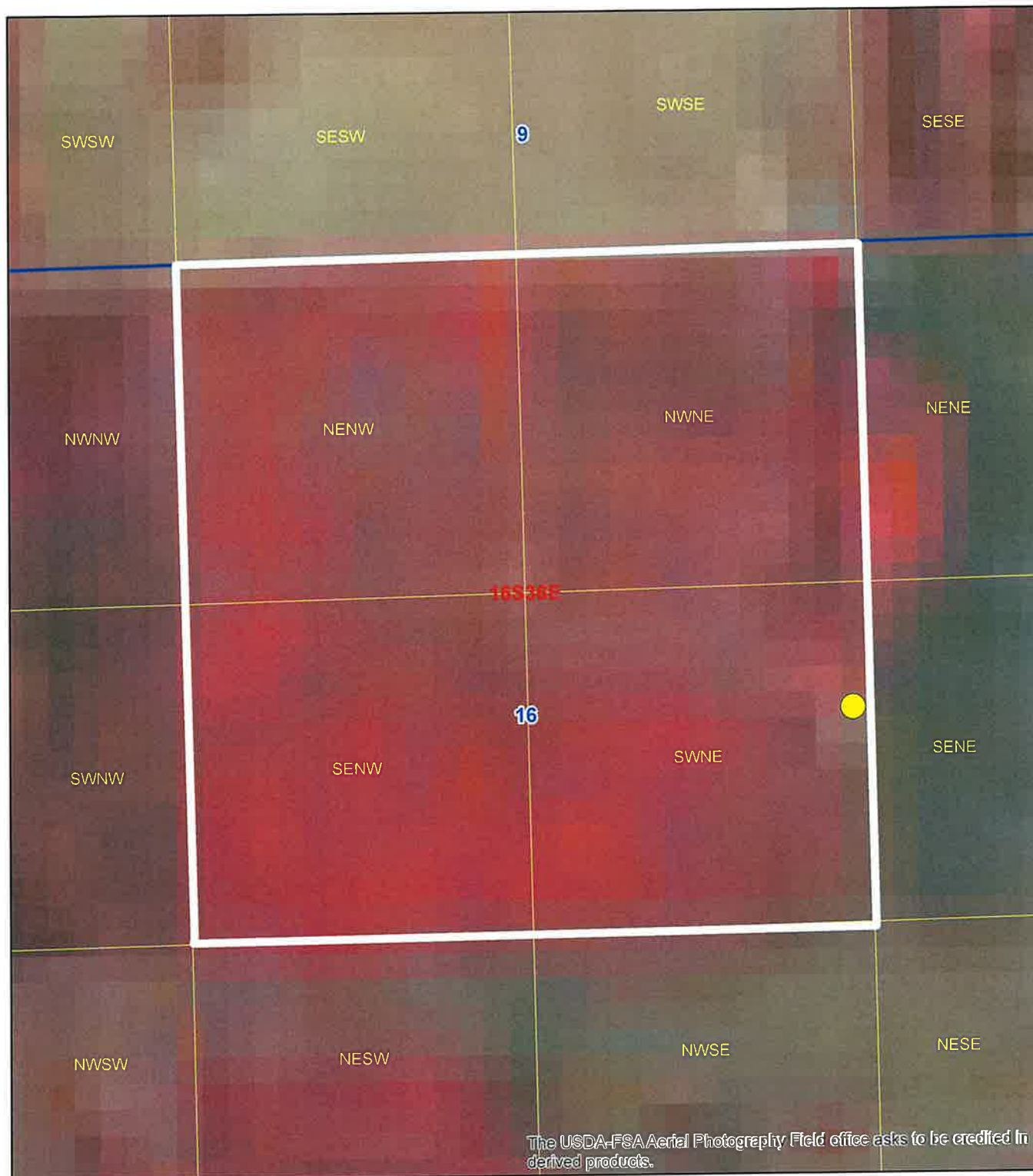
☐ Change P.U. as reflected above ☐ Add P.U. as reflected above ☒ None

I. AUTHENTICATION Cooper Fritz -

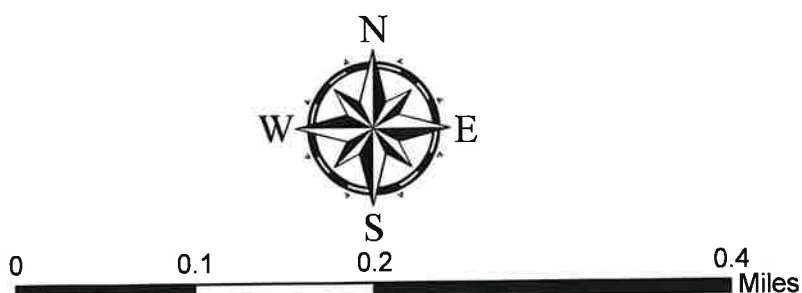
Field Examiner's Name Cooper Fritz Date 4/15/2022

Reviewer _____ Date _____

15-7399 Point of Diverion and Place of Use at Licensing



April 21, 2016 Landsat Imagery



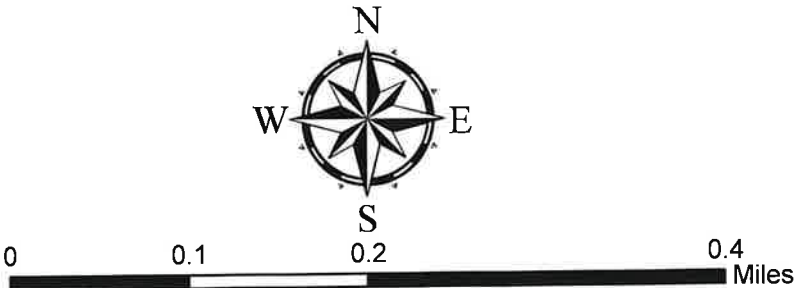
15-7399 Point of Diverion and Place of Use at Licensing



Legend

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

2017 Aerial Photography

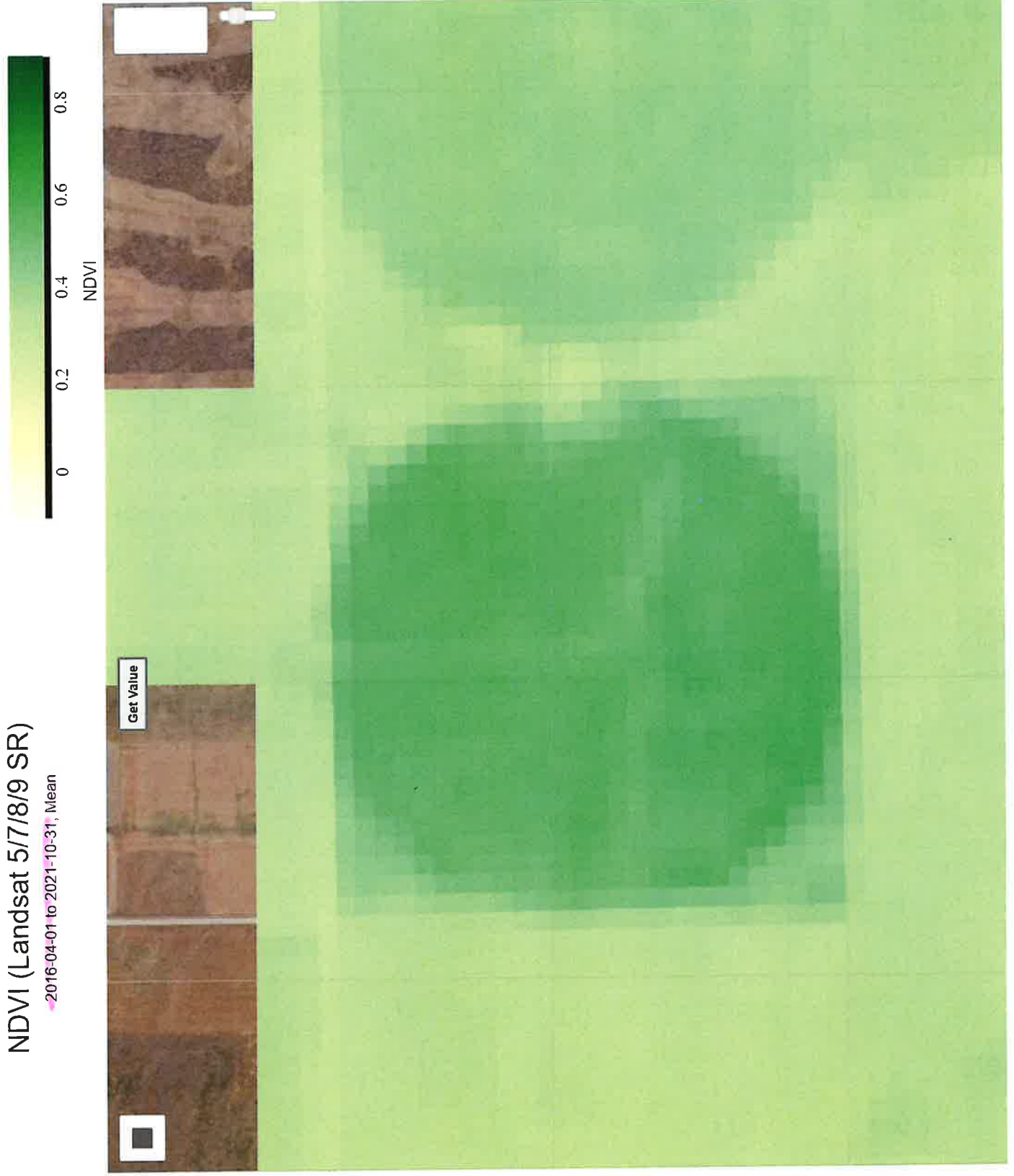


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1/30/2021 12:27	913.3216996
1/30/2021 12:27	913.3216996
1/30/2021 12:27	913.3216996
1/30/2021 12:27	914.0950442
1/30/2021 12:27	914.1279788
1/30/2021 12:28	914.1279788
1/30/2021 12:28	914.1279788
1/30/2021 12:28	913.5415887
1/30/2021 12:28	912.230648
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1/30/2021 12:36	928.2003979
1/30/2021 12:37	925.1077444

NDVI (Landsat 5/7/8/9 SR)

2016-04-01 to 2021-10-31, Mean



SPRINKLER SYSTEM DISCHARGE

NOZZLE DISCHARGE - GALLONS PER MINUTE							
psi	3/32	1/8	9/64	5/32	11/64	3/16	13/64
20	1.17	2.09	2.65	3.26	3.92	4.69	5.51
25	1.31	2.34	2.96	3.64	4.38	5.25	6.16
30	1.44	2.56	3.26	4.01	4.83	5.75	6.80
35	1.55	2.77	3.50	4.31	5.18	6.21	7.30
40	1.66	2.96	3.74	4.61	5.54	6.64	7.80
45	1.76	3.13	3.99	4.91	5.91	7.03	8.30
50	1.85	3.30	4.18	5.15	6.19	7.41	8.71
55	1.94	3.46	4.37	5.39	6.48	7.77	9.12
60	2.03	3.62	4.50	5.65	6.80	8.12	9.56
65	2.11	3.77	4.76	5.87	7.06	8.45	9.92
70	2.19	3.91	4.96	6.10	7.34	8.78	10.32
75	2.27	4.05	5.12	6.30	7.58	9.08	10.66
80	2.35	4.18	5.29	6.52	7.84	9.39	11.02
85	2.42	4.31	5.45	6.71	8.07	9.67	11.35
90	2.49	4.43	5.61	6.91	8.31	9.95	11.69
95	2.56	4.56	5.76	7.09	8.53	10.20	11.99
100	2.63	4.67	5.91	7.29	8.76	10.50	12.32

AVERAGE APPLICATION RATE - INCHES PER HOUR

Spacing in Feet	Discharge From Each Sprinkler						
	2 gpm	3 gpm	4 gpm	5 gpm	6 gpm	7 gpm	8 gpm
20x20	0.48	0.72	0.96	1.20	1.44	1.70	1.95
20x30	0.32	0.48	0.64	0.80	0.96	1.12	1.28
20x40	0.24	0.36	0.48	0.60	0.72	0.84	0.96
30x30	0.21	0.32	0.43	0.54	0.64	0.75	0.88
30x40	0.16	0.24	0.32	0.40	0.48	0.56	0.64
30x50	0.13	0.19	0.25	0.32	0.38	0.45	0.51
40x40	0.12	0.18	0.24	0.30	0.36	0.42	0.48
40x50	0.1	0.14	0.19	0.24	0.29	0.34	0.38
40x60		0.12	0.12	0.20	0.24	0.28	0.32