

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 95-13555

Exam Date: 7/20/2016

1. Current Owner:
TED BLANKINSHIP PO BOX 714 LEWISTON ID 83501 (509)758-2644

2. Accompanied by: Ted Blankinship

3. SOURCE:
BENEWAH CREEK
UNNAMED STREAM

TRIBUTARY:
BENEWAH LAKE
BENEWAH CREEK

B. OVERLAP REVIEW

1. Other water rights with the same place of use: None
2. Other water rights with the same point-of-diversion: None

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

UNNAMED STREAM L3 (NE¼NW¼) Sec. 3, Twp 45N, Rge 03W, B.M. BENEWAH County
UNNAMED STREAM L2 (NW¼NE¼) Sec. 4, Twp 45N, Rge 03W, B.M. BENEWAH County
BENEWAH CREEK SW¼NE¼ Sec. 4, Twp 45N, Rge 03W, B.M. BENEWAH County
UNNAMED STREAM L3 (NE¼NW¼) Sec. 3, Twp 45N, Rge 03W, B.M. BENEWAH County

Method of Determination: Maps and GPS. POD locations at

Benewah Creek: 116° 43.392, 47° 16.655

Unnamed Stream L2: 116° 43.257, 47° 16.778

Unnamed Stream L3: 116° 42.497, 47° 16.840

Unnamed Stream L3: 116° 42.220, 47° 16.814

2.

PLACE OF USE: IRRIGATION

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
45N	03W	3		0.3 L 2			3.1 L 3	1.7 L 4											5.1
45N	03W	4	1.8 L 1	7.1 L 2	13.0					2.4									24.3

Total Acres: 29.4

Method of Determination: Google Earth and Arc map.

3.

Delivery System Diagram Attached (required). Indicate all major components and distances between components.

 X 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
BENEWAH CREEK	STATIONARY PUMP	5			
UNNAMED STREAM	PORTABLE PUMP	2			

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

D. FLOW MEASUREMENTS

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date

2. Measurements:

E. FLOW X Additional Computation Sheets Attached**CALCULATIONS**

Measured Method: MAXIMUM DIVERSION RATE DETERMINED BY SPRINKLERS THAT WERE USED. SEE ATTACHED SHEETS SHOWING MAXIMUM DIVERSION RATE FOR 3 SECTIONS OF SPRINKLERS. 2 SECTIONS USED WITH 5HP PUMP AND 1 SECTION USED WITH 2HP PUMP.

1 SECTION OF HOSE IS EQUAL TO 13 SPRINKLERS WHICH PRODUCES 29.6 GPM

3 SECTIONS OF HOSE X 29.6 GPM = 88.8 GPM

88.8 GPM IS EQUAL TO 0.20 CFS

F. VOLUME CALCULATIONS**1. Volume Calculations for Irrigation:**

$$V_{IR} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 29.4 \text{ AF} \times 3.0 \text{ AF} = 88.2 \text{ AF}$$

$$V_{DR} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.20 \text{ CFS} \times 214 \times 1.9835 = 84.9$$

$$V = \text{Smaller of } V_{IR} \text{ and } V_{DR} = 84.9 \text{ AF}$$

G. NARRATIVE/REMARKS/COMMENTS

Field exam with applicant, Ted Blankinship, showed a large cattle operation on a large piece of property. Applicant first showed me what he had developed from the two sources listed as springs on the permit. Applicant had built 3 ponds that had a pvc pipe in bottom of dam that he used for flood irrigation of lands below. It was discussed during exam that this development wasn't what was permitted and applicant would need file a separate application for the springs and unnamed stream ponds. Applicant did apply for those ponds on application for permit 95-17300. Mr. Blankinship also had claims on the same property; 95-13822 for instream stockwatering and 95-13821 for domestic and stockwater from a well.

Applicant had electricity brought from road down to point of diversion on Benewah Creek. A 5hp pump was used there to supply water to two sections of K-Line irrigation sprinklers. Pump was not present during exam because applicant was having it re-built and irrigation water was not yet needed. A 2hp portable pump was used on the unnamed stream and that would run one section of K-Line. Mr. Blankinship said he had bought the sections of K-Line that were rated for 29gpm. During licensing review a sprinkler pump sheet was found showing the orange heads on sprinklers were rated for 29.6gpm. The diversion rate for system is limited by what the sprinklers can produce which is equal to 88.8gpm or 0.20cfs.

Applicant would use an ATV to drag the K-Line around to different spots on the property. The unnamed stream had a portable pump that he would move to the three different points of diversion along with sprinklers. Mr. Blankinship said he would mainly use the water when there was enough water in the creeks and he would only use the water to keep the grass green enough for the cattle before he moved them for slaughter. License will be issued for 0.20cfs with no annual volume for irrigation from surface water.

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

H. RECOMMENDATIONS**1. Recommended Amounts**

BENEFICIAL USE
IRRIGATION

PERIOD OF USE
04/01 to 10/31

DIVERSION RATE
0.20 CFS

Totals: 0.200 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 ☒ None

I. AUTHENTICATION

Field Examiner's Name

Adam Fink

Date

4-19-2017

Reviewer

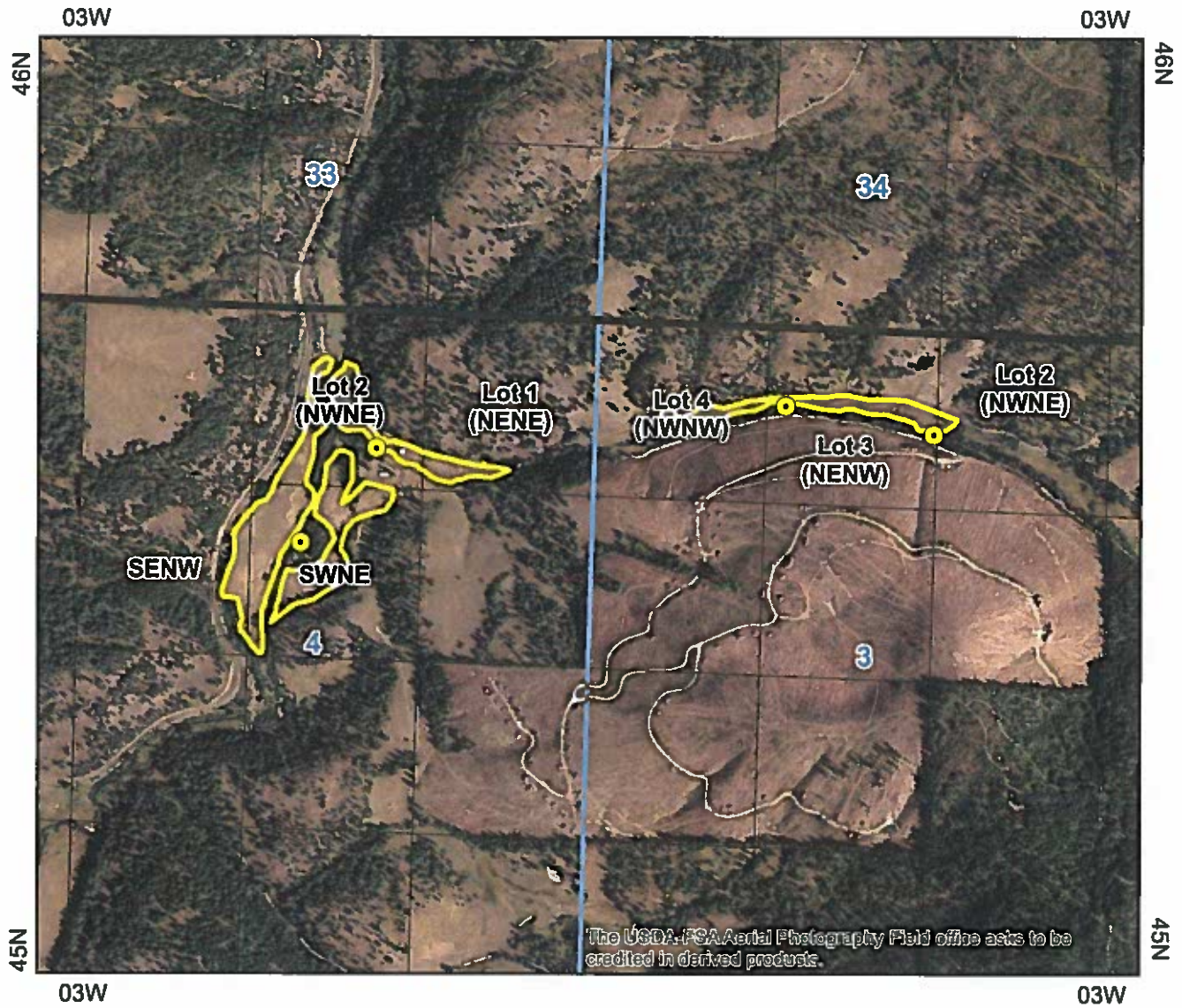
Morgan Cox

Date

5/9/2017

State of Idaho
Department of Water Resources
Attachment to Field Exam
95-13555

IRRIGATION



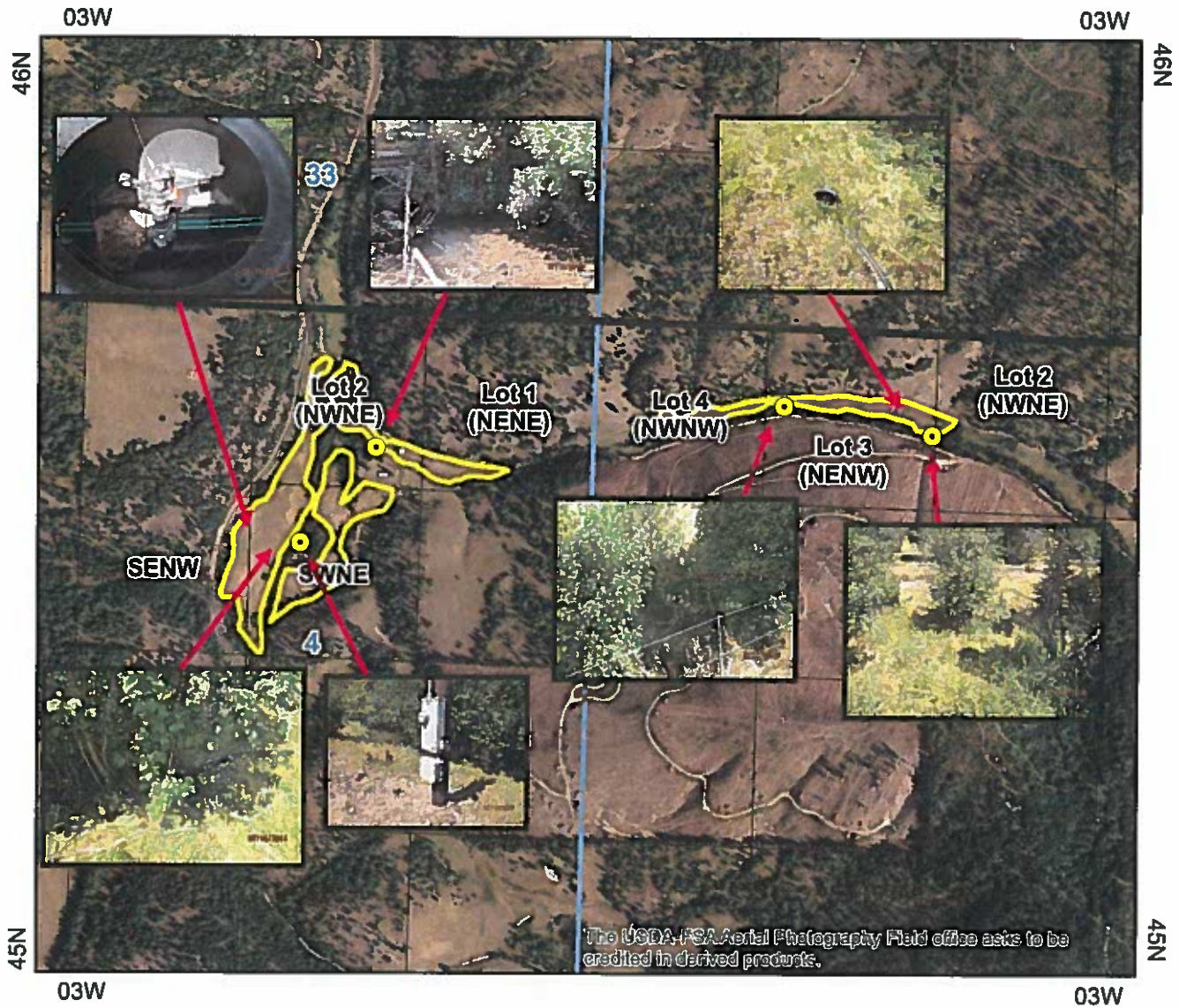
-  Point of Diversion
-  Place Of Use Boundary
-  Townships
-  PLS Sections

0 0.15 0.3 0.6 Miles



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SYSTEM DIAGRAM



-  Point of Diversion
-  Place Of Use Boundary
-  Townships
-  PLS Sections

0 0.15 0.3 0.6 Miles





Naan 5022SD (Super Diffuser) Sprinkler Rates

	Nozzle	Pressure PSI	Number of pods per sprinkler line							
			6	7	8	9	10	11	12	13
	Flow per sprinkler line									
	7/64 Orange	35	13.1	15.4	17.7	20.0	22.5	24.9	27.3	29.6
		45	14.9	17.4	20.0	22.6	25.4	28.1	30.8	30.4
	15/128 Red	35	15.2	17.8	20.5	23.2	26.1	28.8	31.5	34.1
		45	17.1	20.0	23.0	26.1	29.3	32.4	35.4	38.3
	1/8 Green	35	16.9	19.8	22.8	25.9	29.0	32.0	35.0	37.0
		45	19.0	22.6	25.7	29.1	32.5	35.9	39.2	41.6
	9/64 Blue	35	19.5	23.0	26.5	30.2	33.6	36.9	39.2	42.4
		45	22.1	26.0	30.0	34.1	38.0	41.7	44.2	47.9
	5/32 Black	35	25.2	29.8	34.5	38.7	42.7	47.6	51.5	55.6
		45	28.4	33.5	38.7	43.4	48.0	53.4	57.8	62.4
	Precipitation rate, inches per 24 hours									
	7/64 Orange	35	2.02	2.03	2.04	2.06	2.07	2.09	2.10	2.10
		45	2.29	2.30	2.31	2.32	2.34	2.36	2.37	2.37
	15/128 Red	35	2.33	2.35	2.36	2.38	2.41	2.42	2.43	2.42
		45	2.63	2.64	2.66	2.68	2.70	2.72	2.72	2.72
	1/8 Green	35	2.60	2.61	2.63	2.66	2.68	2.68	2.69	2.63
		45	2.92	2.94	2.96	2.99	3.00	3.01	3.02	2.95
	9/64 Blue	35	3.00	3.03	3.06	3.09	3.11	3.09	3.01	3.01
		45	3.40	3.43	3.46	3.49	3.51	3.50	3.40	3.40
	5/32 Black	35	3.88	3.93	3.97	3.96	3.94	3.99	3.96	3.94
		45	4.36	4.41	4.46	4.45	4.43	4.48	4.44	4.43

x 3
Section

K-Line Irrigation Systems

A revolutionary new irrigation system designed for pastures and forage crops

K-Line Irrigation benefits include:

- Cost effective irrigation
- Simple installation
- Easy shifting
- Suits all terrain and property sizes
- Slow application rate for maximizing absorption
- Efficient use of water
- Easily expanded



The heart of the system is a series of tough one-piece plastic pods protecting a sprinkler that is firmly attached to the specially designed K-Line low density tubing. The system can run on pressures ranging from 35 to 60 psi at the sprinklers. It is designed to distribute water through a slow absorption method for up to a 24 hour period, (like a soft rain). This also eliminates the need to shift irrigation several times a day and allows for maximum absorption into the soil.

The bottom line: ***K-Line Irrigation uses less water and uses it much more effectively!***

K-Line Components:



Sprinklers - K-Line offers a wide variety of nozzles to adjust application rates.

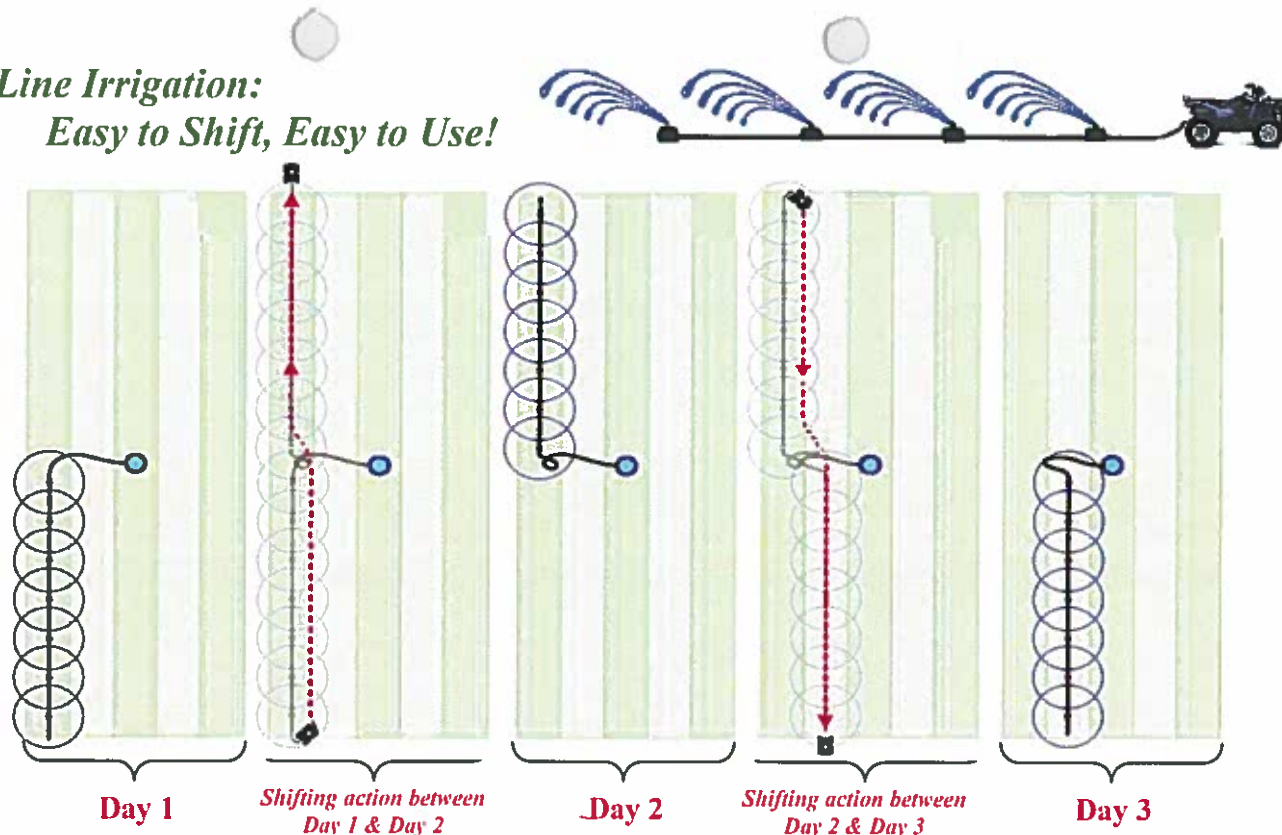


Pods - Up to 13 K-Line pods can be installed on one sprinkler line. (with a 50' maximum sprinkler spacing).



www.k-linena.com

***K-Line Irrigation:
Easy to Shift, Easy to Use!***



The simple process of shifting K-Line Irrigation is as follows:

1. K-Line is irrigating for 24 hours on Day 1.
2. Go to the far end of the sprinkler line. Turn your ATV back into & along the side of your sprinkler line. In one easy movement, hook onto the sprinkler line and start immediately back along your pod line staying within 10' of your pod line. Line up with your marker as you approach midpoint and continue to the end of the field. Sprinklers remain in operation while lines are being moved. (NOTE: It only takes 2-3 minutes to move one sprinkler line!)
3. K-Line is now irrigating for Day 2. (Keep repeating this step until you have covered your entire field). Typically a field is covered in an 8-12 day return.
4. When the field has been irrigated completely, disconnect the line from your feed line, tow the sprinkler back to the



K-Line Irrigation is a truly simple and effective system. That's also true when it comes to shifting the lines. The unique skid characteristics of the pod and the shifting process have been carefully designed so that when done correctly, the shifting process places no undue stress on your ATV or other vehicle.

K-Line Irrigation works in fields of all shapes and sizes! (From 2 - 200 acres!)

***For more information,
contact your local dealer at:***



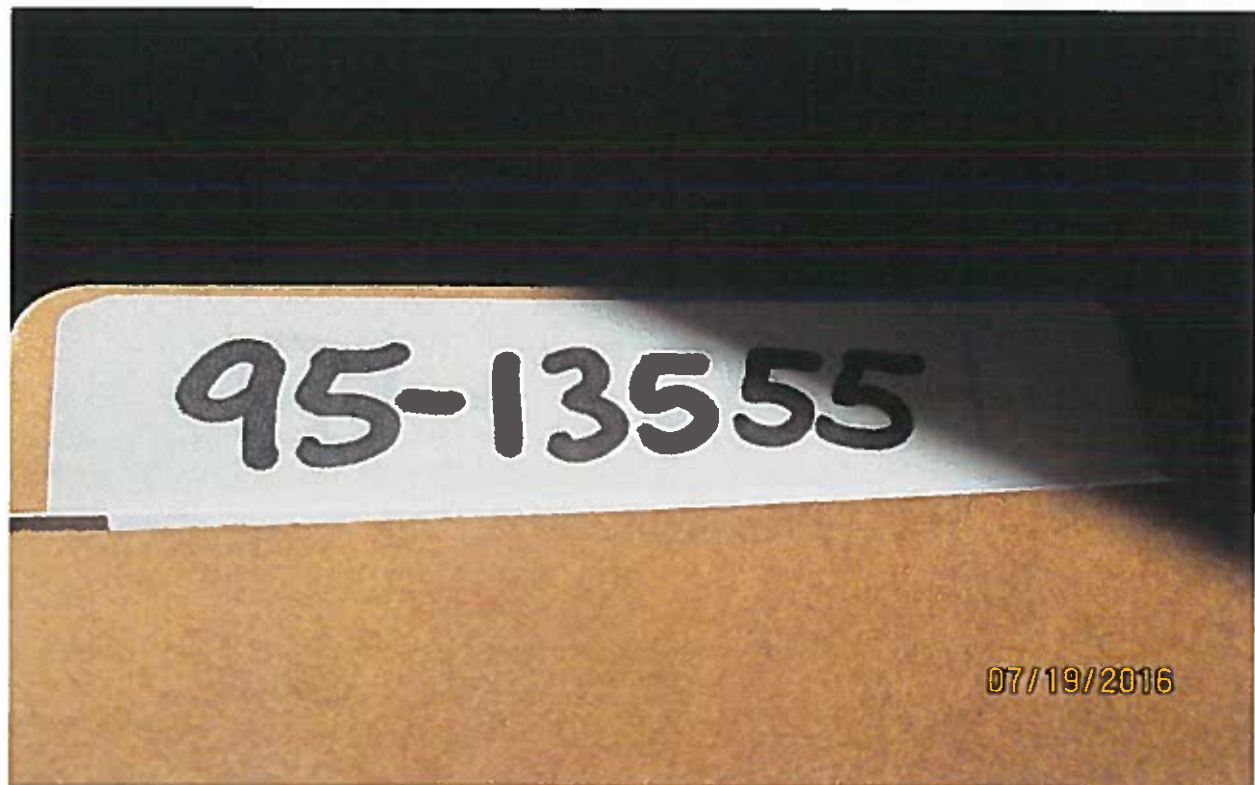
Pacific Ag Systems, Inc.

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Proudly providing irrigation systems to the following counties: Benton, Coos, N. Curry, Douglas, Lane, S. Lincoln and Linn.



Point of diversion on Benewah Creek. Pump was getting repaired at time of exam.



PVC piping heading to sprinklers from point of diversion.



Point of diversion on unnamed stream in Lot 2. Pump would go down in pool area next to culvert.



Point of diversion on unnamed stream in Lot 3.



Point of diversion on unnamed stream in Lot 3.



1 line of sprinklers located in Lot 3.



Sprinkler head.



Sprinkler head off of Benewah Creek.



Orange sprinkler head.



Place of Use.



Place of Use



Place of Use



Place of use



Place of Use



Place of Use



Place of Use