

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 98-8005
Exam Date: 09/22/2022

1. Current Owner:
ALTA FOREST PRODUCTS LLC PO BOX 135 NAPLES ID 83847-0135
2. Accompanied by: Ryan Comer
Phone No: 208-290-2546
Address: Same as above
Relationship to permit Holder: Naples Mill Operation Manager

3. **SOURCE:**
DEEP CREEK

Tributary
KOOTENAI RIVER

Method of Determination: ArcMap and DRG.

B. OVERLAP REVIEW

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

Water Right No.	Source	Purpose of Use	Basis
98-2003	TROUT CREEK	IRRIGATION, DOMESTIC	LICENSE
98-7750	GROUND WATER	MUNICIPAL	LICENSE

Comments: Licensed Right 98-2003 uses a separate water source than this Permit, authorizing 39-ac irrigation/domestic uses in both the SW $\frac{1}{4}$ SW $\frac{1}{4}$, Gov Lot 7, Section 6 & NW $\frac{1}{4}$ NW $\frac{1}{4}$, Gov Lot 1, Section 7. Each 40-ac tract QQ authorizes 39-ac for 98-2003 which overlaps this right's POU. Basin 98 has not been adjudicated by IDWR & the State of Idaho Courts at this time. Based on the nature of the Permit's water use and the property owned by Alta Forest Products LLC, coupled with the separate water source & conveyance systems, there is no concern for overlap between rights 98-2003 & 98-8005.

Licensed Right 98-7750 uses groundwater source(s) for municipal water use that overlaps this right's POU. The applicant is served domestic water use by Cabinet Mountain Water District for drinking and restroom facilities at the lumber mill. 98-7750's water system is separate & not connected to Permit 98-8005's conveyance works. There isn't any stacking of beneficial uses of water which negates overlap concerns between 98-7750 & 98-8005. Condition X35 isn't recommended for use in the license approval process for 98-8005.

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

C. DIVERSION AND DELIVERY SYSTEM1. **LOCATION OF POINT(S) OF DIVERSION:**

DEEP CREEK L7 (SW $\frac{1}{4}$ SW $\frac{1}{4}$), Sec. 6, Twp 60N, Rge 01E, B.M. BOUNDARY County

Method of Determination: GPS. POD is located at -116°23.7811, 48°34.4296.

PLACE OF USE: INDUSTRIAL & FIRE PROTECTION

Twp	Rng	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
60N	01E	6										X L6	X L7						
60N	01E	7						X L1											

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

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

X 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
SUBMERSIBLE PUMP	NIDEC	15	DJ15P2EM (Model# HA72) 3 PHASE VFD		

D. FLOW MEASUREMENTS

1.

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

2. Measurements: Applicant's diverting works incorporate flowmeters installed on a section of pipe receiving direct flow creek water prior to entering a storage reservoir. System SCADA program was monitored with the 15 HP pump operating and fluctuating flow rates were observed between 396.5 gpm on the low end and 450 gpm on the high end. The running historic average observed when interrogating the SCADA software illustrate 456 gpm as the average operating flow rate.

E. FLOW CALCULATIONS

Measured Method: In-line flowmeters & SCADA management panel readings demonstrate a 450-gpm flow rate.

F. VOLUME CALCULATIONS

1. Volume Calculations for irrigation: N/A

2. Volume Calculations for Other Uses: Industrial beneficial use annual volume recommended is equivalent to Year 2022 annual volume reporting data from Applicant = 20,767,060.8 gallons / 325,850 gal per acre-foot = **63.7 af**.

G. NARRATIVE/REMARKS/COMMENTS

Beneficial use field exam conducted on 9/22/2022 with the applicant's representative, Ryan Comer – Operations Manager, and accompanying Alta Forest Products staff – water system subject matter experts (SMEs), showed surface water being diverted from Deep Creek for industrial & fire protection uses at the Naples Idaho mill site. At the POD, a wet well is installed 7 ft below riprap in the creek from which a 15 hp variable frequency drive (VFD) pump with NIDEC motor diverts water from a wet well. From the POD and co-located pump station, water is conveyed by buried pipeline across a road to the log yard & 100,000-gal storage reservoir. The applicant's system incorporates flowmeters and a sophisticated SCADA system which allows instantaneous flow measurements & historic average flow measurements to be illustrated.

I observed a range of flow rates between 396 and 450 gpm during my exam, with the VFD set at 49.4 Hz and 60 Hz respectively. Based on the historic and observed diverting rates I'm recommending the 450 gpm, or **1.0 cfs** considering department rounding standards, as the maximum diversion rate for licensing purposes. From the 100K storage reservoir a

75 HP Baldor transfer pump conveys water to a nearby 24-hr impoundment pond & to the southern waterlines to log watering riser pipes with sprinklers.

The Industrial POU & Fire Protection POU (POU) are the same and consist of earthen & paved log deck yards, the reclamation pond (pond), and lumber mill structures. Fire protection use is readily available throughout the entirety of the applicant's system and no diversion volume is associated with this beneficial use; the 1.0 cfs diversion rate for fire protection is being recommended for licensing. The industrial water uses at the POU are broken down as follows:

- A buried water main line routes south from the 100k storage reservoir to riser pipes and impact sprinklers served by the 75 hp transfer pump water to log decks along the southern extent of the POU. The impact sprinklers used for this spur of log watering are smaller in size than those used from the recirculation pond.
- Water from the 100k tank is distributed to the boiler & sawmill structures for milling processes and used for dust abatement associated with the mill property.
- A buried water main line routes north from the 100k storage reservoir to a lined 350,000-gal pond prior to distribution to the log watering system operated along the northern extent of the POU. While the pond size has a larger capacity than what is diverted from the creek in a 24-hr period, approximately 70% of the water filling the pond is previously appropriated water from the asphalt layered log yard. The applicant has earned multiple awards related to energy conservation and pollution prevention from the State of Idaho & Idaho Dept. of Environmental Quality for their pond and log yard design & implementation.
 - The asphalt log yard was developed to slope to capture already appropriated water for recapture in the pond recycling water and preventing undue contaminants to leach into the ground.
 - There are two pump stations located at the pond. System 1 incorporates a 7.5 hp bubbler pump and 100 hp sprinkler pump. System 2 incorporates a 15 hp bubbler pump and 125 hp sprinkler pump. From the pond a main water line routes above ground along the northern perimeter with lateral pipelines spurring to the south between log decks. Sprinkler riser pipes are set at intervals with a total of 13 'Big Gun' sprinklers served by the two systems. Big guns normally operate at 80 psi when pump(s) are set to 60 Hz, have a 150 ft radius, and have a 100-gpm capacity nozzle installed. If all 13 sprinklers are operating in concert approximately 1300 gpm is being drafted from the pond.

The annual volume for the industrial beneficial use is related solely to the non-reclaimed portion of the combined log watering system. The applicant provided year 2021 annual volume data that illustrates log watering occurred April – thru October for a total of 14,702,443.2 gallons, which converts to 45.1 af. Following the field exam, I requested year 2022 annual volume reports to target whether water usage was consistent from year to year. Mr. Comer provided year 2022 volume data illustrating operation from June – thru October for a total of 20,767,060.80 gallons, which converts to 63.7 af.

It is reasonable that the variance between 2021 & 2022 directly reflects climate variances between years indicating 2022 had both warmer & dryer summer months which required additional log watering to adequately maintain log products before milling. Although 2022 volume data represents time outside submission of the Statement of Completion, I am recommending this volume report be used for licensing purposes, to mitigate enlargement by volume occurring regularly if licensed using 2021 annual volume. I'm recommending the industrial beneficial use be licensed with an annual volume of

63.7 af. There shall be no maximum diversion volume associated with the license due to inclusion of the fire protection beneficial use. This volume accounts for approximately 30% of the mill's water use with the other 70% coming from reclaimed water use, further demonstrating benefits of the conservation designed system. The industrial beneficial use recommended for licensing purposes remains the same as the permit approved value equal to **1.0 cfs**.

The approved permit did not include the description of POU within the NW¼SW¼, Gov Lot 6, Section 6, Twp 60 North, Range 01 East. Following my examination I analyzed ArcMap software, year 2021 imagery layer, and found the recirculation pond and industrial use dust abatement areas were developed in this QQ. An Amendment to Permit was mailed to the applicant on 9/22/2023 advising of the requested changes to conform to project development vice permit approval requirements. The applicant submitted the amendment with \$100.00 fee (N044106) received by IDWR on 10/5/2023.

During licensing review, condition X35 was removed from the permit. Right 95-8005 is related to a separate municipal water system used by the mill only for domestic water uses at the facility, and not used to provide industrial water use. A text condition that was used to describe mill processes was removed from the permit; the condition was explanatory in nature and doesn't require being carried forward to licensing. Another text condition related to volume reporting was also removed during licensing review; the applicant fulfilled this requirement by providing supporting volume reports with submission of their statement of completion. All other conditions of the permit shall be carried forward to licensing.

Overlap concerns: detailed above are overlap considerations related to 98-2003 & 98-7750, both of which have overlapping POUs with this right. Overlap concerns are not present due to the separate water sources and separate water systems involved and I do not recommend inclusion of X35 for licensing purposes. There are no other overlapping concerns for this water right.

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

H. RECOMMENDATIONS

1. Recommended Amounts

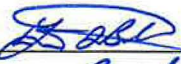
<u>Beneficial Use</u>	<u>Period of Use</u>	<u>Rate of Diversion</u>	<u>Annual Volume</u>
INDUSTRIAL	01/01 to 12/31	1.00 CFS	63.7 AF
FIRE PROTECTION	01/01 to 12/31	1.00 CFS	

Totals: 1.00 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

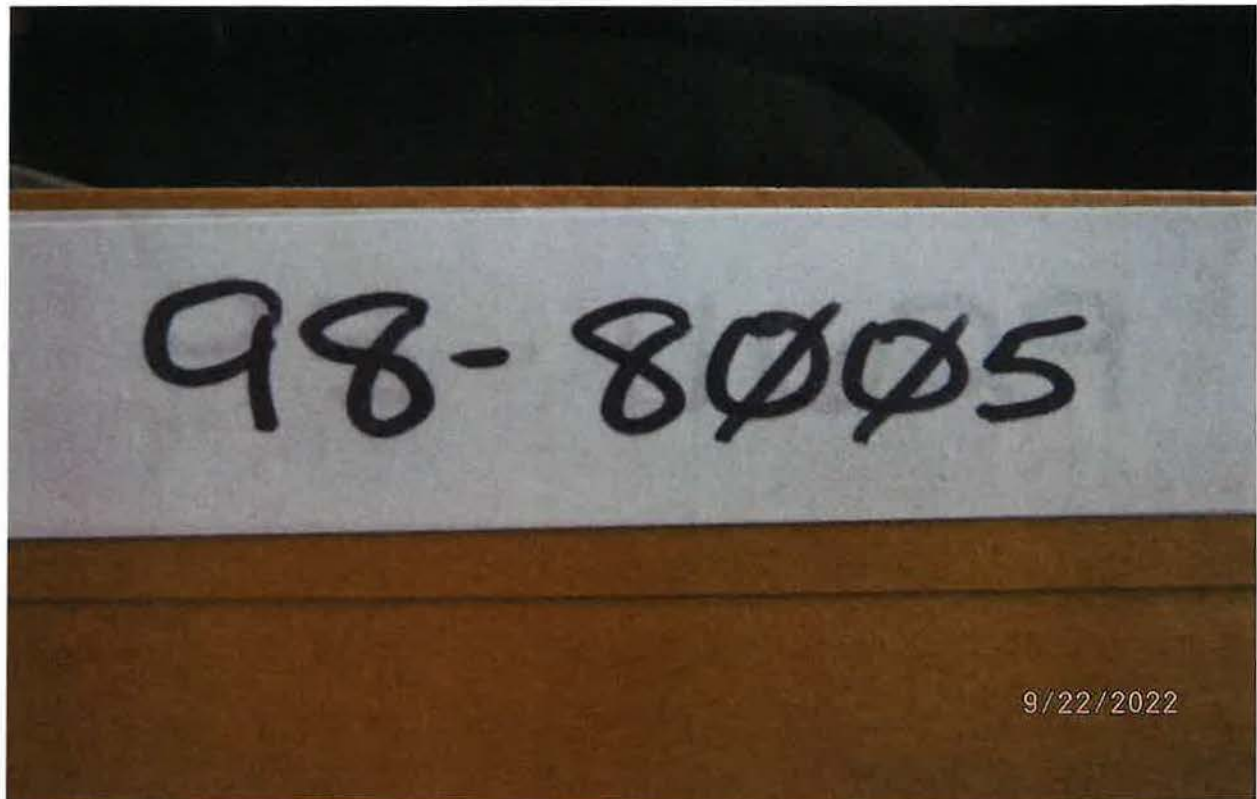
I. AUTHENTICATION Luke Bates -

Field Examiner's Name  Date 10/23/2023
 Reviewer  Date 04/17/2024

State of Idaho
Department of Water Resources
Attachment to Field Exam
98-8005

INDUSTRIAL & FIRE PROTECTION system diagram.





BENEFICIAL USE FIELD EXAM DATE 9/22/2022





POD – PUMP ENCASED IN CONCRETE RINGS AT DEPTH 7 FT BELOW CREEK BED LEVEL



INTAKE PIPE TO PUMP STATION



DIVERTING WORKS – 3 PHASE 15 HP CENTRIFUGAL PUMP MODEL HA72

CATALOG # DJ15P2EM		MODEL #HA72	
SHAFT END BRG	6310 - 22 - J/C3	ODP END BRG	6309 - 22 - J/C3
FR	254JM	TYPE	DE4
PH	3	ENCL	ODP
MAX AMP	40	°C	ID# B 01 7728095 - 0043 M 0001
INSUL CLASS	F	DUTY	CONT
		WT	150 LB
		BAL	
HZ 60 HP 15.00 RPM 1775		HZ 50 HP 15.00 RPM 1470	
SF 01.15 DESIGN B CODE G		SF 01.15 DESIGN # CODE E	
GUARANTEED EFFICIENCY	91.7	MAX KVAR	4.60
NEMA NOM EFFICIENCY	93.0	NOM PF	82.4
VOLTS	230/460	VOLTS	190/380
FL AMPS	37.00/18.30/	FL AMPS	44.00/22.20/
SF AMPS	42.0/21.0/	SF AMPS	52.0/26.0/
CC 030A		ENERGY EFFICIENT US CE	
VOC RISE/RES AT FL 60HZ.		MADE IN MEXICO OF IMPORTED AND DOMESTIC COMPONENTS	
Also Energy Verified in Accordance with CSA C295-10 and US DOE 10CFR431.191202		NIDEC MOTOR CORPORATION	
430PHE-002		WWW.USMOTORS.COM	



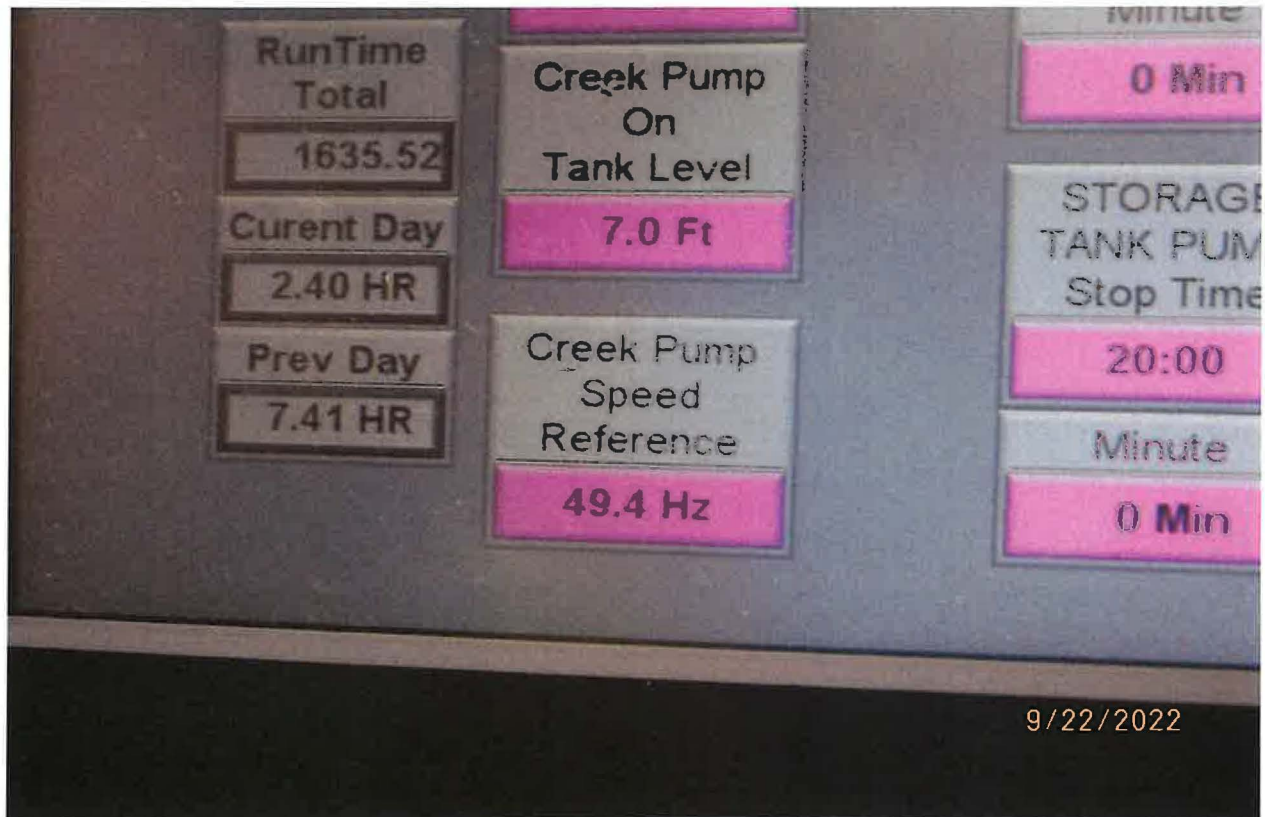
MAIN SERVICE PIPE ROUTING FROM PUMP STATION TO STORAGE TANK



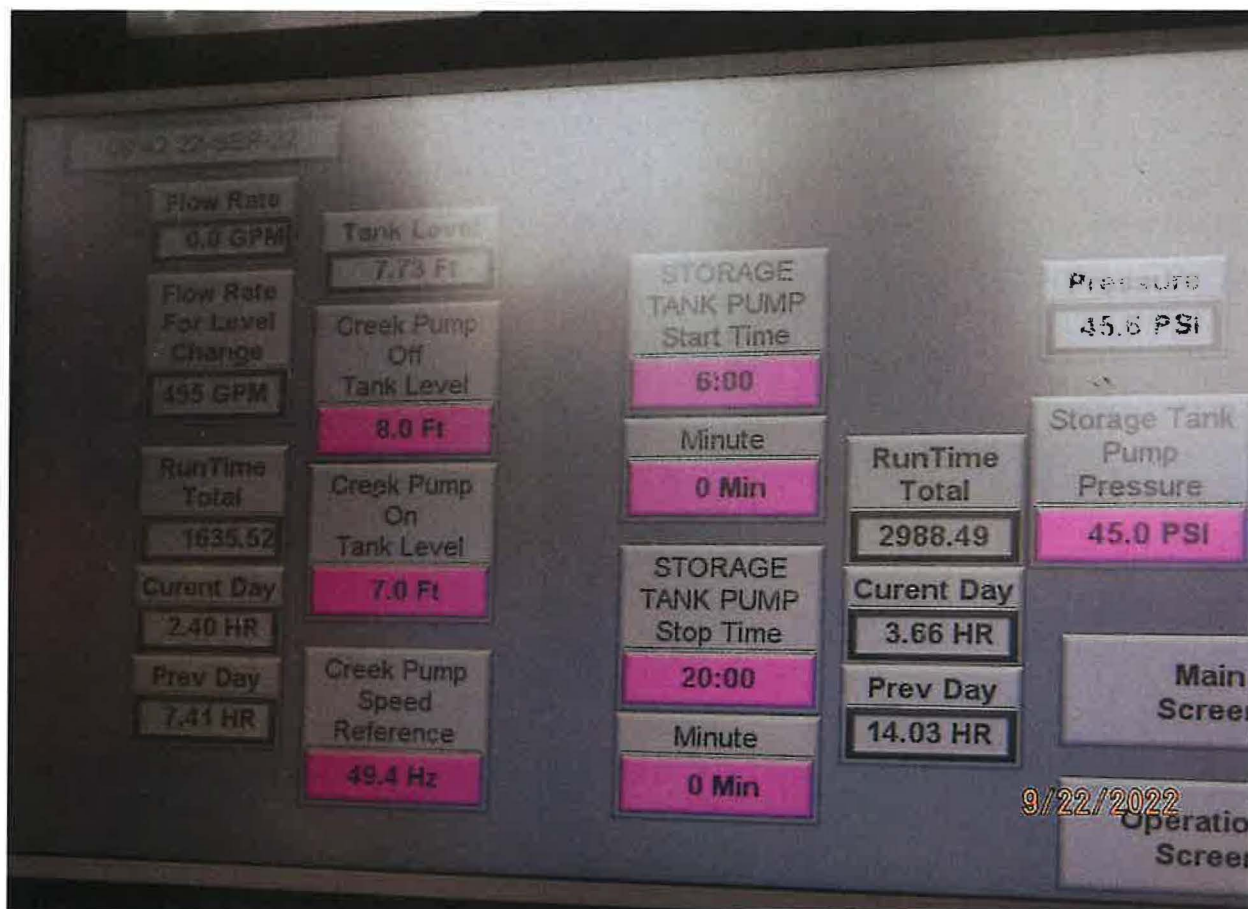
100,000 GALLON STORAGE TANK – INFLOW VERTICAL LINE TO STORAGE & OUTFLOW TANK TO USE(S)
PIPELINE



FLOWMETER INSTALLED ON MAIN SERVICE PIPE PRIOR TO REACHING STORAGE TANK



DIVERSION PUMP OPERATING AT 49.4 Hz



AVG OF 450 GPM ON SYSTEM CALCULATED OVER TIME



396.5 GPM WAS THE LOWEST FLOW RATE OBSERVED AT TIME OF EXAM



BALDOR 75 HP TRANSFER PUMP FROM STORAGE TANK TO INDUSTRIAL & FIRE PROTECTION USES





MAIN SERVICE LINE FROM STORAGE TANK TO USES & FIRE PROTECTION HOSE FILL POINT



350,000 GAL 24HR IMPOUNDMENT RECIRCULATION POND



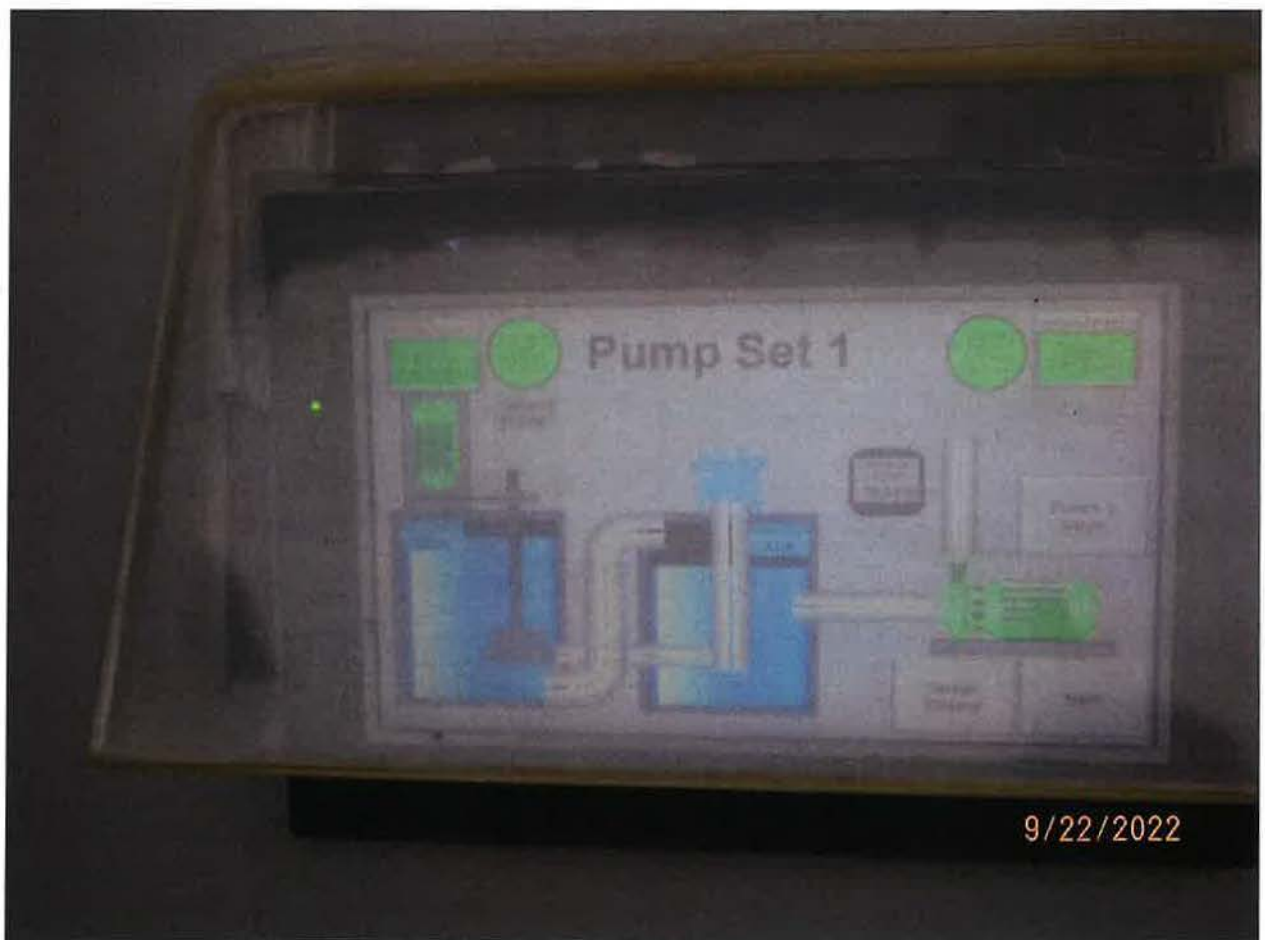
RECIRCULATION POND RECYCLES INDUSTRIAL LOG WATERING OVERFLOW CAPTURE

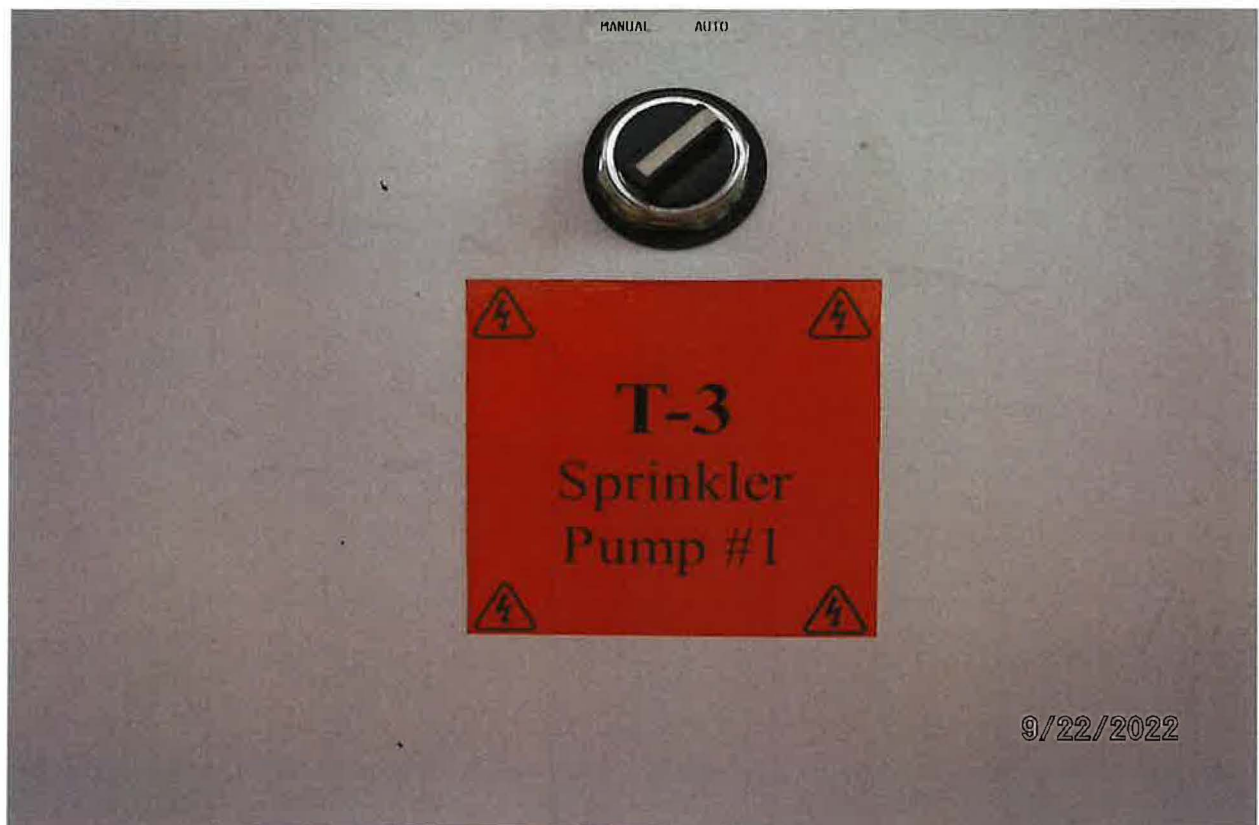


2 PUMP SYSTEMS A RECIRCULATION POND

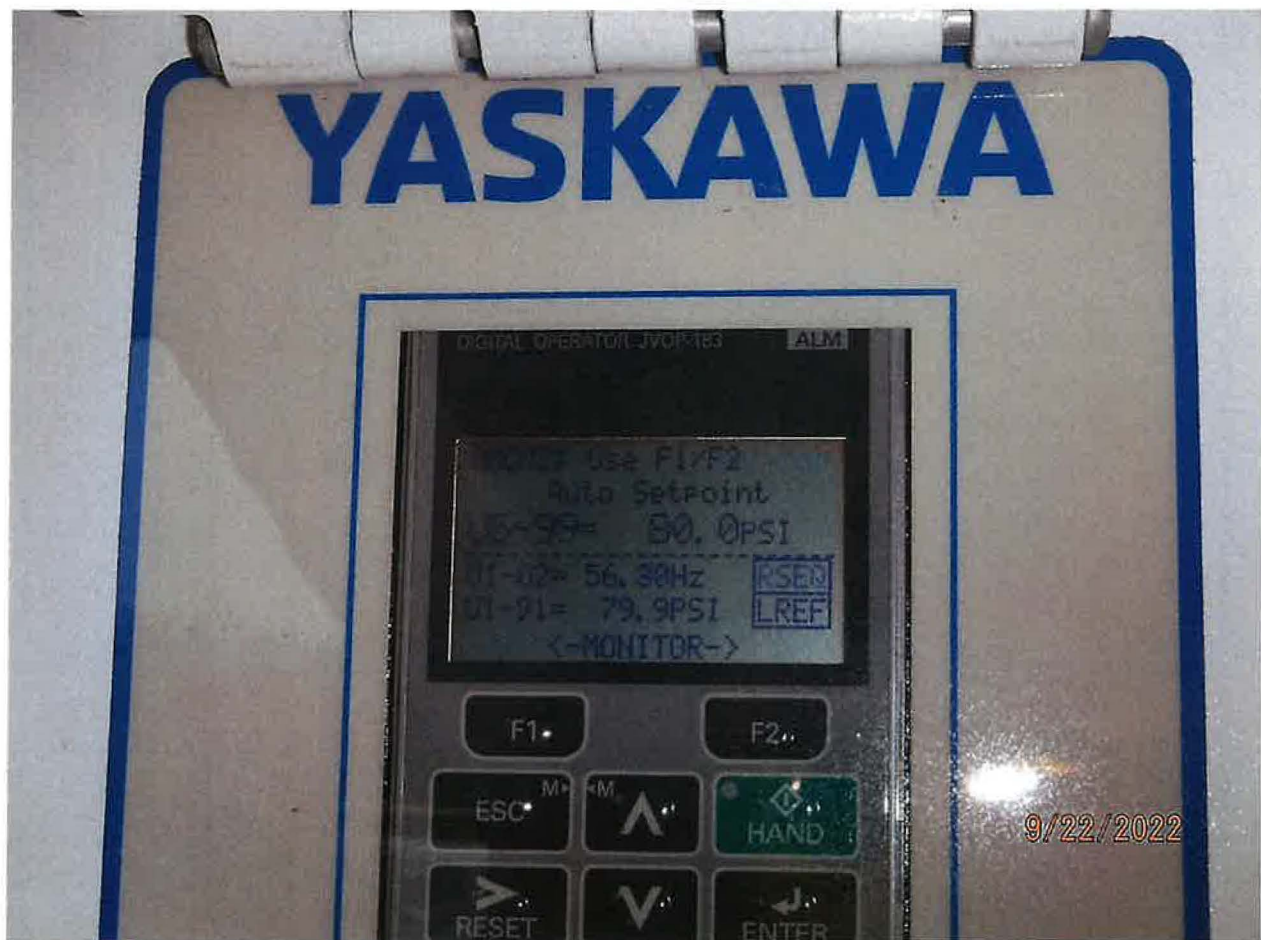


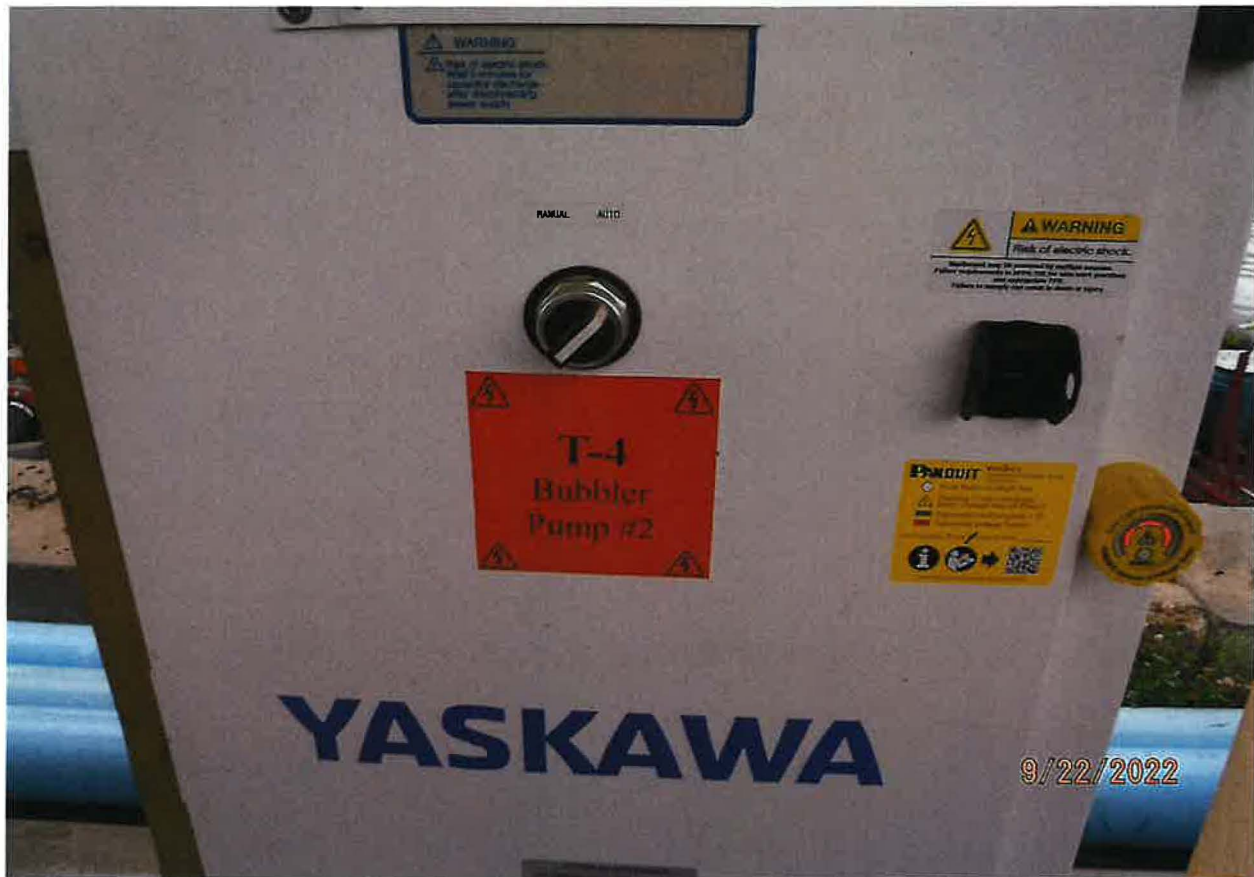
BUBBLER 7.5 HP PUMP FOR SYSTEM # 1 CONTROL PANEL





SPRINKLER 100 HP PUMP FOR SYSTEM # 1 CONTROL PANEL





BUBBLER 15 HP PUMP FOR SYSTEM # 2 CONTROL PANEL – MATCHED WITH 125 HP SPRINKLER PUMP



RECLAIMED WATER FROM RECIRCULATION POND - MAIN WATER LINE FOR LOG WATERING



MULTIPLE LATERAL WATER LINES TO SPRINKLER RISERS FROM RECIRCULATION POND SYSTEM



INDUSTRIAL & FP POU – UP TO 13 BIG GUN SPRINKLERS OPERATE OFF RECIRCULATION SYSTEM – 80 PSI
100 GPM PER NOZZLE PROVIDE 150 FT RADIUS FOR LOGWATERING



INDUSTRIAL & FIRE PROTECTION POU





INDUSTRIAL AND FIRE PROTECTION POU





SERVICE LINE FROM STORAGE TANK ROUTES SOUTH TO PROVIDE INDUSTRIAL COVERAGE FOR SOUTHERN EXTENT OF POU – USES SMALLER SPRINKLERS THAN THE RECIRCULATION SYSTEM



ACCOLADES FROM DEQ



WATER SYSTEM ACCOLADES FROM BRAD LITTLE, GOVERNOR STATE OF IDAHO

