

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 96-9498
Exam Date: 04/18/2024

1. Current Owner:
IDAHO FOREST GROUP LLC 687 W CANFIELD AVE STE 100 COEUR D ALENE ID 83815-5335
2. Accompanied by: Travis Hanson and Ryan Fobes
Phone No: 208-255-6174 and 208-714-6866
Address: PO BOX 220 Laclede ID 83841
Relationship to permit Holder: Mr. Hanson – Project Engineer
Mr. Fobes – P.E. Foresite Engineering (representative)

3. **SOURCE:**
PEND OREILLE RIVER

Tributary
COLUMBIA 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
96-7454	PEND OREILLE RIVER	INDUSTRIAL	LICENSE with Notice of Claim filed in the CFPRBA
96-7616	PEND OREILLE RIVER	INDUSTRIAL, DOMESTIC	LICENSE

Comments: Licensed Right 96-7454 associates with the historic lumber mill industrial use water right that authorized a diversion rate of 0.14 cfs and 46.5 af annually from the Pend Oreille River Laclede boat launch POD. The Right holder has filed a Notice of Claim in the Clark Fork Pend Oreille River Basin Adjudication (CFPRBA) process; based on this claim, I recommend adding condition 928 that serves to apply combined use limits based on the outcome of the court decree process for 96-7454. Condition 928 reduces this Permit authorized amounts based on the court decreed rates & volume amounts to negate redundancy between the two WRs. Essentially, both water rights when combined shall not exceed the current diversion rate of 1.45 cfs and 169 acre-feet; the prior historic use licensed right is not additive with the current permit recommended for license amounts.

Licensed Right 96-7616 authorizes diversion from the same source as this Permit for industrial and domestic uses by Laclede Water District (Water District) who is a municipal provider for Laclede & surrounding populated area. Review of the backfile for 96-7616 indicates that part of the water right's 186.4 af was used to serve 50 af annually to the sawmill historically. More recently, including part of the Permit's development period, the Water District served water for irrigation of green spaces as designated by the irrigation POU for this Permit by supplying water to the boiler room for distribution. At the end of the development period for this Permit, Mr. Ryan Fobes asserts the Applicant has worked to be independent from the Water District. Although a Notice of Claim hasn't been filed to date for 96-7616, a late claim may be pursued by the Right Holder.

Water system infrastructure is still maintained between the Water District and the Permit Holder's system, and I recommend addition of condition X35 describing combined use limits between 96-7616 & 96-9498 for 5.2 acres irrigation as validated at time of exam. The Permit Holder asserts that no industrial water use is contracted from the Water District, but future water use by contract may come into play and there isn't a conflict of enlargement for this Permit toward licensing approval. Any industrial and irrigation water use greater than 169 af annually may be served by the Water District or the Applicant may seek additional water rights to secure additional water usage from the Pend Oreille River from their own system.

2. Other water rights with the same point-of-diversion: YES Overlap

Water Right No.	Source	Purpose of Use	Basis
96-7454	PEND OREILLE RIVER	INDUSTRIAL	LICENSE with Notice of Claim filed in the CFPRBA

Comments: Prior License 96-7454 and this Permit share a POD, the Laclede boat launch diversion pump system. I've added condition F06 to the Permit during licensing review annotating the shared POD between 96-7454 and 96-9498. Overlap concern related to diversion rate is covered by a separate condition 928 as described above on PG1 of this report.

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

PEND OREILLE RIVER SE¼ SE¼, Sec. 25, Twp 56N, Rge 04W, B.M. BONNER County

PEND OREILLE RIVER SE¼ NW¼, Sec. 31, Twp 56N, Rge 03W, B.M. BONNER County

Method of Determination: GPS. The boat launch duplex pump POD is located at -116°45.233, 48°9.680. The lagoon pump POU is located at -116°45.874, 48°10.004.

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	
56N	03W	30									1.7	0.1 L3	1.9 L4	1.5					5.2

Total Acres: 5.2

PLACE OF USE: INDUSTRIAL, INDUSTRIAL FROM STORAGE, and 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	
56N	03W	31						X L3											
56N	03W	30									X	X L3	X L4	X					

PLACE OF USE: INDUSTRIAL STORAGE and FIRE PROTECTION STORAGE

Twp	Rng	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
56N	03W	31						X L3											
56N	03W	30											X L4						

Method of Determination: beneficial use field exam and 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 1:24,000 or greater.

 X X Aerial Photo Attached (required for irrigation of 10+ acres). X X Photo of Diversion and System Attached X

4.

Well or Diversion ID No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
Laclede Boat Launch 1 of 2 Duplex Diverting Pumps	Franklin Electric	10		Grundfos	180STS5 Part No.
2 of 2 Duplex Diverting Pumps	Franklin Electric	10		Grundfos	180STS5 Part No.
Lagoon Diverting Pump	Franklin Electric	40	2366178125 Model No.	Goulds	Unknown

D. FLOW MEASUREMENTS

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date
Boat Launch Duplex Pumps – flowmeter	Flanged Velocity Style	Zenner	ZTM04			Nov-2017
Lagoon Diversion – flowmeter	Flanged Velocity Style	McCrometer	Unknown			

2. Measurements: System installed velocity-style flowmeters were used to observe normal operating diversion rates; the duplex boat launch diverting works incorporate two 10 hp submersible pumps which were observed at 143 gpm with both pumps operational. The lagoon diverting works incorporate a 40 hp submersible pump which was observed at 510 gpm during the field exam. The total of 653 gpm equals 1.45 cfs considering department rounding standards.

E. FLOW CALCULATIONS

Measured Method: Flowmeters.

- Duplex pumping from the river at the Laclede Boat Launch (one POD encasing both pumps) has been operated simultaneously upon demand. With a single 10 hp pump operating I observed 85 gpm, but when both 10 hp pumps cycle on there is competition to push water in the buried conveyance pipeline (diameter unknown) resulting in an average of 71.5 gpm per pump = 143 gpm combined.
- Lagoon pumping uses a 40 hp submersible pump demonstrating 510 gpm during normal operating practices. The 40 hp pump is paired with a VFD pump motor.

F. VOLUME CALCULATIONS

1. Volume Calculations for irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 5.2 \text{ ac} \times 3.0 \text{ afa} = 15.6 \text{ af}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = \text{surface water source, no diversion rate associated with licensing.}$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = 15.6 \text{ af}$$

2. Volume Calculations for Other Uses:

- See attached pond analysis worksheets for four (4) pond's storage volume data that derive the fire protection storage beneficial use annual volume.
- This Permit's irrigation and fire protection beneficial uses are exempt from volume reporting requirements IAW IDAPA 37.03.02, Section (Rule) 035.

- Industrial storage and industrial from storage annual volume was determined by evaluating annual volume reports supplied by the Permit Holder; Year 2022 demonstrates the largest volume reporting year out of the three years data was provided for (2021-2023). The combined diverting between boat launch river pump and lagoon pump equal 144.98 af, which rounds to 145 af considering department rounding standards.
- Due to the surface water source and exempt volume reporting beneficial uses, there will be no maximum diversion volume assigned to the face of the water right license; conditions of approval shall be used to convey volume limitations for licensing purposes.

G. NARRATIVE/REMARKS/COMMENTS

I started to evaluate this Permit for beneficial water use during a field exam on 7/1/2021 but found that the Laclede boat launch pump station flow meter had recently been installed which resulted in a lack of annual volume reporting for the development period. At that time, I recommended the Permit Holder withdraw their statement of completion and request an extension of time in order to evaluate the diversion system while recording diversion volume data. As a result, an extension request was submitted and approved with a current statement of completion being submitted 5/13/2023 which enabled volumetric data capture for 2021-2023 time periods.

I conducted my complete beneficial use field exam on 4/18/2024 with Mr. Travis Hanson – Project Engineer and Mr. Ryan Fobes – P.E. Foresite Engineering (representative). During the exam I observed two PODs consisting of a “Lagoon” pump system diverting from a backwater pool in the Pend Oreille River and a Laclede “boat launch” duplex pump in the main Pend Oreille River. The two PODs with diverting works are described below:

- Lagoon pump – uses a submersible screened 40 hp pump which routes to the NW corner lagoon ponding where it's diverted for diversion to storage, industrial, fire protection, and irrigation purposes. A wet well is co-located with the lagoon pond and a pump station houses the pump relay control panel and associated diverting work booster pump(s) control panels.
 - During the exam the pump was operated, and I observed a diversion rate of 510 gpm from an in-line flowmeter that displaces instantaneous flow rates.
- Boat launch pump(s) – two 10 hp submersible screened pumps in a single POD intake located at the Laclede boat launch site diverting for diversion to storage, industrial, fire protection, and irrigation water uses. A manhole is installed at the river frontage that allows access to manual control valves and an electrical control panel is co-located along the boat launch access that houses the duplex pump(s) pump motor relay control panels and individual electric metering boxes.
 - From the boat launch buried water conveyance pipes route along the roadway to the sawmill property to a vaulted pump station shed that houses the pipeline with shutoff valves and a flowmeter is installed on the single intake pipeline as it enters the vaulted concrete shed. With a single 10 hp pump operating the diversion rate averaged 85 gpm. I inquired whether both pumps operate at the same time, and it was determined that the system is designed for both to run simultaneously when demand requires it.
 - In a follow-up data collection correspondence Mr. Travis Hanson operated both pumps simultaneously while monitoring the flowmeter and observed a flow rate of 143 gpm or 71.4 gpm per 10 hp pump. This is a lower rate per pump, but that is expected from a duplex pump system that competes to push water down a single pipeline, which results in a slight reduction in total flow = 143 gpm.
- The combined flow rates from both diversion systems equal 653 gpm or **1.45 cfs** that I've recommended for licensing purposes. The two separate diverting systems co-mingle water in the water conveyance pipelines serving the storage of water to four (4) ponds and interconnected direct flow pipelines for sawmill industrial use; based on this information I don't recommend splitting this Permit based on separate diverting systems.

Diverted water from both PODs is pumped to the lagoon pond (lagoon pump) and the two mill ponds (boat launch pumps). Direct flow pipelines also allow water to be pumped directly into the sawmill supply pipelines for use at the boiler room building, which houses a 10,000-gallon storage reservoir, and directly to serve industrial uses throughout the sawmill for industrial or fire protection purposes as required. There are several beneficial uses associated with this permit, which I've broken down below to maintain consistency in description:

Irrigation POU – River water is pumped by direct flow pipelines to the Boiler room building, which houses the 10k storage reservoir that serves industrial use and additionally is tapped for irrigation water distribution. The permit authorized irrigation, irrigation storage, & irrigation from storage beneficial uses to be developed. I've assessed that the 10k boiler storage vessel is multi-purposed and for the irrigation development serves as a 24-hr impoundment vessel; I've removed the irrigation storage and irrigation from storage beneficial uses from the permit during licensing review.

The irrigation POU was walked during the exam and photographs were taken as I sketched multiple segments of irrigated green space predominantly bordering the eastern side of the sawmill site. Irrigation water is distributed using a booster pump from the boiler tank to multiple zones of pressurized sprinklers for small plots of lawn & landscape trees/shrubs. Additionally, several irrigation risers to hose bibs and impact sprinklers are incorporated into the larger areas irrigated on the system. During licensing review, I used ArcMap aerial imagery to accurately trace out the irrigation POU which equals 5.2 acres. 5.2 acres is authorized as a diversion rate of 0.02 cfs per acre or 0.10 cfs based on Department standards. I've reduced the permitted rate of 1.20 cfs to reflect **0.10 cfs** for licensing purposes. There isn't an annual volume associated with this beneficial use in accordance with IDAPA 37.03.02, Section (Rule) 035; condition R66 serves to describe the diversion rate and volume limits per acre.

The annual volume records provided by the Permit Holders account for the total diverted water from the Pend Oreille River Source but doesn't break out how much water is used for industrial purposes versus irrigation purposes within each respective POU. For that reason, I've added a combined use condition that explicitly states: Right 96-9498 industrial and irrigation water use(s) when combined shall not exceed an annual total diversion volume of 145 acre-feet. Mr. Travis Hanson asserts by email correspondence that the irrigation system now has a flowmeter installed to enable volumetric reporting and, in the future, the primary 0.02 cfs and 3.0 afa per acre are the limitations for irrigation water, but secondary constraints limit the water system to a combined irrigation and industrial water use based on how the water was beneficially used in the development period. The applicant may elect to reduce irrigation water and apply that to industrial use so long as irrigation occurs once every five years to mitigate forfeiture consideration but not exceed the diversion volumes authorized under the license.

Fire Protection Storage POU – River water from each POD is conveyed by buried pipelines to fill four (4) storage ponds: 2 'mill' ponds, 1 'frog' pond, and 1 'lagoon' pond. Storage water from the mill ponds and lagoon pond are distributed through multi-fill processes using booster pumps to facilitate log watering, dust abatement, and related sawmill water operation requirements annually. An un-recorded amount of log watering & dust abatement watering usage surface drains back to the lagoon pond and frog pond where it is recaptured and recycled for use industrial uses. This recycling serves to reduce the volumetric quantity required by diversion from source water each year to maintain log watering operations. The annual volume requirements for the fire protection storage equate to the combined pond capacity, seepage & evaporation loss rates for licensing purposes. Pond analysis worksheets were developed during licensing review to evaluate each pond representative of the fire protection storage POU as shown below:

- Lagoon pond (recirculation pond #1): maximum depth 20 ft, avg depth 8 ft, 0.3 ac in size, pond capacity = 2.4 af, seepage & evaporative loss = 0.7 af, and total volume required to keep pond full year-round = 3.1 af.
- Frog pond (pond #2): maximum depth 15 ft, avg depth 6 ft, 0.3 ac in size, pond capacity = 1.8 af, seepage & evaporative loss = 0.7 af, and total volume required to keep pond full year-round = 2.5 af.
- Sawmill pond (fire & mill pond #3): maximum depth 10 ft, avg depth 4 ft, 1.1 ac in size, pond capacity = 4.4 af, seepage & evaporative loss = 2.7 af, and total volume required to keep pond full year-round = 7.1 af.

- Sawmill pond (fire & mill pond #3): maximum depth 10 ft, avg depth 4 ft, 1.8 ac in size, pond capacity = 7.2 af, seepage & evaporative loss = 4.5 af, and total volume required to keep pond full year-round = 11.6 af.
- Four ponds combined annual volume = **24.0 af** assigned as the annual volume for fire protection storage toward licensing the Permit. The **Diversion to Storage rate = 1.45 cfs** pumping from each POD to the lagoon and mill pond(s).

I evaluated the 24.0 af of storage water annually to be in addition to the volume reports supplied by the Permit Holder for annual volume pumped for multi-fill and direct flow beneficial uses. The ponds were in place prior to the flowmeter(s) beginning to track volumetric data for the sawmill operations, and it's reasonable to evaluate the storage ponds full at the beginning of annual recording and end for fire protection storage purposes, which results in the storage volume being additive to the multi-fill from storage and direct flow industrial & industrial from storage beneficial uses.

Industrial and Industrial from Storage POU(s) – Once source water is conveyed through pipelines and respective diverting work flowmeter(s), valve selection enables the sawmill water system to convey water to storage ponds or directly to sawmill related operations. I requested annual volume records from Mr. Travis Hanson who supplied me with volumetric reports dating back to 2015 for the Lagoon POD flowmeter but only from 2021 to current for the Boat launch POD flowmeter. Since the boat launch flowmeter was installed later in time, I'm able to evaluate years 2021 – 2023 for licensing purposes, which fall within the development period of the Permit. Out of those years 2021 was a partial year of data collection and 2022 was the largest diversion volume year on record for the combined Idaho Forest Group Laclede River Water Meters (see attached volumetric report provided by the Permit Holder).

Note toward licensing recommendation for the industrial (direct flow) beneficial use: although the flowmeter capture of 145 af for year 2022 establishing the total diversion volume, as stated above when describing the irrigation water use, I'm uncertain which split to apply to industrial and irrigation direct flow beneficial uses for volumetric assignment. I've recommended **1.45 cfs** for industrial use but not assigned an annual volume, rather I've added the combined use limitation for irrigation & industrial use as annotated on PG5 of this report. I used Arcmap during licensing review to assign the industrial storage POU which is the same as the fire protection storage POU for licensing purposes.

Industrial storage is a multi-fill component of the water system as water is conveyed via booster pumps to pipelines serving log deck watering by big gun towers and smaller sprinkler(s) & for dust abatement, boiler room operations, and other sawmill industrial operations. The industrial from storage POU consists of the sawmill operations south of the highway (HWY). The Permit included acreage north of the HWY but at time of exam the only land used north of the HWY was overflow parking and trailer depot with no water uses developed. I've reduced the footprint and used ArcMap aerial imagery to assign the industrial from storage POU. Using annual volume reports, I've assigned **145 af** as the annual volume for industrial storage & industrial from storage beneficial uses; these two BUs volume(s) are not additive toward maximum diversion volumes but establish that in the course of a year the water system may divert 145 af through the ponds as multi-fill use for industrial storage/from storage related operations.

The combined total diversion volume associated with storage BU and from storage BU = Fire protection storage 24.0 af + Industrial storage/from storage 145.0 af = 169.0 af.

Fire Protection POU – I've recommended **1.45 cfs**, the total diverting pump(s) capacity, as the diversion rate associated with fire protection BU component. The Permit authorized up to 4.0 cfs for development but the Permit Holder is limited to pump performance found at the time of field exam toward licensing the Permit. Of note, the statement of completion was

filed designating 1.2 cfs and 133 af with payment of \$125.00 as receipted under N043347. Both values are less than I validated during the field exam, but the fee scale for submitting the statement of completion holds the same fee requirements for 1.45 cfs and 169.0 af as recommended to license 96-9498. I used ArcMap aerial imagery to assign the fire protection POU which is the same as the industrial & industrial from storage BUs. Fire protection uses the same infrastructure as the industrial uses but in the event of an active fire any part of the entire parcel owned by the applicant may use all water available to suppress an active fire. Similar to the irrigation BU, there is no diversion volume associated with the fire protection BU. As a result, the maximum diversion rate recommended for licensing equals 1.45 cfs but there is no maximum diversion volume associated with the face of the license. All annual volume limitations are explicitly defined by conditions of approval for licensing purposes.

During licensing review, I noted the Permit approved fire protection POU was legally described as Twp 56N, Rge 03W, Sec 31, Gov lot 3, NW¼NW¼. Using ArcMap aerial imagery, I found this inaccurately describes the two mill pond locations as developed prior to the application submission, as well as excluding the frog pond and lagoon pond. I recommended the applicant pursue an Amendment to Permit (at time of Licensing) to correct the Fire Protection Storage POU. I mailed the amendment forms on 12/11/2024 and the applicant returned signed documents received on 12/23/2024 which amend the POU to add the SW¼SW¼, Gov Lot 4, Section 30 to the POU; this change makes the storage beneficial uses consistent for licensing purposes. I didn't recommend an amendment fee as the change is a clarification of a BU that is ineligible for active water usage, for a legal description currently fulfilled on the Permit by the industrial storage POU legal description.

During licensing review, I made several recommended changes to the conditions of approval as follows:

- I combined conditions 077 & 218 to form a text-based condition defining that water shall not be diverted for fire protection use nor diverted from fire protection storage use under this right except to fight or repel an existing fire.
- I removed condition 26A, based on compliance by the applicant.
- I added condition F06 describing the shared PODs between Rights 96-7454 and 96-9498, which share one of two PODs.
- I added a text-based condition like X35 describing that Right 96-9498 industrial and irrigation water use(s) when combined shall not exceed an annual total diversion volume of 145 acre-feet. This is required as the volume reporting provided by the applicant doesn't differentiate between the two uses. This condition is necessary and takes the place of a maximum diversion volume assigned to the industrial direct flow BU on the face of the license.
- I replaced condition 219 with condition 259 to accurately describe the storage pond(s) volumetric data including multi-fill water usage.
- I added condition R62 which defines the irrigation BU component's authorized diversion rate and volume per acre requirements for the irrigation of 5.2 acres.
- I added condition X35 describing that rights 96-9616 and 96-9498 when combined shall not exceed the irrigation of 5.2 acres; reasoning discussed above on PG1 of this report.
- I added condition 928 to mitigate overlapping water use from the Right Holder's prior Right 96-7454, which is currently in an active Claim status in the CFPRBA process.
- All other conditions on the Permit are being carried forward to licensing for 94-9498.

All overlapping water right concerns have been addressed on PG1 and PG2 of this report. The Right Holder's surface water system has potential for external water served by Laclede Water District, but any overlap concerns have been mitigated through conditions. Domestic water use for employees is not a service connected to this surface water source.

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	1.45 CFS	
INDUSTRIAL STORAGE	01/01 to 12/31		145.0 AF
INDUSTRIAL FROM STORAGE	01/01 to 12/31		145.0 AF
FIRE PROTECTION	01/01 to 12/31	1.45 CFS	
FIRE PROTECTION STORAGE	01/01 to 12/31		24.3 AF
DIVERSION TO STORAGE	01/01 to 12/31	1.45 CFS	
IRRIGATION	04/01 to 10/31	0.10 CFS	

Totals: 1.45 CFS

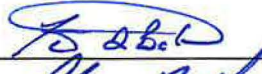
2. Recommended Amendments

☐ 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

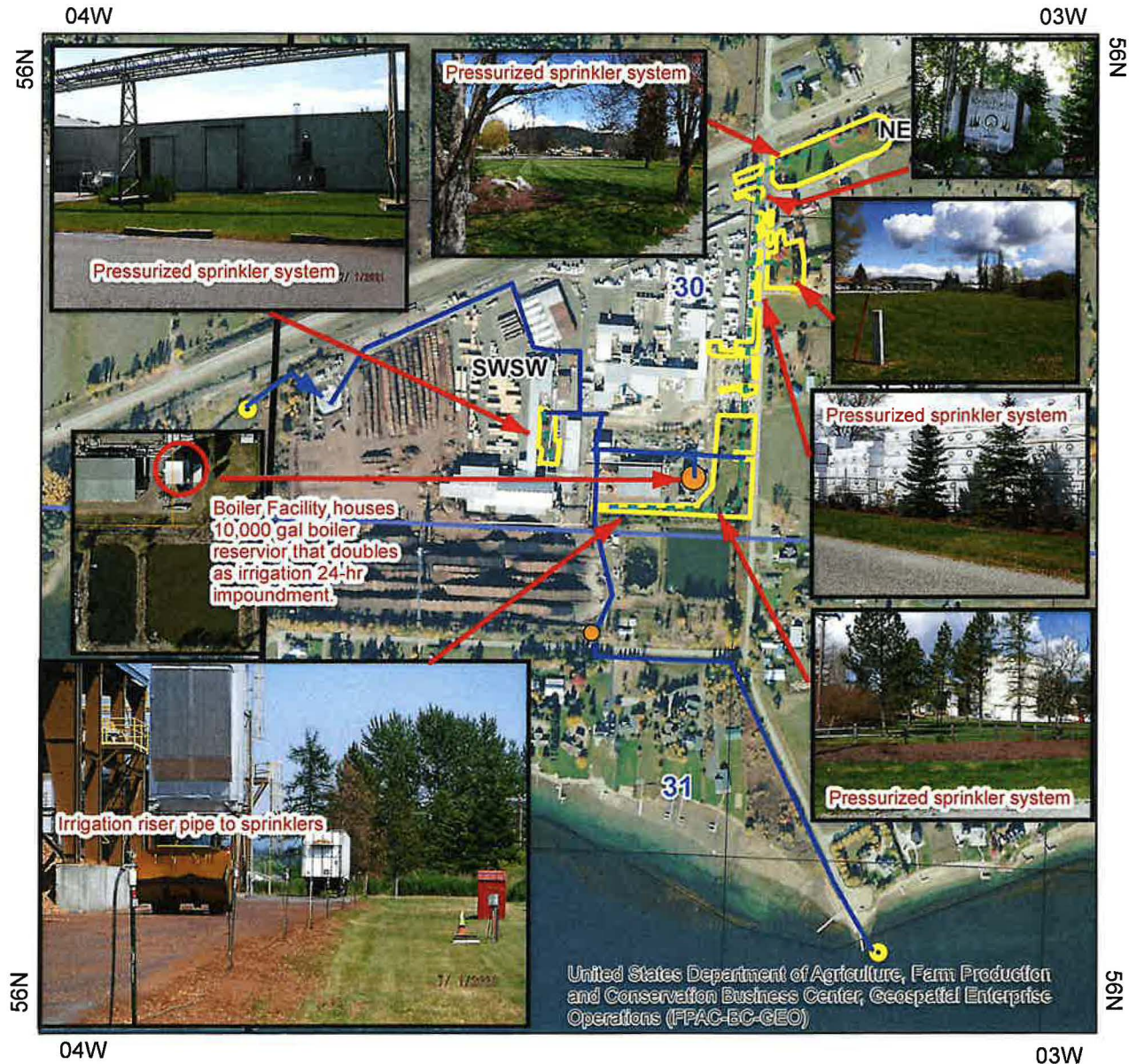
Luke Bates – Sr Water Resource Agent

Field Examiner's Name  Date 12/23/2024

Reviewer  Date 5/8/2025

State of Idaho
Department of Water Resources
Attachment to Field Exam
96-9498

This map depicts the IRRIGATION 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.



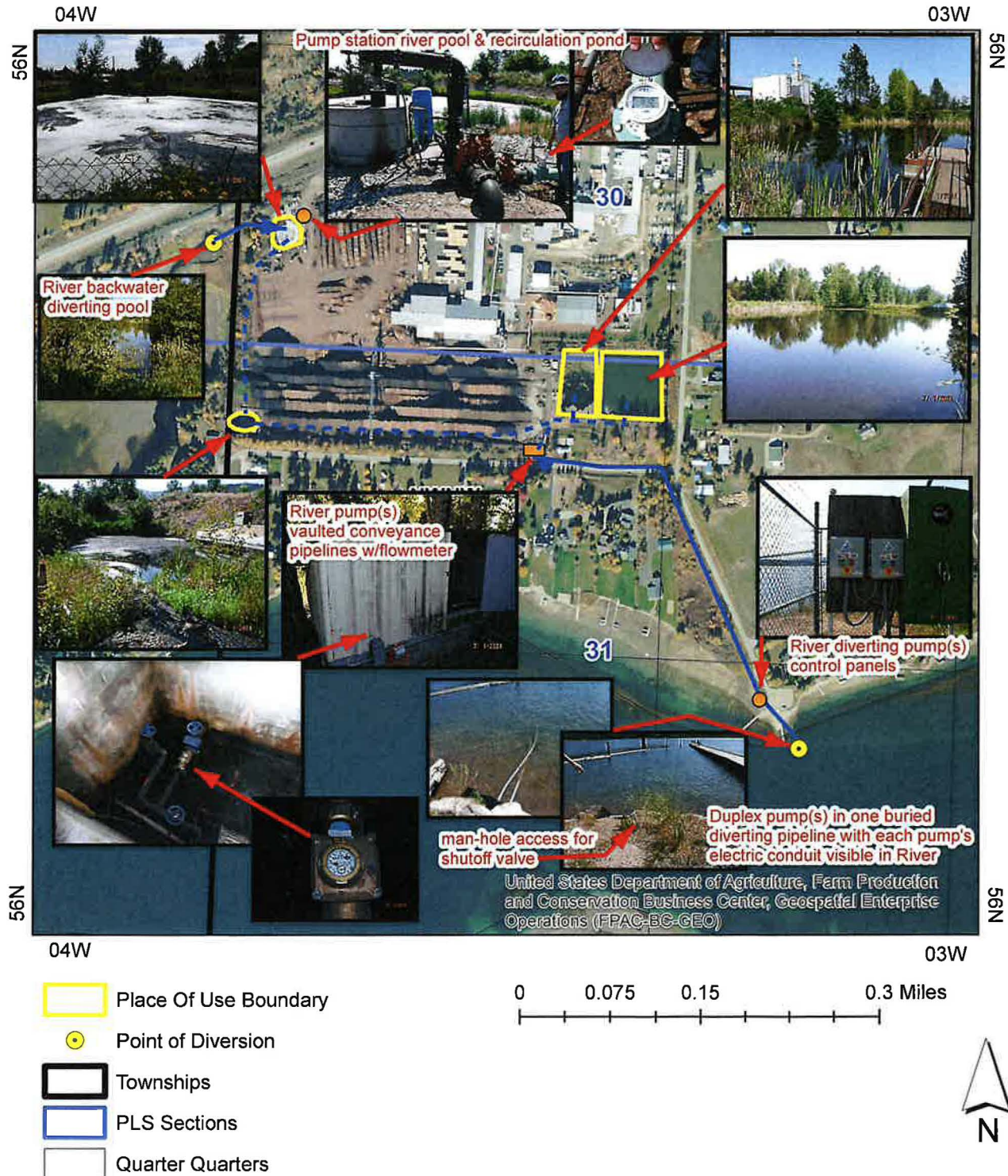
- Place Of Use Boundary
- Point of Diversion
- Townships
- PLS Sections
- Quarter Quarters

0 0.075 0.15 0.3 Miles



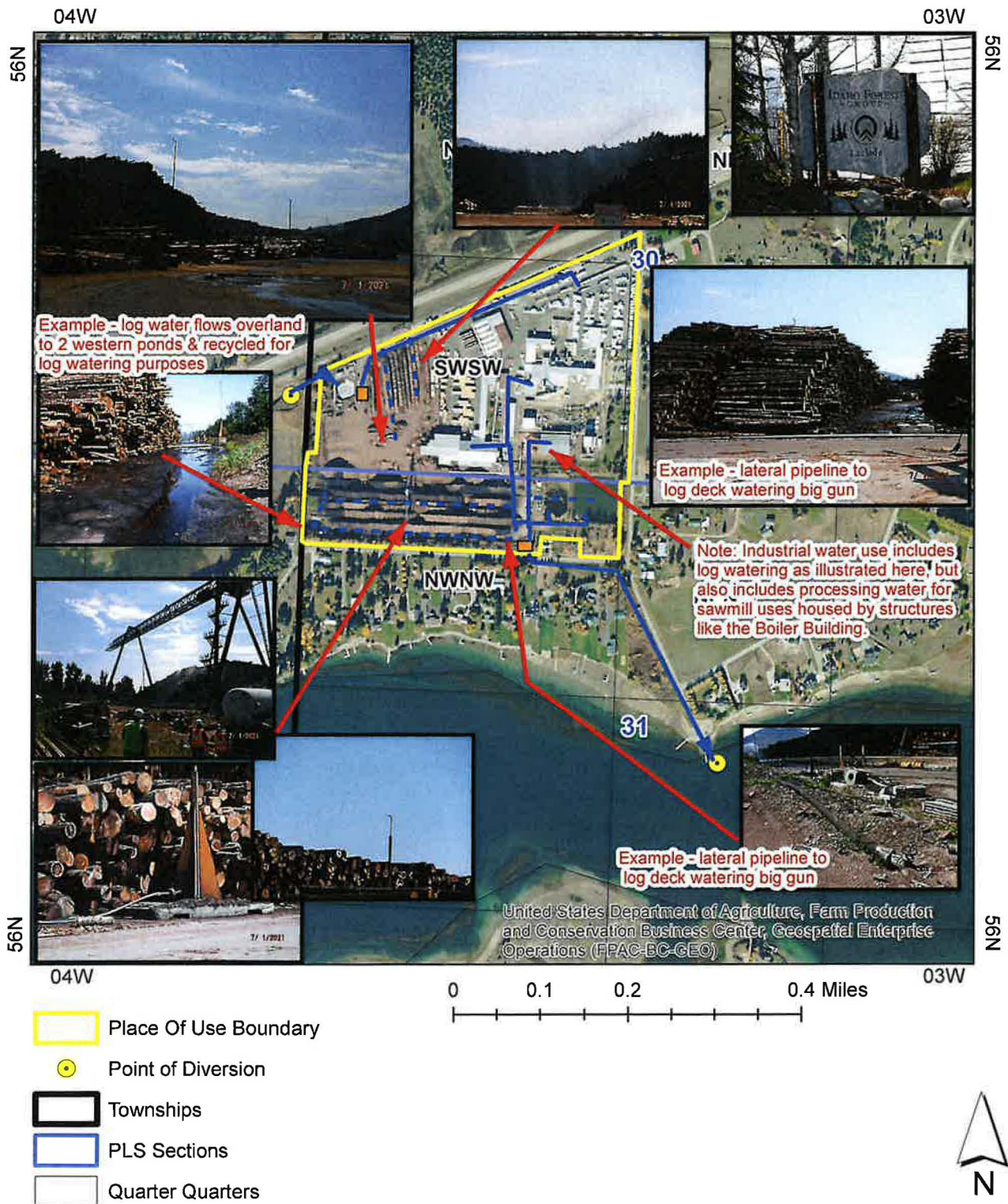
State of Idaho
Department of Water Resources
Attachment to Field Exam
96-9498

This map depicts the INDUSTRIAL STORAGE and FIRE PROTECTION STORAGE 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.



State of Idaho
Department of Water Resources
Attachment to Field Exam
96-9498

This map depicts the INDUSTRIAL, INDUSTRIAL FROM STORAGE, and FIRE PROTECTION system diagram.



IFG Laclede River Water Meters

Lagoon, (Slough) Water Meter				
Reading Date	Meter Reading	Daily Avg	# days	Read diff.
5/15/2015	0			
3/27/2017	51,217,000	75,098	682	51,217,000
6/30/2020	123,592,000	60,768	1191	72,375,000
10/20/2020	144,621,000	187,759	112	21,029,000
5/28/2021	145,833,000	5,509	220	1,212,000
9/22/2021	175,360,000	252,368	117	29,527,000
10/22/2021	177,967,000	86,900	30	2,607,000
3/25/2022	177,967,000	0	154	0
4/21/2022	177,967,000	0	27	0
8/25/2022	196,730,000	148,913	126	18,763,000
9/8/2022	199,111,000	170,071	14	2,381,000
10/13/2022	203,841,000	135,143	35	4,730,000
10/20/2022	203,841,000	0	7	0
11/17/2022	203,841,000	0	28	0
2/14/2023	203,841,000	0	89	0
5/3/2023	203,841,000	0	167	0
5/17/2023	203,841,000	0	92	0
7/19/2023				
8/16/2023				
9/20/2023	215,057,000	80,114	140	11,216,000
10/18/2023	230,257,000	98,701	154	15,200,000

Boat Launch River Water Meter			Days	gal/period	Avg GPM
Date	Meter Reading	Daily Avg			
6/18/2021	1,175,000				
7/23/2021	1,911,900	21,054	35	736,900	14.62
8/19/2021	3,317,600	52,063	27	1405700	36.15
9/22/2021	4,082,000	22,482	34	764400	15.61
10/22/2021	5,533,900	48,397	30	1451900	33.61
11/22/2021	6,385,200	27,461	31	851300	19.07
1/22/2022	8,482,100	34,375	61	2096900	23.87
3/25/2022	10,050,900	25,303	62	1568800	17.57
4/21/2022	11,234,200	43,826	27	1183300	30.43
8/25/2022	28,515,884	137,156	126	17,281,684	95.25
9/8/2022	28,815,629	21,410	14	299745	14.87
10/13/22	29,426,149	17,443	35	610520	12.11
10/20/2022	29,537,739	15,941	7	111590	11.07
11/17/2022	29,849,845	11,147	28	312106	7.74
2/14/2023	30,073,000	2,507	89	223155	1.74
5/3/2023	35,201,700	32,047	167	5351855	22.25
5/17/2023	36,196,000	71,021	14	994300	49.32
7/19/2023	40,765,000	72,251	77	5563300	50.17
8/16/2023	43,944,000	113,536	28	3179000	78.84
9/20/2023	47,035,000	88,314	35	3091000	61.33
10/18/23	48,894,000	66,393	28	1859000	46.11
1/3/24	50,000,000	14,364	77	1106000	9.97
1/18/24	51,098,700	73,247	15	1098700	50.87
3/5/24	53,784,000	57,134	47	2685300	39.68

Meter installed

Boiler moved to river water 3/25/22

Slough	Boat Launch	Total	Acre Ft	Year
25,874,000	21,367,745	47,241,745	145	2022
26,416,000	20,150,155	46,566,155	143	2023

Boiler moved to river water 3/25/22



OWO RECORD LAGOON PUMP METER READINGS

Date Due:

Date Issued: 18-Jun-2021

Date Completed 18-Jun-2021

COPY OF COMPLETED WORK ORDER

EQUIPMENT:



13-700-050

LOG YARD POND PUMP

LOCATION: 13-700

WORK TYPE: CU CALENDAR-USAGE BASED MAINTENANCE

CATEGORY: MEC MECHANICAL

STATUS: Completed Work has been completed and job order is now closed.

PRIORITY: 3 - COMPLETE COMPLETE IN 2 WEEKS

CREW: CREW SIZE: 0 EST LABOR HRS: 5.000 EST MAN HRS: 0.000

TAG NAME: close

DESCRIPTION:

Take lagoon Pump Reading. Update result in Dynastar.

10-20-20 144621 x 1000
 10-20-20 Lagoon pump disconnected
 6-31-20 123592 x 1000
 3-27-17 51217 x 1000
 5-15-15 Meter is installed 0 reading
 5-28-21 145833 x 1000
 6-4-21 147484 x 1000
 6-11-21 149122 x 1000
 6-18-21 150675x 1000

**Work Order 13-WO21010459**

COPY OF COMPLETED WORK ORDER

PARTS MAINTENANCE**Have all parts been tagged and prepared for rebuild?**

YES NO N/A

PREVENTION**How can this problem be prevented from happening again?**☐ Change lubrication shedule
☐ Change PM frequency
☐ Preventative Action**FOLLOW-UP****If follow-up work is required has a work request been submitted?**

YES NO WR# _____

COMPLETED?

(circle one)

YES NO

INITIALS: _____ DATE: _____

MAINTENANCE PLANNING**Evaluation by:** _____ **Date Evaluated:** _____ **Score:** _____

Additional Comments

1.	Were all safety procedures followed?	YES NO N/A	
2.	Was anyone injured while performing the work?	YES NO N/A	
3.	Was work performed according to W/O instructions or if this was an emergency repair was it resolved satisfactorily?	YES NO N/A	
4.	If welding was performed is it of acceptable quality?	YES NO N/A	
5.	If welding was performed were proper Hot Work Procedures followed?	YES NO N/A	
6.	Were proper clean-up procedures followed?	YES NO N/A	
7.	If parts were rebuildable were the parts tagged for rebuild and taken to the shop?	YES NO N/A	
8.	Have follow-up work requests been submitted?	YES NO N/A	
9.	Have all sections been signed off with comments for additional work or for future recurrence?	YES NO N/A	

Total Storage Calculations

FILE NUMBER	96-9498
REVIEWER	Luke Bates
DATE	10/3/2024

This spreadsheet has been designed by Idaho Department of Water Resources to estimate the total seepage, evaporation and fill capacity required for a pond.

User Input
Calculated value
Formula Explanations

POND # 1 - recirc pond

Surface Area (AC.)	0.3	"Surface Area" is automatically carried over from the "Seepage Loss" sheet.
Average Pond Depth (FT.)	8	"Average Pond Depth" depicts the actual depth of the pond either measured or estimated. Note: If you know the maximum depth and not the average depth, the Field Examiner's Handbook suggests multiplying the maximum depth by 0.4 to get the average depth, or you can use any method that seems reasonable to attain average depth.
Pond Capacity (AF)	2.4	Pond Capacity is calculated by multiplying the Pond Surface Area by the Average Pond Depth. If you know the capacity, divide the capacity by surface area and enter the average pond depth in the space above. Note: If pond capacity is determined using a method shown on the "Pond Capacity" sheet, the user may need to modify the value of "Pond Capacity" (cell B9) manually. Note that if the value is modified manually, the formula will be altered for future use.

Multiple Fill Volume Above Initial Fill to Fulfill From Storage Needs- "Multiple Fills" (AF)	0	The "Multiple Fill Volume Above Initial Fill" is the acre-feet of water required to meet a <i>from storage</i> component if the <i>from storage</i> component exceeds a one time fill. This section should not include the amount of water needed to fill the pond initially or the amount of water needed to maintain the pond level due to evaporation or seepage. For example: if a pond has a capacity of 5 acre feet and 2.5 acre feet of seepage and evaporation, but the pond is used for irrigation that requires 10 acre feet of from storage for the irrigation use, then you would insert 5 acre feet into this location (10 acre feet needed - 5 acre feet from the initial fill = 5 acre feet of additional storage needed). Note: You must have a "From Storage" component exceeding the initial fill on the permit to include a volume in this space.
Estimated Seepage Loss (AF)	0.3	The "Estimated Seepage Loss" is automatically carried over from the "Seepage Loss" sheet.
Estimated Evaporation Loss (AF)	0.4	The "Estimated Evaporation Loss" is automatically carried over from the "Evaporation Loss" sheet.
Total Volume Required (AF)	3.1	The "Total Volume Required" is calculated by adding the Pond Capacity, Multiple Fills, Seepage Loss, and Evaporation Loss amounts to determine the total amount of storage required.

Total Storage Calculations

FILE NUMBER	96-9498
REVIEWER	Luke Bates
DATE	10/3/2024

This spreadsheet has been designed by Idaho Department of Water Resources to estimate the total seepage, evaporation and fill capacity required for a pond.

User Input
Calculated value
Formula Explanations

POND # 2 - frog pond

Surface Area (AC.)	0.3	"Surface Area" is automatically carried over from the "Seepage Loss" sheet.
Average Pond Depth (FT.)	6	"Average Pond Depth" depicts the actual depth of the pond either measured or estimated. Note: If you know the maximum depth and not the average depth, the Field Examiner's Handbook suggests multiplying the maximum depth by 0.4 to get the average depth, or you can use any method that seems reasonable to attain average depth.
Pond Capacity (AF)	1.8	Pond Capacity is calculated by multiplying the Pond Surface Area by the Average Pond Depth. If you know the capacity, divide the capacity by surface area and enter the average pond depth in the space above. Note: If pond capacity is determined using a method shown on the "Pond Capacity" sheet, the user may need to modify the value of "Pond Capacity" (cell B9) manually. Note that if the value is modified manually, the formula will be altered for future use.

Multiple Fill Volume Above Initial Fill to Fulfill From Storage Needs- "Multiple Fills" (AF)	0	The "Multiple Fill Volume Above Initial Fill" is the acre-feet of water required to meet a <i>from storage</i> component if the <i>from storage</i> component exceeds a one time fill. This section should not include the amount of water needed to fill the pond initially or the amount of water needed to maintain the pond level due to evaporation or seepage. For example: if a pond has a capacity of 5 acre feet and 2.5 acre feet of seepage and evaporation, but the pond is used for irrigation that requires 10 acre feet of from storage for the irrigation use, then you would insert 5 acre feet into this location (10 acre feet needed - 5 acre feet from the initial fill = 5 acre feet of additional storage needed). Note: You must have a "From Storage" component exceeding the initial fill on the permit to include a volume in this space.
Estimated Seepage Loss (AF)	0.3	The "Estimated Seepage Loss" is automatically carried over from the "Seepage Loss" sheet.
Estimated Evaporation Loss (AF)	0.4	The "Estimated Evaporation Loss" is automatically carried over from the "Evaporation Loss" sheet.
Total Volume Required (AF)	2.5	The "Total Volume Required" is calculated by adding the Pond Capacity, Multiple Fills, Seepage Loss, and Evaporation Loss amounts to determine the total amount of storage required.

Total Storage Calculations

FILE NUMBER	96-9498
REVIEWER	Luke Bates
DATE	10/3/2024

This spreadsheet has been designed by Idaho Department of Water Resources to estimate the total seepage, evaporation and fill capacity required for a pond.

User Input
Calculated value
Formula Explanations

POND # 3 Fire & mill pond

Surface Area (AC.)	1.1	"Surface Area" is automatically carried over from the "Seepage Loss" sheet.
Average Pond Depth (FT.)	4	"Average Pond Depth" depicts the actual depth of the pond either measured or estimated. Note: If you know the maximum depth and not the average depth, the Field Examiner's Handbook suggests multiplying the maximum depth by 0.4 to get the average depth, or you can use any method that seems reasonable to attain average depth.
Pond Capacity (AF)	4.4	Pond Capacity is calculated by multiplying the Pond Surface Area by the Average Pond Depth. If you know the capacity, divide the capacity by surface area and enter the average pond depth in the space above. <i>Note: If pond capacity is determined using a method shown on the "Pond Capacity" sheet, the user may need to modify the value of "Pond Capacity" (cell B9) manually. Note that if the value is modified manually, the formula will be altered for future use.</i>

Multiple Fill Volume Above Initial Fill to Fulfill From Storage Needs- "Multiple Fills" (AF)	0	The "Multiple Fill Volume Above Initial Fill" is the acre-feet of water required to meet a <i>from storage</i> component if the <i>from storage</i> component exceeds a one time fill. This section should not include the amount of water needed to fill the pond initially or the amount of water needed to maintain the pond level due to evaporation or seepage. For example: if a pond has a capacity of 5 acre feet and 2.5 acre feet of seepage and evaporation, but the pond is used for irrigation that requires 10 acre feet of from storage for the irrigation use, then you would insert 5 acre feet into this location (10 acre feet needed - 5 acre feet from the initial fill = 5 acre feet of additional storage needed). <i>Note: You must have a "From Storage" component exceeding the initial fill on the permit to include a volume in this space.</i>
Estimated Seepage Loss (AF)	1.2	The "Estimated Seepage Loss" is automatically carried over from the "Seepage Loss" sheet.
Estimated Evaporation Loss (AF)	1.5	The "Estimated Evaporation Loss" is automatically carried over from the "Evaporation Loss" sheet.
Total Volume Required (AF)	7.1	The "Total Volume Required" is calculated by adding the Pond Capacity, Multiple Fills, Seepage Loss, and Evaporation Loss amounts to determine the total amount of storage required.

Total Storage Calculations

FILE NUMBER	96-9498
REVIEWER	Luke Bates
DATE	10/3/2024

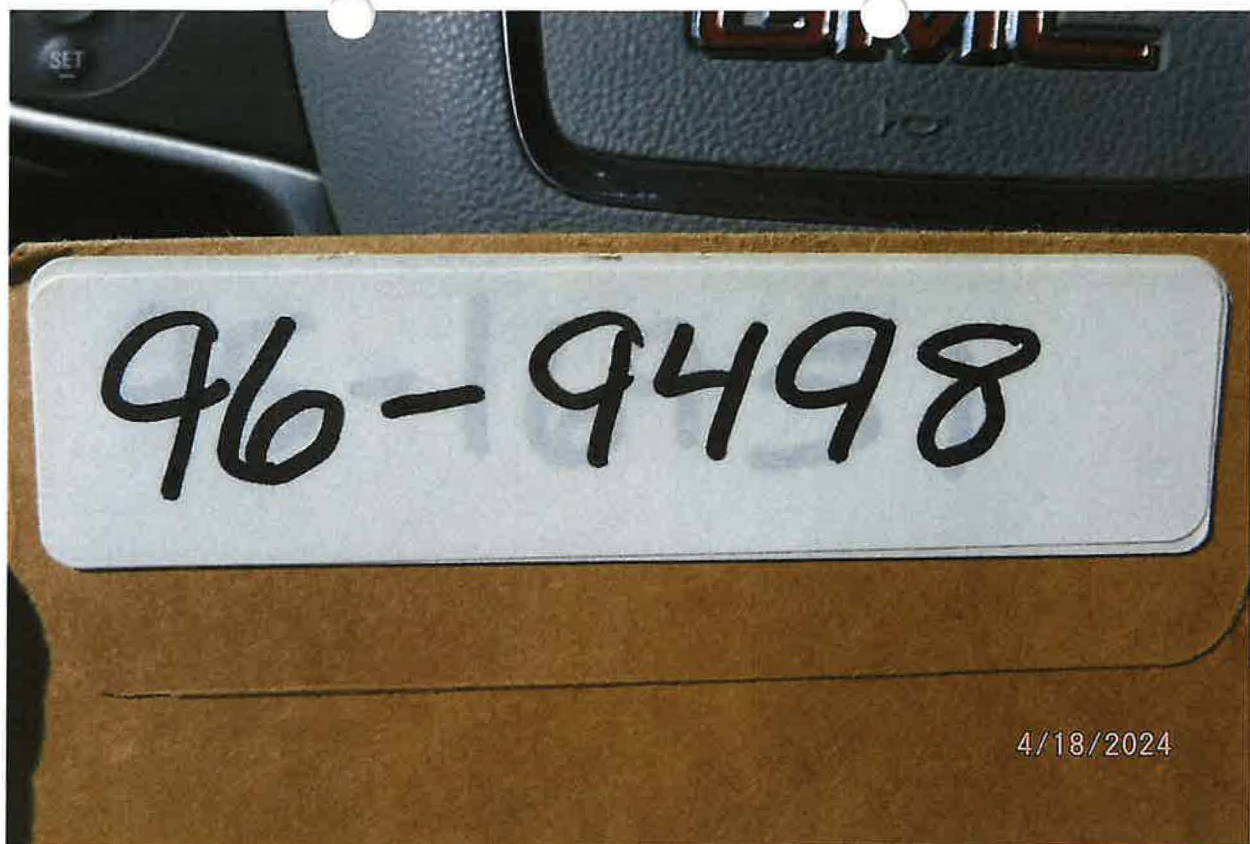
This spreadsheet has been designed by Idaho Department of Water Resources to estimate the total seepage, evaporation and fill capacity required for a pond.

User Input
Calculated value
Formula Explanations

POND # 4 Fire & mill pond

Surface Area (AC.)	1.8	"Surface Area" is automatically carried over from the "Seepage Loss" sheet.
Average Pond Depth (FT.)	4	"Average Pond Depth" depicts the actual depth of the pond either measured or estimated. Note: If you know the maximum depth and not the average depth, the Field Examiner's Handbook suggests multiplying the maximum depth by 0.4 to get the average depth, or you can use any method that seems reasonable to attain average depth.
Pond Capacity (AF)	7.2	Pond Capacity is calculated by multiplying the Pond Surface Area by the Average Pond Depth. If you know the capacity, divide the capacity by surface area and enter the average pond depth in the space above. <i>Note: If pond capacity is determined using a method shown on the "Pond Capacity" sheet, the user may need to modify the value of "Pond Capacity" (cell B9) manually. Note that if the value is modified manually, the formula will be altered for future use.</i>

Multiple Fill Volume Above Initial Fill to Fulfill From Storage Needs- "Multiple Fills" (AF)	0	The "Multiple Fill Volume Above Initial Fill" is the acre-feet of water required to meet a <i>from storage</i> component if the <i>from storage</i> component exceeds a one time fill. This section should not include the amount of water needed to fill the pond initially or the amount of water needed to maintain the pond level due to evaporation or seepage. For example: if a pond has a capacity of 5 acre feet and 2.5 acre feet of seepage and evaporation, but the pond is used for irrigation that requires 10 acre feet of from storage for the irrigation use, then you would insert 5 acre feet into this location (10 acre feet needed - 5 acre feet from the initial fill = 5 acre feet of additional storage needed). <i>Note: You must have a "From Storage" component exceeding the initial fill on the permit to include a volume in this space.</i>
Estimated Seepage Loss (AF)	2.0	The "Estimated Seepage Loss" is automatically carried over from the "Seepage Loss" sheet.
Estimated Evaporation Loss (AF)	2.5	The "Estimated Evaporation Loss" is automatically carried over from the "Evaporation Loss" sheet.
Total Volume Required (AF)	11.6	The "Total Volume Required" is calculated by adding the Pond Capacity, Multiple Fills, Seepage Loss, and Evaporation Loss amounts to determine the total amount of storage required.



BENEFICIAL USE FIELD EXAM DATE 4/18/2024 (PRIOR SITE VISIT ON 7/1/2021)



IDAHO FOREST GROUP, LACLEDE MILL



POD – PEND OREILLE RIVER DIVERSION; DUPLEX PUMP SYSTEM 2EA 10 HP PUMP TO SINGLE CONVEYANCE PIPELINE.



POD – DIVERTING WORKS – 2EA 10 HP FRANKLIN ELECTRIC PUMP MOTORS PAIRED WITH GRUNDFOS PUMP'S PART No. 180STS5 CONTROL PANELS AT LACLEDE BOAT LAUNCH SITE



POD – PEND OREILLE RIVER DIVERSION WATER CONVEYANCE SYSTEM – WATER
LINE & FLOW METER STATION





7/ 1/2021

INFLOW LINE WITH FLOWMETER INSTALLED FROM PEND OREILLE RIVER



7/ 1/2021

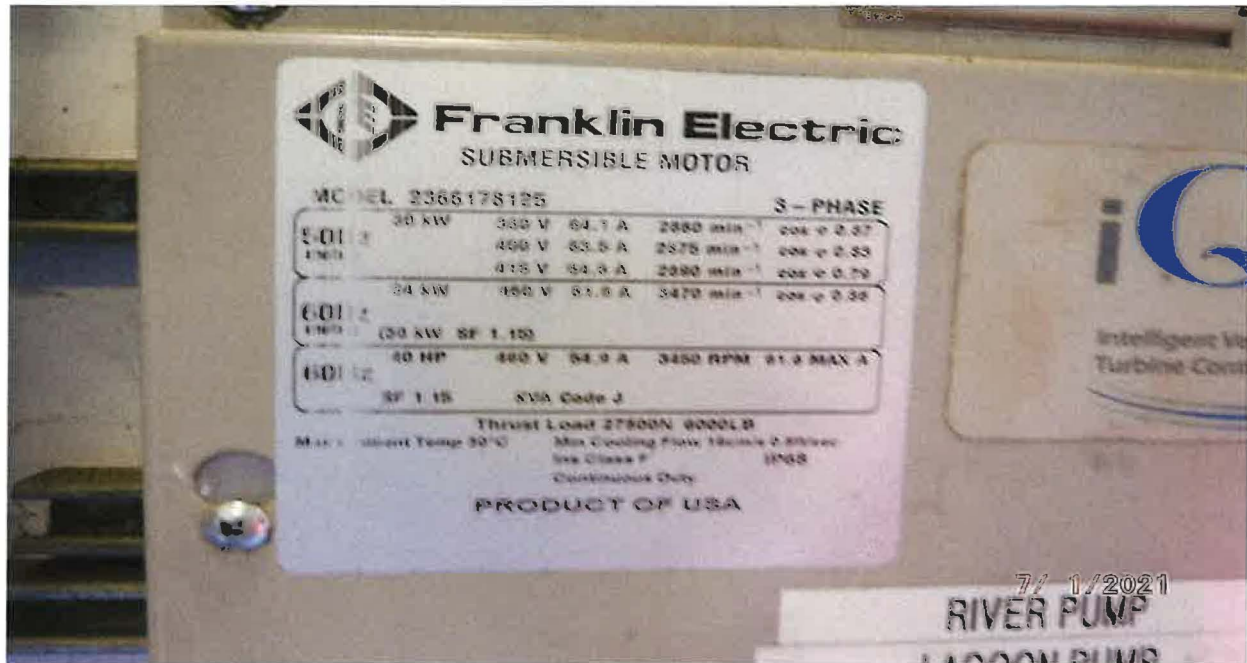
VELOCITY STYLE FLOW METER – ZENNER MODEL ZTM04 4-INCH FLANGED MOUNTING



POD – LAGOON DIVERTING WORKS; BURIED LINE WITH INTAKE TO WET WELL



POD – WET WELL FROM LAGOON WITH 40 HP DIVERTING PUMP



POD – 40 HP FRANKLIN ELECTRIC PUMP MOTOR MODEL 2366178125



LAGOON DIVERTING WORKS – A VELOCITY STYLE PROPELLER METER, McCROMETER BRAND FLANGED FLOWMETER INSTALLED TO MONITOR 40 HP PUMP. 510 GPM MEASURED AT TIME OF SITE VISIT.



POU – POND #1 (SETTLING POND) INDUSTRIAL STORAGE & FIRE PROTECTION STORAGE –
WATER IS RE-CIRCULATED FOR INDUSTRIAL LOG WATERING FROM THIS POND



POU – POND #2 (FROG POND) INDUSTRIAL STORAGE & FIRE PROTECTION STORAGE –
WATER IS RE-CIRCULATED FOR INDUSTRIAL LOG WATERING FROM THIS POND



POU – POND #3 (MILL FIRE POND 1) INDUSTRIAL STORAGE & FIRE PROTECTION STORAGE – WATER IS PUMPED TO OTHER PONDS FOR INDUSTRIAL LOG WATERING FROM THIS POND



POU – POND #4 (MILL FIRE POND 1) INDUSTRIAL STORAGE & FIRE PROTECTION STORAGE – WATER IS PUMPED TO OTHER PONDS FOR INDUSTRIAL LOG WATERING FROM THIS POND



WATER CONVEYANCE SYSTEM – (1) INFLOW FROM BOAT LAUNCH PUMPS; (2) OUTFLOW TO IRRIGATION STORAGE 10,000-GAL TANK; (3) OUTFLOW TO MILL STORAGE POND(S)



POU – IRRIGATION FROM STORAGE

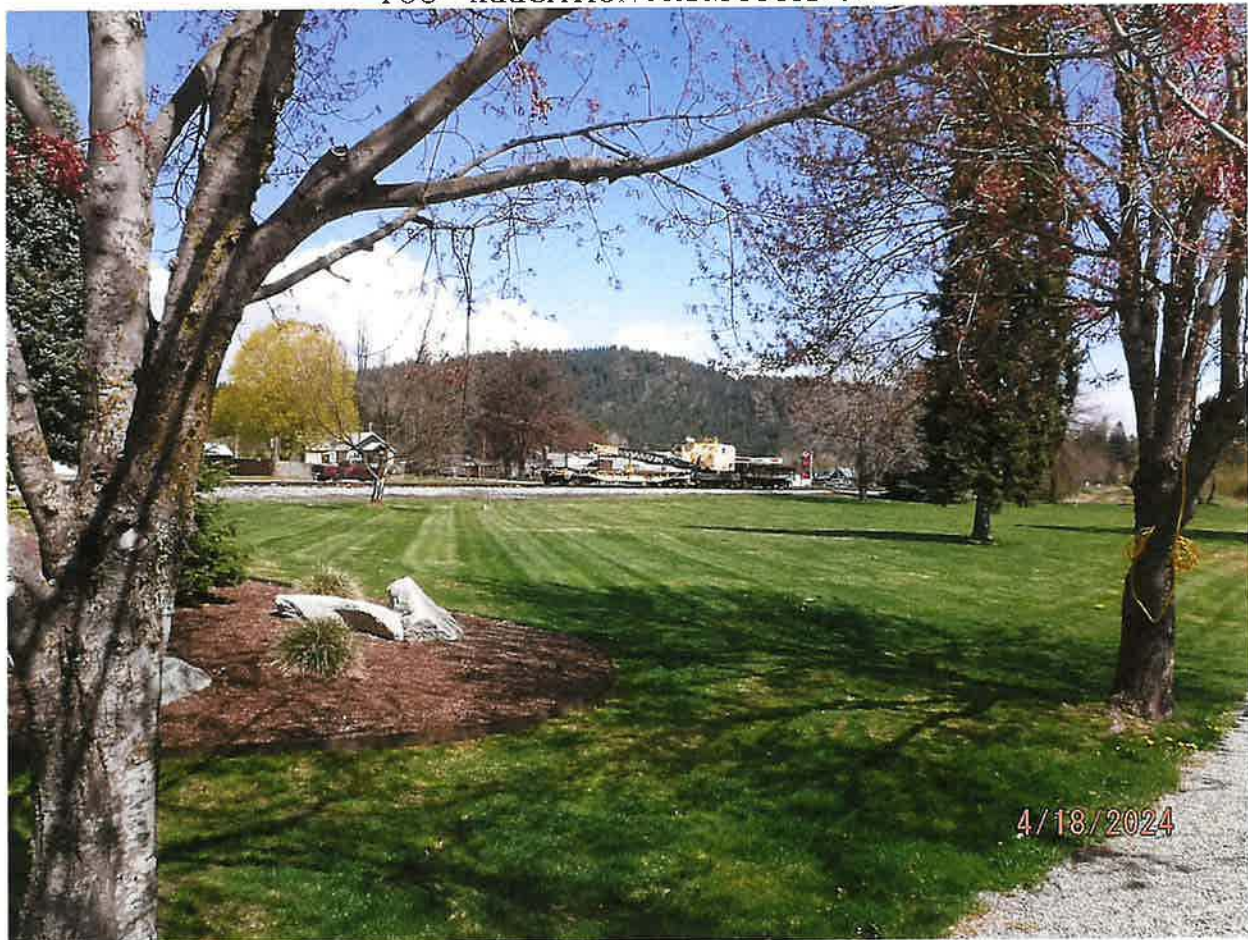


POU – IRRIGATION FROM STORAGE





POU – IRRIGATION FROM STORAGE





POU – INDUSTRIAL FROM STORAGE – LOG WATERING





POU – INDUSTRIAL FROM STORAGE – LOG WATERING





INDUSTRIAL FROM STORAGE POU – LOG WATER EXCESS CHANNELIZES BACK TO
SETTLING PONDS FOR RE-CIRCULATION PROCESSES (REDUCES TOTAL DIVERSION
VOLUME FROM WATER SOURCE THROUGHOUT SEASON)





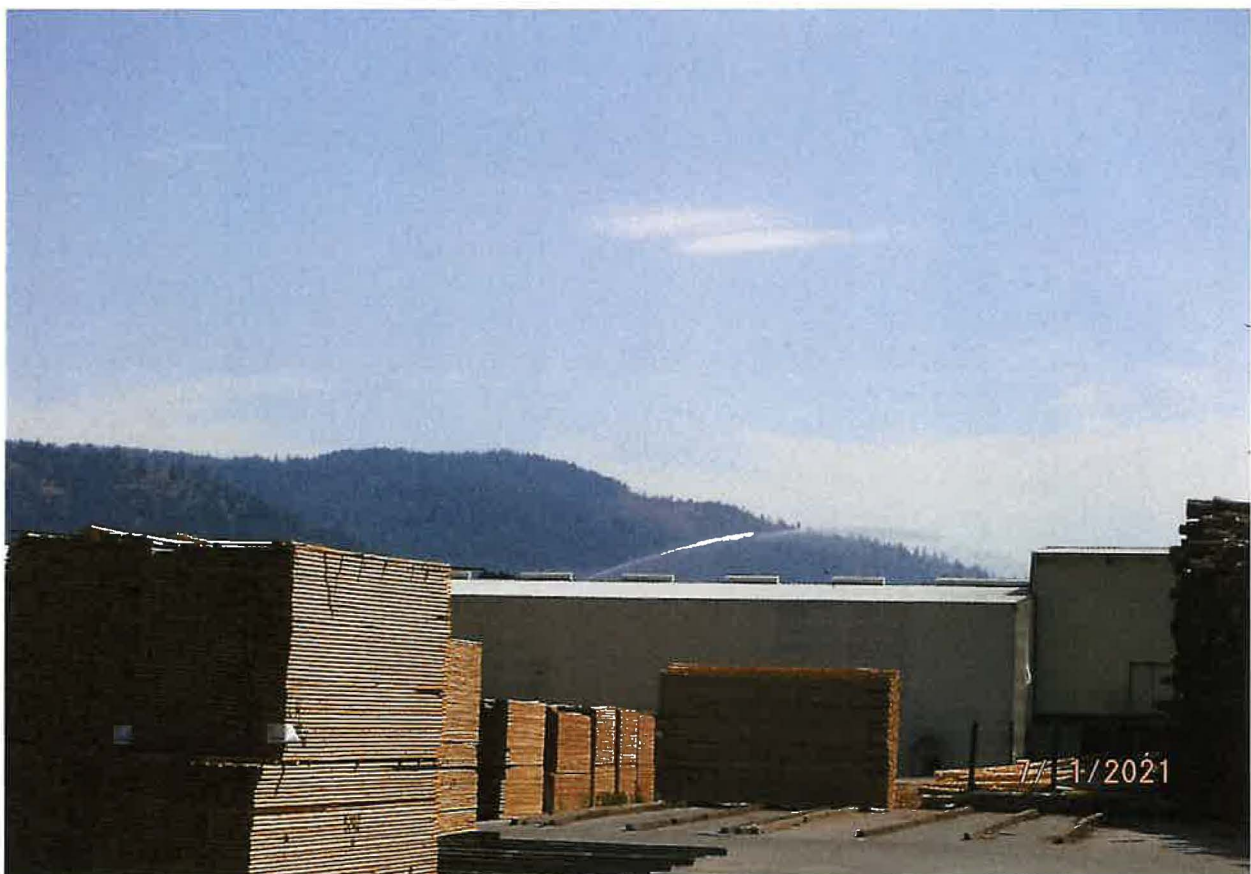
POU – INDUSTRIAL FROM STORAGE – LOG WATERING



POU – INDUSTRIAL FROM STORAGE – RINSE WATER, BOILER OPERATION WATER USE, AND OTHER SAWMILL INFRASTRUCTURE WATER FROM STORAGE USAGE



INDUSTRIAL FROM STORAGE POU – TRANSFER PUMPS TO BIG GUN WATER TOWERS FOR LOG WATERING



POU – FIRE PROTECTION – ENTIRETY OF LACLEDE MILL OPERATION