

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 74-16057
Exam Date: 06/12/2024

1. Current Owner:
LAMAR COCKRELL & SONS LLC 182 LEMHI RD SALMON ID 83467-5140
2. Accompanied by: Ori Cockrell
Phone No: (208)303-0332
Address: same as mailing address above
Relationship to permit Holder: Permit Holder

3. SOURCE:

WASTE WATER

Tributary

LEMHI RIVER

Method of Determination: Garmin GPS, GIS Imagery.**B. OVERLAP REVIEW**

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

Water Right No.	Source	Purpose of Use	Basis
74-2047L, 74-1835, 74-169B	Lemhi River	Irrigation	Decreed
74-7095	Spring/sinks	Irrigation	Decreed

Comments: The permitted place of use (POU) is supplementing wastewater to existing irrigation rights held by the permit holder for irrigation diverted from the L9 Ditch (Lemhi River). There were no concerns apparent through review of the proposed use of wastewater for irrigation to provide the standard duty within the permitted POU.

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

Water Right No.	Source	Purpose of Use	Basis
NONE	NA	NA	NA

Comments: Several rights deliver live water from the L9 Ditch which is used to convey the wastewater to the permitted POU. However, no rights share the wastewater point of diversion (POD) at the L9 Ditch with the permitted POD.

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

WASTE WATER SE¼ SW¼, Sec. 19, Twp 21N, Rge 23E, B.M. LEMHI County

GPS COORDS: N 45 07.867° W 113 46.923°

Method of Determination: Garmin GPS Coordinates taken at discharge of weir into L9 Ditch.

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	
21N	22E	10	29.0	40.0	12.0	7.8	33.0	31.0											152.8
21N	22E	3			26.0	1.0				17.0	15.9	4.0	35.0	39.0	17.6	1.8	27.0	34.0	218.3
21N	22E	11						4.7											4.7
21N	22E	2										20.0	11.0						31.0

Total Acres: 406.8

3. Delivery System Diagram Attached (required). Indicate all major components and distances between components.
X 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.
X
X Aerial Photo Attached (required for irrigation of 10+ acres).
X Photo of Diversion and System Attached

Method of Determination: NAIP 2023 GIS Imagery and Google Earth Pro Imagery.**4.**

Well or Diversion ID No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
12" Weir	NA	NA	NA	NA	2cfs max

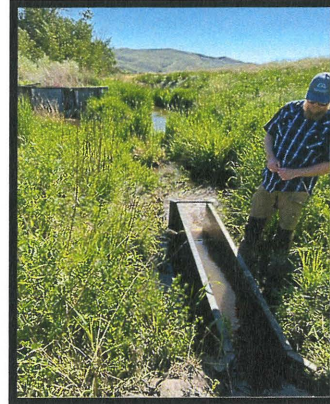
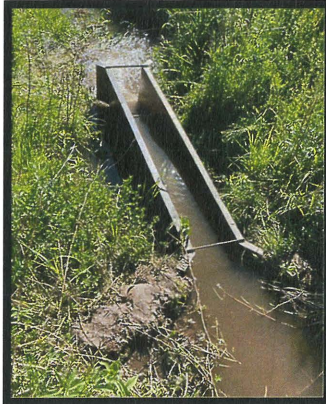
D. FLOW MEASUREMENTS**1.**

Measurement Equip.	Type	Make	Model No.	Serial No.	Size	Calib. Date
Steel Weir	Broad Crested	Unknown	Unknown	Unknown	12"wide- 2cfs	Unknown

2. Measurements: A staff gauge installed to measure the output of a wastewater ditch from the permit holder's field.
- E. FLOW CALCULATIONS**

_____ Additional Computation Sheets Attached

Measured Method:



Photos 1-3 – The 12" broad crested weir installed near the southeast corner of the fields along Geertson Creek. In the image on the right the flow crossing the flume can be seen discharging into the L9 Ditch in the background.

2 cfs Flume Water Measurement Table Broad-Crested Weir					
4" Crest Height			Flow Equation		
1'-6" Crest Length			$Q = K1 * (Head + K2)^{1/2} U$		
12" Crest Width			3.549 = K1		
Vertical Side Walls (Steel)			0.007 = K2		
50 Miners Inches = 1 CFS			1.619 = U		
Head (feet)	Flow Rate (cfs)	(inches)	Head (feet)	Flow Rate (cfs)	(inches)
0.15	0.18	9	0.50	1.18	59
0.16	0.20	10	0.51	1.22	61
0.17	0.21	11	0.52	1.26	63
0.18	0.23	12	0.53	1.30	65
0.19	0.26	13	0.54	1.34	67
0.20	0.28	14	0.55	1.38	69
0.21	0.30	15	0.56	1.42	71
0.22	0.32	16	0.57	1.46	73
0.23	0.34	17	0.58	1.50	75
0.24	0.37	18	0.59	1.54	77
0.25	0.39	20	0.60	1.58	79
0.26	0.42	21	0.61	1.62	81
0.27	0.44	22	0.62	1.67	83
0.28	0.47	23	0.63	1.71	85
0.29	0.50	25	0.64	1.75	88

Table 1- Water Measurement Table provided by Brian Hamilton, USBR. The staff gauge reading for 0.60 ft of head in the photo above corresponds with a rate of 1.58cfs.

Comments/Recommendation: The wastewater runs off the fields northwest of the measuring weir in several places. The measuring device installed at the one pictured above indicates that the amount of water crossing the weir adjacent to discharging into the L9 Ditch exceeds the permitted rate of 1.00cfs (approx. measurement=1.58cfs). I recommend that the license is issued with a maximum rate of 1.00cfs, limited by the permitted use.

F. VOLUME CALCULATIONS

1. Volume Calculations for irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 50 \text{ acres} \times 3.5 \text{ AF/acre} = 175.0 \text{ AF annually}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 1.00\text{cfs} \times 246 \text{ days} \times 1.9835 = 488.0 \text{ AF}$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = 175 \text{ AF annually}$$

2. Volume Calculations for Other Uses: NA

Comments/Recommendation: The permit holder applied to use supplemental wastewater to divert a rate of 1.00cfs from the L-9 Ditch east of the wastewater discharge into the ditch. The statutory standard rate for 50 acres of irrigation is 1.00cfs and at the field headgate requirement of 3.5 AF/acre the full permitted rate can divert up to 175.0 AF annually when combined with all other rights. The permit is conditioned limiting it to the statutory rate and field headgate standard for irrigation. I recommend that the license is issued with an annual volume of 175.0 AF, per the irrigation calculation above.

Correction by

G. NARRATIVE/REMARKS/COMMENTS

The Department received the Proof of Beneficial Use for permit 74-16057 on October 22, 2021. In section 5 of the form the permit holder stated that the use was developed for the irrigation of 406.8 acres of irrigation, describing a wastewater source in section 4. On June 12, 2024, a field examination was conducted with permit holder, Orie Cockrell as an escort. During the field examination wastewater flow from fields southeast of the POU and on the west side of Geertson Creek were documented at a 12" broad crested weir just upstream of the discharge into the L-9 Ditch. The L-9 Ditch conveys wastewater to the west, sidling the northern slopes along the Lemhi valley crossing several drainages to deliver water to the permitted POU on the west side of Kirtley Creek and POUs such as WR 74-16182 to the west of the permitted POU. Several methods of irrigation (see Figure 1-System Diagram) are used to deliver the wastewater throughout the POU utilizing the existing systems diverting from the L-9 Ditch under rights 74-2047L, 74-1835, 74-169B held by the permit holder.

At the time of the field examination approximately 0.6ft of head (1.58cfs) was observed at the measuring weir, exceeding the permitted rate. Irrigation was observed throughout the permitted POU in the field and via aerial imagery. I recommend that the license is issued for the full permitted rate of 1.00cfs and an annual volume of 175.0 AF, per sections E & F of this report.

This license should be issued with conditions R05, R02, R43, R63, 176, 198, & 004. Condition 01H was replaced with R02 at licensing, as per current guidance. After discussions with James Cefalo, and correspondence with the Watermaster Lacey French condition 215 was replaced with R43, as a data logger would not aid in administration of the right and condition 198 requires that the permit holder may be required to provide the same information upon request. Condition 029 was removed as no correspondence was received from Idaho Fish and Game regarding fish screening requirements. Condition 26A was removed per current guidance. Condition 196 was removed as it is not to be used for a right exceeding 0.24cfs in the area that is or will be Water District 170 (current guidance). The delivery systems for the existing rights were found to require the same general conditions as the permit, with the exception of those specific to a wastewater source.

Condition R02 is as follows, "A lockable device subject to the approval of the Department shall be maintained on the diverting works in a manner that will provide the watermaster suitable control of the diversion." And condition R43 states, "The right holder shall maintain a measuring device and lockable controlling works of a type approved by the Department in a manner that will provide the watermaster suitable control of the diversion(s)." The conditions are almost identical. The correspondence between Bob Howe and the watermaster for the district gave direct approval for condition R43. Condition R43 will stay on the license and condition R02 will be removed.

Have conditions of permit approval been met? X 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>
IRRIGATION	03/15 to 11/15	1.00 CFS	175.0 AF

Totals: 1.00 CFS 175.0 AF

Amendment: No volume recommendation for Irrigation Rights taking from surface water according to Beneficial Use Exam IDAPA Rule 35.01.(i).viii, the volume will not be reported on the license.

2. Recommended Amendments

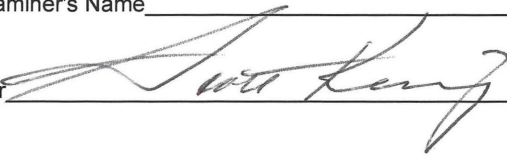
 Change P.D. as reflected above Add P.D. as reflected above X None

 Change P.U. as reflected above Add P.U. as reflected above X None

I. AUTHENTICATION

Bob Howe - Water Resource Agent, Sr.
Izzy Crichton – Amendments – Water Resource Agent (4/16/2026)

Field Examiner's Name _____ Date _____

Reviewer  Date April 17, 2026

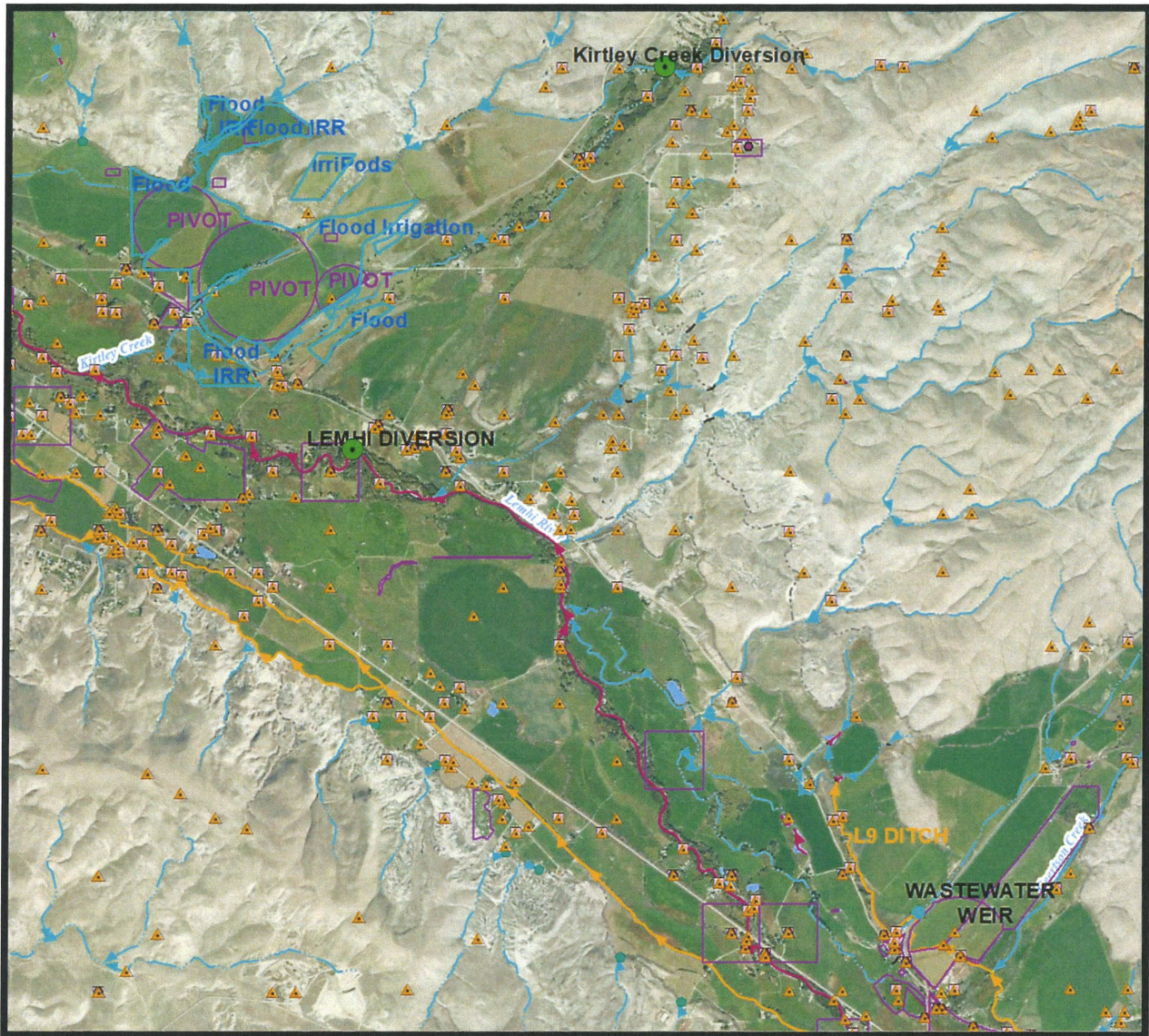


Figure 1- System Diagram- Wastewater Irrigation. When wastewater is adequate at the measuring weir site additional water is available for diversion at the L-9 Ditch diversion points for permit holder's rights 74-1835, & 74-2047L. The spring POD for the permit holder's right 74-7095 sinks but overlaps the permitted use. WR 74-15985 & 74-16101 are still active permits for spring diversions overlapping the southern extent of this permit POU. The proof report for 74-15985 was received 03/04/2024, but not available for review as part of this FE conducted in June, 2024.

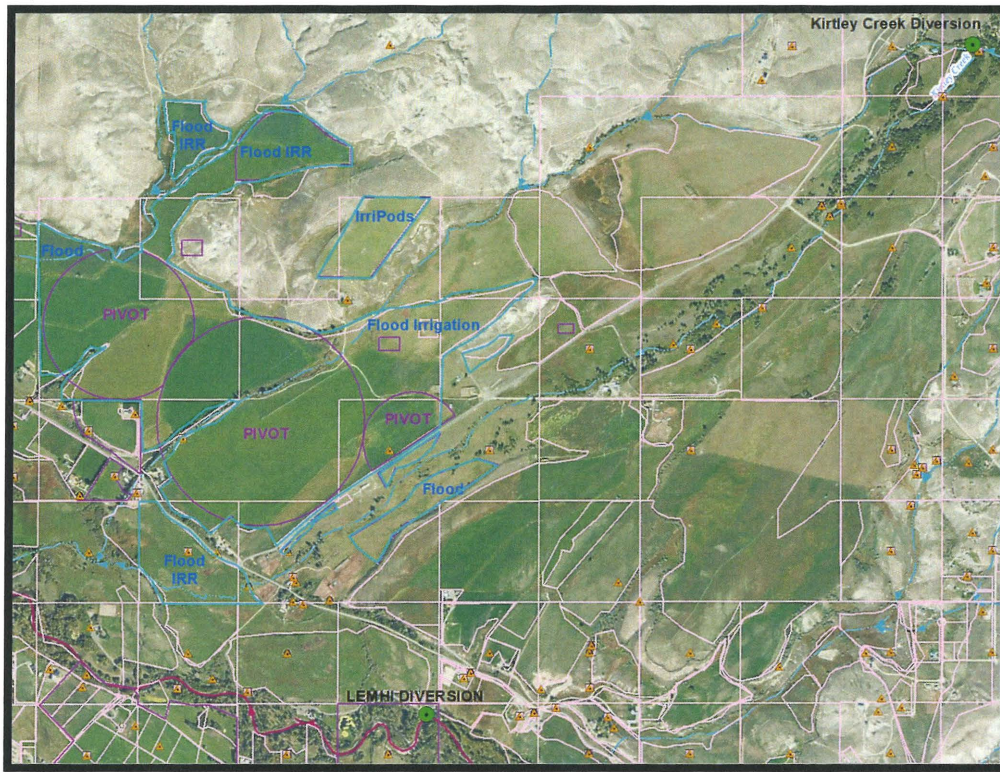


Figure 1a- Irrigation methods used for systems of rights irrigating the irrigation POU. Wastewater adds only 50 acres to the existing water rights irrigation within the POU.



Figure 1b- The L9 ditch sidles the periphery of the valley from the wastewater weir in the southeast to the flood irrigated portions of the permitted POU in the northwest.

2 cfs Flume

Water Measurement Table Broad-Crested Weir

4" Crest Height
1'-6" Crest Length
12" Crest Width
Vertical Side Walls (Steel)

50 Miners Inches = 1 CFS

Flow Equation

$$Q = K1 * (\text{Head} + K2)^U$$

$$3.549 = K1$$

$$0.007 = K2$$

$$1.619 = U$$

Head (feet)	Flow Rate (cfs)	(inches)	Head (feet)	Flow Rate (cfs)	(inches)
0.15	0.18	9	0.50	1.18	59
0.16	0.20	10	0.51	1.22	61
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0.26	0.42	21	0.61	1.62	81
0.27	0.44	22	0.62	1.67	83
0.28	0.47	23	0.63	1.71	85
0.29	0.50	25	0.64	1.75	88
0.30	0.52	26	0.65	1.80	90
0.31	0.55	28	0.66	1.84	92
0.32	0.58	29	0.67	1.89	94
0.33	0.61	30	0.68	1.93	97
0.34	0.64	32	0.69	1.98	99
0.35	0.67	33	0.70	2.02	101
0.36	0.70	35	0.71	2.07	103
0.37	0.73	37	0.72	2.12	106
0.38	0.76	38	0.73	2.16	108
0.39	0.79	40	0.74	2.21	111
0.40	0.83	41	0.75	2.26	113
0.41	0.86	43	0.76	2.31	115
0.42	0.89	45	0.77	2.36	118
0.43	0.93	46	0.78	2.41	120
0.44	0.96	48	0.79	2.46	123
0.45	1.00	50	0.80	2.51	125
0.46	1.03	52	0.81	2.56	128
0.47	1.07	53	0.82	2.61	130
0.48	1.11	55	0.83	2.66	133
0.49	1.14	57	0.84	2.71	136