

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 98-7997

Exam Date: 07/17/2025

1. Current Owner:
IDAHO FOREST GROUP LLC 687 W CANFIELD AVE STE 100 COEUR D ALENE ID 83815-5335
2. Accompanied by: Chris Pease
Phone No: 208-255-3252
Address: Same as above
Relationship to permit Holder: Representative – Mill Manager at Moyie Springs Idaho Forest Group Mill

3. **SOURCE:**
MOYIE RIVER

Tributary
KOOTENAI RIVER

Method of Determination: ArcMap and DRG Layer

B. OVERLAP REVIEW

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

Water Right No.	Source	Purpose of Use	Basis
98-2083	Moyie Springs	Industrial and Fire Protection	License
98-7649	Spring	Domestic	License
98-7804	Skin Creek	Municipal	License

Comments:

- Licensed Right 98-2083 is owned by the Permit Holders and authorizes Industrial and Fire Protection beneficial uses from Moyie Springs water source; the POU for 98-2083 overlaps this Permit's POU in part, for the northern mill site property. While the water systems between Rights are separate and don't co-mingle, both are used by the Permit Holders to serve the mill for industrial log deck watering, dust abatement, and potential fire protection requirements. I have added condition X35 describing that 98-2083 and 98-7997 when combined shall not exceed an industrial use annual diversion volume of 129 af (rounding conventions applied) for mill log deck watering and dust abatement.
- 98-7649 uses a separate Spring source as this Permit for domestic use 1 home and was licensed with a 40-acre tract POU which overlaps this Permit's POU in the NW1/4NE1/4. Water right backfile information illustrates the historic beneficial use under 98-7649 occurs outside Idaho Forest Group LLC property and isn't a concern for overlap between WRs. During the near future adjudication of the Kootenai River Basin 98-7649 will likely be refined to accurately depict the individual parcel the domestic use is occurring (if it is claimed).
- 98-7804 uses Skin Creek for Municipal purposes which have a large POU that encompasses this Permit's POU. Mr. Pease asserts the Mills internal building and mill operation water use is served by the municipal system, which is a completely separate system than the Moyie River system covered under this Right. The water composition of the river water isn't compatible with internal mill use like the boiler processes without treatment and there isn't any intent to add Moyie River water to the internal mill system. Based on this information there isn't any concern for overlaps as the municipal system isn't utilized for external industrial use related to the mill. The municipal system covers small scale irrigation around office buildings, provides potable water for employees, and other internal building mill water use.

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

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

MOYIE RIVER NW¼ SE¼, Sec. 15, Twp 62N, Rge 02E, B.M. BOUNDARY County

Method of Determination: GPS located diverting pump in Moyie River at -116°11.141, 48°43.363

PLACE OF USE: FIRE PROTECTION and INDUSTRIAL

Twp	Rng	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
62N	02E	15		X	X		X		X	X	X	X	X	X					

Method of Determination: Beneficial use field examination and ArcMap aerial imagery.

3.

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

☒ 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.☒ Aerial Photo Attached (required for irrigation of 10+ acres).☒ 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
RIVER PUMP		60			6-INCH DISCHARGE

D. FLOW MEASUREMENTS

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date
Flow Meter	Transit Time	GE PANAMETRIC	PT900	M06210067	CLAMP-ON	4/1/2025

2. Measurements: I performed a flow measurement for 15 minutes a short distance from the river pump where the 6-inch pipeline daylighted in routing alongside a service road. The system operates in short run times filling a 6,500-gal storage tank resulting in only two short run periods in the total 15-min measurement. The average diversion rate based on run time(s) equaled 1.09 cfs.

E. FLOW CALCULATIONS☒ Additional Computation Sheets Attached

Measured Method: Department Panametric PT900 flow meter.

- Permit authorized diversion rate = 1.0 cfs
- Flow meter evaluated average flow rate = 488 gpm or 1.09 cfs considering Department rounding standards.
- Recommended Maximum diversion rate for licensing purposes = **1.0 cfs**

F. VOLUME CALCULATIONS

1. Volume Calculations for irrigation: N/A

2. Volume Calculations for Other Uses:

- Fire Protection water use is exempt from the volume reporting requirements IAW Section 035 of Idaho Administrative Code – IDAPA 37.03.02 Beneficial Use Examination Rules; there isn't a Maximum Diversion Volume nor Annual Volume (for Fire Protection use) reported for licensing purposes.
- The Permit Holder provided annual volume reports for Year 2021 related to the Industrial water use in the amount of 31,031,000 gallons. $31,031,000 \text{ gal} / 325,850 \text{ gal per af} = 95.2 \text{ af}$ considering Department rounding standards. This value is recommended as the Industrial beneficial use annual volume.

G. NARRATIVE/REMARKS/COMMENTS

I conducted the beneficial use field exam on 7/17/2025 with the Permit Holder's representative, Chris Pease – Mill Manager, which showed Moyie River water being diverted for Fire Protection and Industrial water uses. At the Pod, a vertically installed 60 hp pump motor and submersible pump are installed along river frontage with 6-inch HTPE pipeline conveying water from the POD to POU. I collected photographs of the diverting work and while I was unable to determine the make/model of the centrifugal pump motor, I captured flow measurements using the Department's GE PT900 Panametric flow meter during the exam.

The HTPE pipeline daylights for about 30 feet alongside a road cut along the river before going underground routing upslope to the mill. During the exam the diverting pump, which operates on very short time cycles, diverting to a 6,500-gal storage reservoir co-located with the mill before distribution to uses by booster pump(s). As a result, the storage reservoir fills quickly causing the diverting pump to cycle off after 3-5 minutes. I measured for 15 minutes using the flow meter which derived two periods of pump on and two periods of pump off. I was unable to collect a full 11-minute pump runtime measurement. I have evaluated two separate pumping periods, a four-minute and a five-minute measurement period(s), which demonstrate the diverting pump produces an average of 488-gpm respectively for each measurement period.

The average pumping rate between both equates to a maximum diversion rate of 1.09 cfs with flow measurements taken near the POD prior to the conveyance pipeline routing vertically to climb the ridge to the POU and storage reservoir. A water system installed Badger Meter brand flowmeter is installed at the storage reservoir, which monitors instantaneous and volumetric data prior to diverted water inflow to storage reservoir. During the exam with pump active the digital readout registered between 370 to 380-gpm, indicating some gpm loss associated with elevation gain and friction loss. The Permit authorized development of **1.0 cfs**, which I have recommended for licensing purposes; the diverting pump can produce 1.09 cfs with realized flow rates to the storage reservoir of 0.85 cfs. This variation in flow indicates the slightly larger measured diversion rate is mitigated after the system assumes friction loss and elevation gain from POD to POU.

The industrial/fire protection POU consists of a lumber mill where water is used for log deck watering and dust abatement only. All internal mill operations are served water from a separate municipal water system (98-7804) and the water systems are completely separate. Water from the 6,500-gal reservoir is distributed by 3ea main trunk 6-inch HTPE pipelines using 3ea 25 hp Balder brand centrifugal pumps. The three pipelines route to different regions of the log yard and deliver water via 1-inch sprinkler lateral lines for log watering and a J-hook water truck fill point. The conveyance system doesn't cross the main road which splits the POU between north and south sections, and a field exam map was developed to illustrate the extent of the log watering industrial use at the POU. For licensing purposes, ArcMap aerial imagery was used to designate the Industrial use POU which is the same as the Fire Protection POU.

The mill has a prior water right, 98-2083, which supplies industrial water use and fire protection use from a spring source located along the northern extent of the mill. In discussion with Mr. Pease and Mr. Les Love, mill employee, the following water is used under normal mill operations:

- Spring source water from 98-2083 is used to sprinkle water on log decks and some dust abatement in the SE $\frac{1}{4}$ NW $\frac{1}{4}$, NE $\frac{1}{4}$ NW $\frac{1}{4}$, and NW $\frac{1}{4}$ NE $\frac{1}{4}$ of Section 15 but there isn't sufficient water to extent to the southern portion of the mill across them main paved roadway which splits the POU.
- Moyie River source water under this Permit 98-7997 is used to sprinkle water on log decks in the SW $\frac{1}{4}$ NE $\frac{1}{4}$, NW $\frac{1}{4}$ SW $\frac{1}{4}$, NE $\frac{1}{4}$ SW $\frac{1}{4}$, SW $\frac{1}{4}$ SW $\frac{1}{4}$, and SE $\frac{1}{4}$ SW $\frac{1}{4}$ of Section 15. Additionally, water trucks are filled using a J-hook station and spray water is used throughout the entire POU for dust abatement.
- Based on this information dust abatement is used from both water systems overlapping in the northern extent of the POU. I have recommended licensing with inclusion of condition of approval X35 describing that both water rights when combined shall not exceed a diversion volume of 129 af for industrial water use.

The industrial POU was toured during the field exam and photographs were taken to illustrate examples of log deck watering. This mill elects to use smaller impact sprinkler lateral runs which are easier to shift as log deck locations change over time. Annual volume is tracked using the Badger flowmeter and computer software. The year 2021's annual volume was submitted with the Statement of Completion form received by the Department on 4/8/2024. I was able to collect annual volume report data working off Mr. Pease's computer program during the exam with the following annual volumes reported:

- 2021 = 31,031,000 gal = **95.2 af** = largest volume year reported in permit's development period.
- 2022 = 27,500,000 gal = 84.4 af
- 2023 = 21,500,000 gal = 66.0 af
- 2024 = 25,100,000 gal = 77.0 af

I have recommended licensing designating the industrial annual volume = 95.2 af considering Department rounding standards, which is the largest year on record within the Permit's development period.

The Fire Protection POU was designated to be synonymous with the Industrial POU for licensing purposes and retains the same diversion rate as industrial water use. By nature, the entire industrial water system usage maintains wetting of log mill property and all water can be diverted to fight an active fire as necessary. In the event active fire suppression is required the Right Holder is not limited by the POU defined shape as fire protection is an exempt water use by State Code to suppress fire activities.

During licensing review, I removed a text condition related to volume reporting based on compliance by the Permit Holder. I've added condition X35 as described above which asserts that Rights 98-2083 and 98-7997 when combined shall not exceed a total diversion volume of 129 af (Department rounding conventions applied) for industrial use. All other conditions on the permit are being carried forward to the license. Overlapping water right concerns have been discussed in detail on PG1 of this report, and there are no additional overlapping water right concerns toward licensing Permit 98-7997.

As the Statement of Completion for Permit 98-7997 was submitted and received prior to commencement of the near-future Kootenai River Basin Adjudication (KRBA), the Right Holder is required to submit a Notice of Claim based on Permit or subsequent License (once signed into approval) to maintain the active license through the adjudication process toward perfecting a decreed water right by court decree.

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>
FIRE PROTECTION	01/01 to 12/31	1.00 CFS	
INDUSTRIAL	01/01 to 12/31	1.00 CFS	95.2 AF

Totals: 1.00 CFS

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

Luke Bates – Sr Water Resource Agent

Field Examiner's Name  Date 8/1/2025

Reviewer _____ Date _____

Flow Measurement B.U. Field Exam 98-7997

Date/Time 7/17/2025	Velocity ft/s	Volume Gallons/min	Fwd Totalizer Fwd Gallons	Error
10:00:00	5.2465	489.2494	469.3956	Error:0
10:01:00	5.2455	489.1626	958.947	Error:0
10:02:00	5.2453	489.1429	1447.9724	Error:0
10:03:00	5.0617	472.0179	1936.1512	Error:0
Average Velocity	5.20	System operates for less than 5 minute cycles. Two segments of measurement captured in one 15 minute period.		
Max Velocity	5.2465			
Min Velocity	5.0617			
Average GPM	484.9			
Max GPM	489.2	Max CFS	1.170	
Min GPM	472.0			
Beginning Reading			469.396	
Ending Reading			1936.1512	
Difference in Readings			1466.756	
Difference / 10 readings			488.919	GPM
Conversion from GPM to CFS (/448.83)			1.09	CFS
Measure Device: GE PT900 S/N M06210067			Last Calibration Date: 4/1/2025	

Flow Measurement B.U. Field Exam 98-7997

Date/Time 7/17/2025	Velocity ft/s	Volume Gallons/min	Totalizer Fwd Gallons	Error
10:07:00	5.2508	489.6558	2461.9795	Error:0
10:08:00	5.2374	488.4028	2952.405	Error:0
10:09:00	5.2467	489.2676	3442.4199	Error:0
10:10:00	5.2236	487.1199	3931.5852	Error:0
10:11:00	4.813	448.8236	4415.77	Error:0
Average Velocity	5.15	System operates for less than 5 minute cycles. Two segments of mesurement captured in one 15 minute period.		
Max Velocity	5.2508			
Min Velocity	4.813			
Average GPM	480.7			
Max GPM	489.7	Max CFS	1.170	
Min GPM	448.8			
Beginning Reading			2461.980	
Ending Reading			4415.77	
Difference in Readings			1953.791	
Difference / 10 readings			488.448	GPM
Conversion from GPM to CFS (/448.83)			1.09	CFS
Measure Device: GE PT900 S/N M06210067			Last Calibration Date: 4/1/2025	

98-7997 – PT 900 PANAMETRIC FLOWMETER MEASUREMENT – RAW DATA FROM FIELD EXAM

Date	Time	Velocity	Volumetri	Standard 'Mass	Batch Fon	Batch Rev	Batch Net	Batch Tot	Sound Spe	Amplitude	Amplitude	Gain Up	Gain Down	Signal Dyr	Signal to †	Signal to Noise Ratio Down
		ft/s	Gal/min	Sft^3/s	lb/s	gal	gal	gal	min	ft/s		db	db	db		
7/17/2025	10:00:00	5.2465	489.2494	1.0889	67.978	469.3956	0	469.3956	0.9625	5395.82	26.375	26.3125	30.5802	30.5802	0	34.9074 35.0388
7/17/2025	10:01:00	5.2455	489.1626	1.0887	67.966	958.947	0	958.947	1.9625	5395.703	27.6875	27.6875	30.5802	30.5802	0	35.5412 35.5659
7/17/2025	10:02:00	5.2453	489.1429	1.0887	67.9632	1447.972	0	1447.972	2.9625	5395.806	27.8125	27.75	30.5802	30.5802	0	35.6065 35.6126
7/17/2025	10:03:00	5.0617	472.0179	1.0506	65.5838	1936.151	0	1936.151	3.9625	5395.864	28	28	30.5802	30.5802	0	35.7243 35.7046
7/17/2025	10:04:00	-0.0178	-1.6563	-0.0037	-0.2301	2182.503	5.0382	2177.465	4.9625	5396.462	28.9375	28.9375	30.5802	30.5802	0	35.985 35.9666
7/17/2025	10:05:00	-0.0039	-0.3669	-0.0008	-0.051	2182.503	5.5357	2176.968	5.9625	5396.449	29.125	29.1875	30.5802	30.5802	0	36.0654 36.0481
7/17/2025	10:06:00	-0.0107	-0.9977	-0.0022	-0.1386	2182.503	6.2804	2176.223	6.9625	5396.324	29.25	29.3125	30.5802	30.5802	0	36.1558 36.1367
7/17/2025	10:07:00	5.2508	489.6558	1.0898	68.0345	2461.98	6.6272	2455.352	7.9625	5396.247	23.625	24	28.9626	28.9626	0	33.9629 34.1209
7/17/2025	10:08:00	5.2374	488.4028	1.087	67.8604	2952.405	6.6272	2945.778	8.9625	5395.695	24.125	24.1875	28.9626	28.9626	0	34.2877 34.329
7/17/2025	10:09:00	5.2467	489.2676	1.0889	67.9806	3442.42	6.6272	3435.793	9.9625	5395.58	24.5	24.6875	28.9626	28.9626	0	34.4101 34.4671
7/17/2025	10:10:00	5.2236	487.1199	1.0842	67.6822	3931.585	6.6272	3924.958	10.9625	5395.469	24.6875	24.9375	28.9626	28.9626	0	34.4705 34.5381
7/17/2025	10:11:00	4.813	448.8236	0.9989	62.3611	4415.77	6.6272	4409.143	11.9625	5395.54	24.6875	25.0625	28.9626	28.9626	0	34.5333 34.5761
7/17/2025	10:12:00	-0.0106	-0.9844	-0.0022	-0.1368	4586.158	11.2708	4574.887	12.9625	5395.979	25.125	25.125	28.9626	28.9626	0	34.6543 34.6349
7/17/2025	10:13:00	-0.0061	-0.5732	-0.0013	-0.0796	4586.158	11.8146	4574.344	13.9625	5395.977	25.3125	25.3125	28.9626	28.9626	0	34.7141 34.696
7/17/2025	10:14:00	-0.0088	-0.8236	-0.0018	-0.1144	4586.158	12.4549	4573.703	14.9625	5396.08	25.3125	25.375	28.9626	28.9626	0	34.7351 34.7182

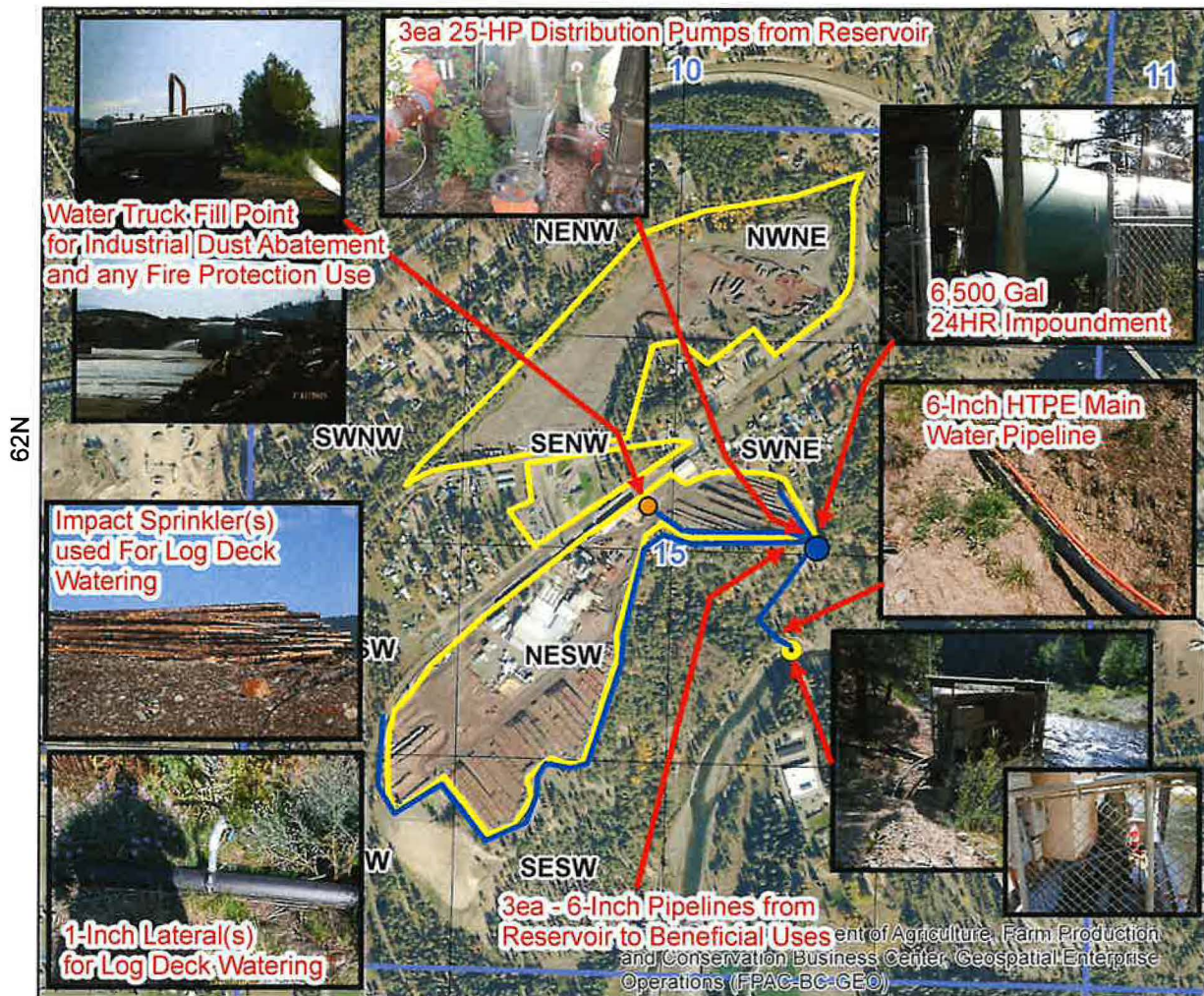
Congrats! Channel 1 Linear END!

[Pump OFF During measurement.

98-7997

This map depicts the INDUSTRIAL and FIRE PROTECTION place of use boundary for this water right at the time of this approval and is attached to the approval document solely for illustrative purposes.

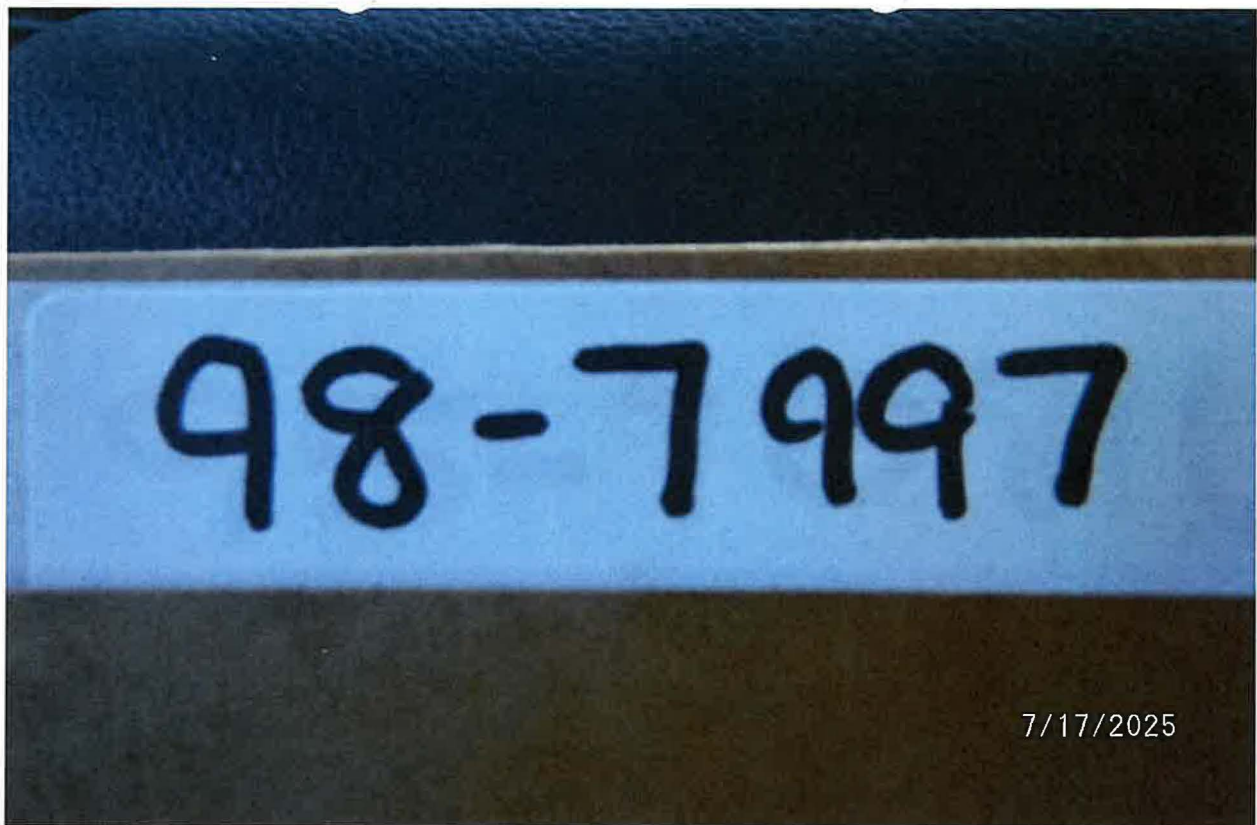
02E



A horizontal number line representing distance in miles. The line starts at 0 on the left and ends at 0.5 Miles on the right. There are major tick marks at 0, 0.125, 0.25, and 0.5 Miles. Between each of these major tick marks, there are three smaller tick marks, dividing each 0.125-mile segment into four equal parts of 0.03125 miles each. This results in a total of 16 equal segments between 0 and 0.5 miles.

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

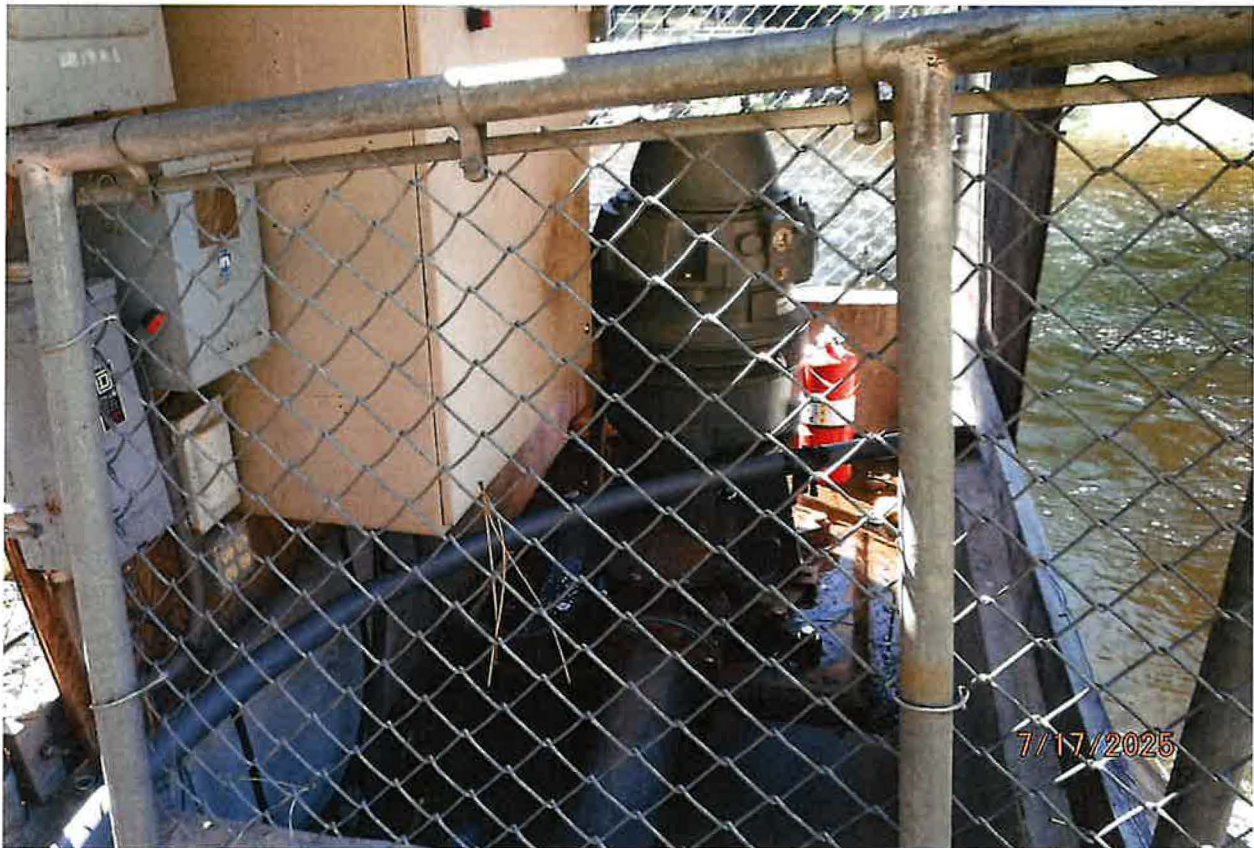




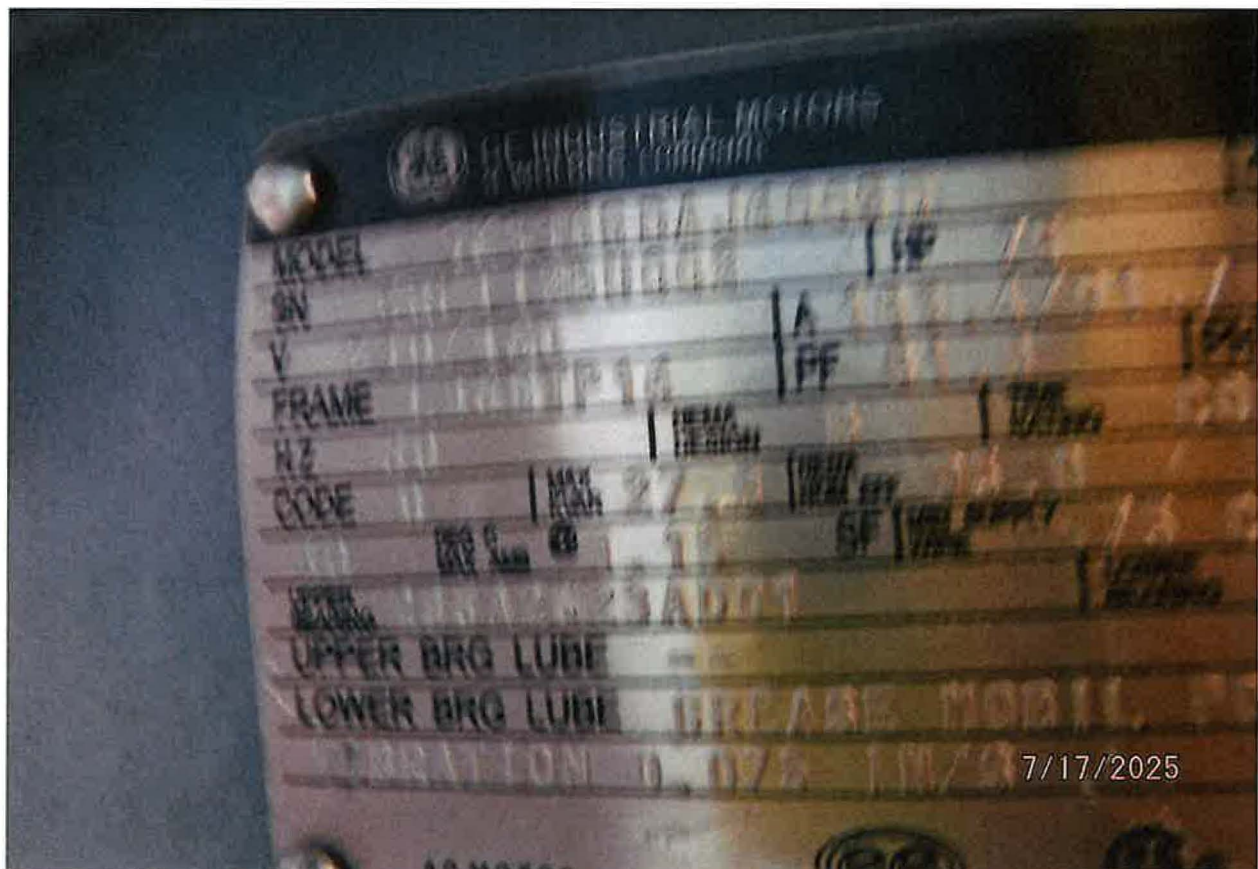
BENEFICIAL USE FIELD EXAM DATE 7/17/2025



POD – PUMP DIVERTING FROM MOYIE RIVER



60 HP PUMP END PAIRED WITH 75 HP GE MOTOR END



DATA PLATE FOR MOTOR IN BAD LOCATION – GE 75 HP MOTOR WITH 6-INCH DISCHARGE PIPE



DATA PLATE ON MOTOR INDICATES 475 GPM PUMP CAPACITY



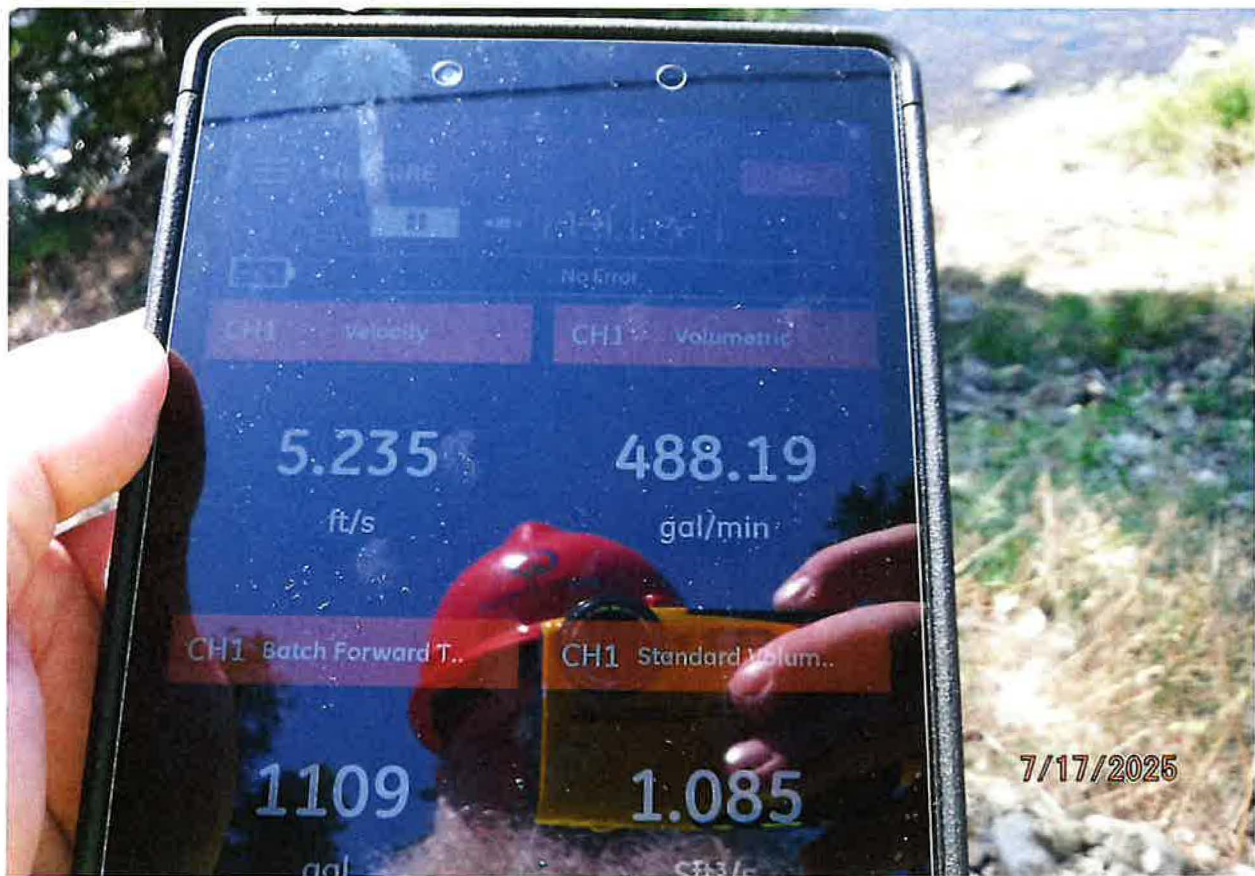
1225 PSI GAUGE PRESSURE WITH PUMP CYCLED ON



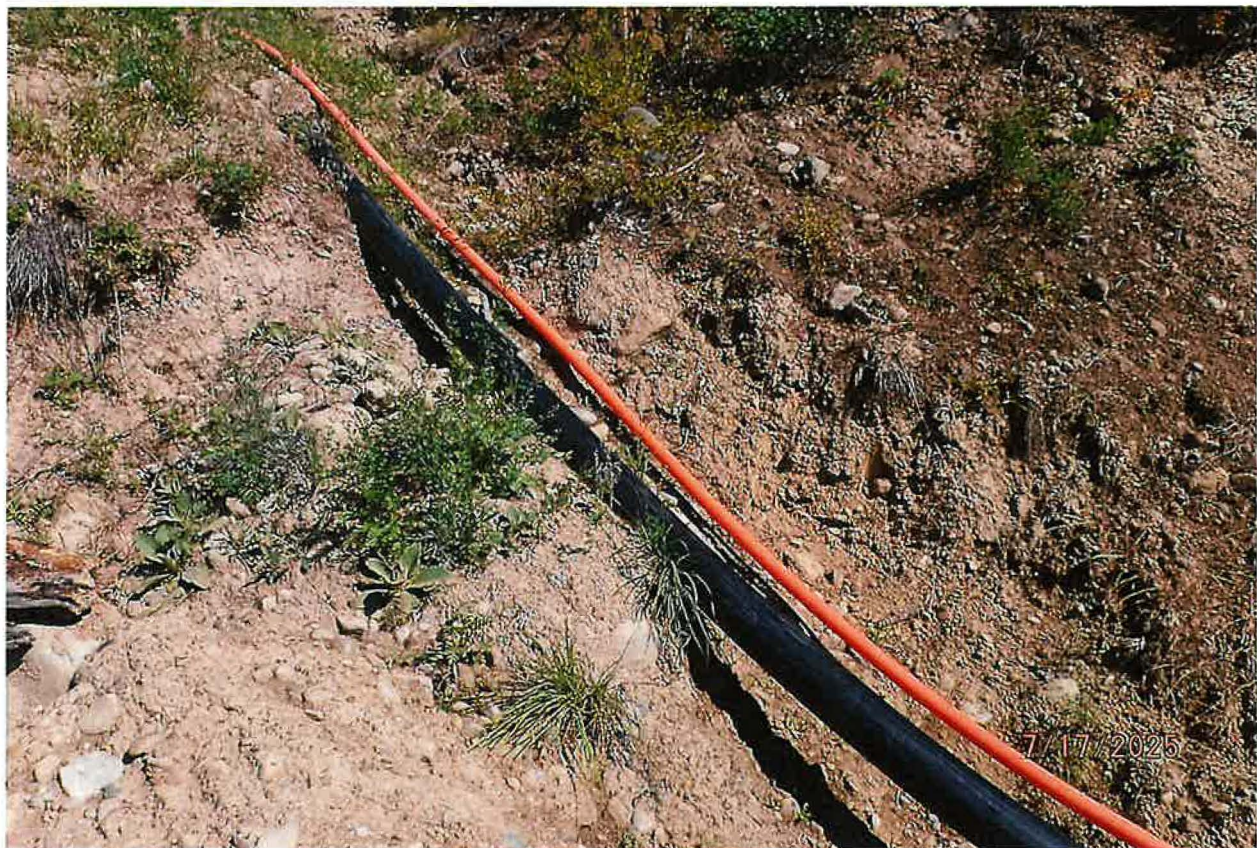
DIVERTING WORKS CONTROL PANEL



PT-900 FLOW METER MEASUREMENT TAKEN FROM NEAR POD LOCATED BACK OF IMAGE FRAME ALONG THE RIVER



AVERAGE GPM OBSERVED DURING PT900 MEASUREMENT



6-INCH HTPC PIPELINE ROUTES FROM POD UP-GRADE TO STORAGE RESERVOIR
PRIOR TO DISTRIBUTION

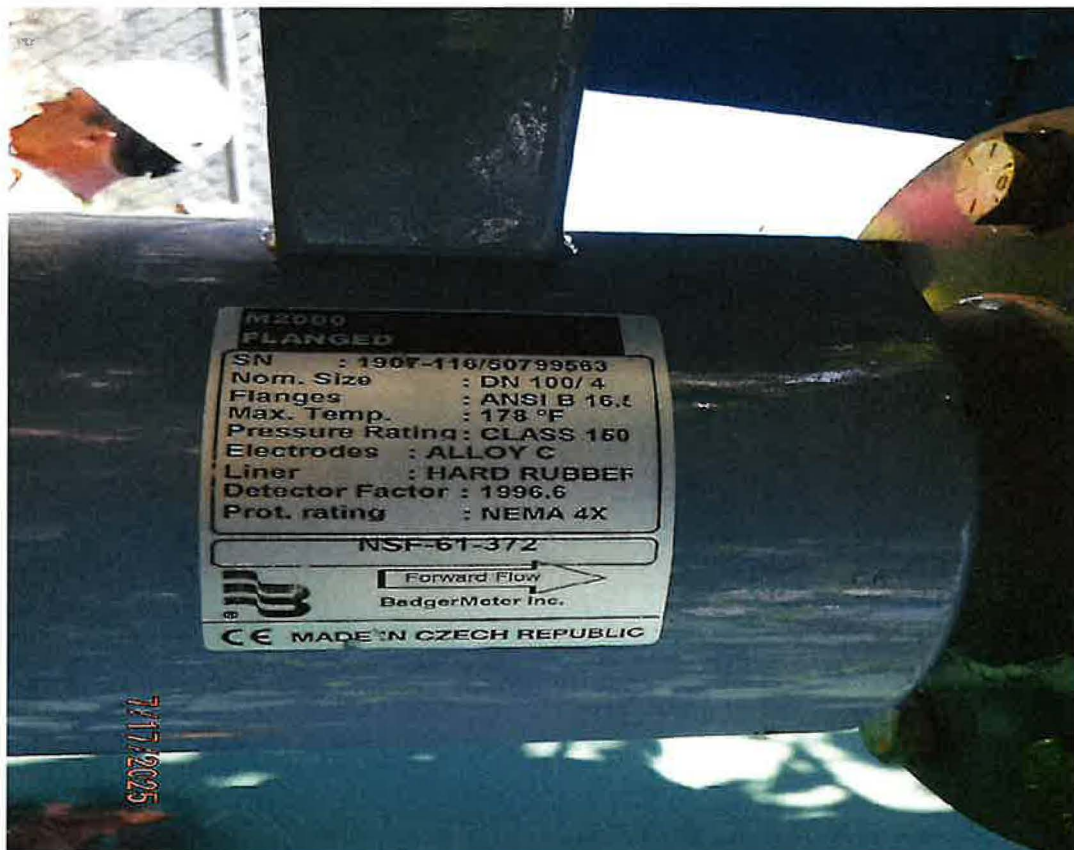


WATER CONVEYANCE SYSTEM LEADING INTO FENCED 6,500-GAL RESERVOIR





FLOW METER CONTROL PANEL – INDICATED 370-380 GPM DURING ACTIVE PUMPING



SYSTEM INSTALLED FLOW METER – BADGER METER; S/N1907-116/50799563



WATER CONVEYANCE SYSTEM – 6-INCH PIPELINE FROM POD FILLS 6,500-GAL STORAGE RESERVOIR PRIOR TO DISTRIBUTION BY THREE TRANSFER PUMPS



3EA – 25 HP BALDER PUMPS USED TO DISTRIBUTE WATER TO POU VIA THREE LOG DECK 6-INCH PIPELINES WITH 1-INCH SPRINKLER LATERAL POLYPIPE RUNS AT INERVAL & A WATER TRUCK J-HOOK FILL POINT



EXAMPLE – 1-OF-3 BALDOR MOTOR 25 HP TRANSFER PUMPS USED TO DISTRIBUTE WATER FROM RESERVOIR TO POU FOR INDUSTRIAL/FIRE PROTECTION USE(S)





INDUSTRIAL / FIRE PROTECTION POU – J-HOOK WATER TRUCK FILL POINT



INDUSTRIAL POU – LUMBER MILL LOG YARD DUST ABATEMENT



INDUSTRIAL / FIRE PROTECTION POU – 6 INCH PIPELINE WITH EXAMPLE OF 1-INCH RISER PIPELINE TO LOG DECK WATERING WITH IMPACT SPRINKLER(S)





INDUSTRIAL / FIRE PROTECTION POU

