



# Public Utility District No. 1 of Douglas County

Wells Hydroelectric Project \* PO Box 549 \* 375 Azwell Rd. \* Chelan, WA 98816 \* 509/923-2226 \* FAX 509/884-0553 \* [www.douglas pud.org](http://www.douglas pud.org)

**Via Electronic Notification**

April 25, 2024

WA State Department of Ecology  
Central Regional Office  
1250 West Alder Street  
Union Gap, WA 98903-0009

**Subject: Wells Hydroelectric Project NPDES Waste Discharge Permit No. WA0991031;  
Revised Operation and Maintenance (O&M) Manual and Review Confirmation**

Dear Ecology,

The Public Utility District No. 1 of Douglas County (Douglas PUD) respectfully submits to Washington State Department of Ecology (Ecology) an updated Operation and Maintenance (O&M) Manual and annual review confirmation letter, pursuant to requirements within Section S4.A of the National Pollutant Discharge Elimination System (NPDES) Wastewater Discharge Permit No. WA0991031 issued to the Wells Hydroelectric Project on March 7, 2022.

Douglas PUD's has completed an annual review of the Wells Project O&M Manual date April 2023 that was submitted to Ecology on April 14, 2023. During our review, updates and revisions were required. The following bulleted list provides an overview of the Wells Project O&M Manual revisions dated April 2024:

- Section 1.1: Description of Overall Facility Operations
  - Added summary of approved permit details and submission deadlines.
- Section 2.1: Sump System - Outfall No. 1
  - Added information regarding the plumbing of Outfall No. 14-23 into the Outfall No. 1 per approval from Ecology.
- Section 2.3: Generator Air Coolers - Outfall Nos. 3-12
  - Added clarification language to improve description of operation.
- Section 2.5: Mechanics Room HVAC System - Outfall No. 24
  - Updated HVAC system description to reflect outfall replumbing changes.
- Section 2.6: Fish Pump Turbine Bearing Cooling - Outfall Nos. 25 and 26
  - Added clarification language added to improve description of operation.
- Section 3.0: Monitoring and Wastewater Sampling Procedures
  - Added Section 3.1 and Section 3.1.1 to update sampling procedures.

- Section 4.0: Maintenance and Direction to Staff
  - Added Section 4.1 and direction to staff.
- Section 9.0: Facility Contact Information and Minimum Staffing
  - Added clarification language, additional facility contact and description to existing minimum staffing
- Minor editorial changes

This updated O&M Manual, revised April 2024, supersedes the 2023 O&M Manual.

Various sections of the Permit require Douglas PUD to submit plans and/or reports for Ecology's review and approval. As such, please indicate your receipt of this document and provide comments and/or suggested revisions, should they exist, within 30 days of receipt. If Ecology has no comments, please indicate approval of the document attached herein toward meeting the terms and conditions of Section S4 of the permit. In the absence of receiving formal comment(s) from Ecology, Douglas PUD will assume the document to be final and implement the O&M Manual, as provided in Attachment A. If you have any questions, please contact me at 509-881-2323.

Respectfully,



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Attachment A. Operations and Maintenance Manual revised April 2024 for the Wells Hydroelectric Project No. 2149

**NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)  
WASTE DISCHARGE PERMIT NO. WA0991031**

**ATTACHMENT A**

**OPERATIONS AND MAINTENANCE MANUAL REVISED APRIL 2024 FOR THE WELLS  
HYDROELECTRIC PROJECT NO. 2149**

**NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM  
(NPDES) WASTE DISCHARGE PERMIT NO. WA0991031**

**OPERATION AND MAINTENANCE MANUAL**

**WELLS HYDROELECTRIC PROJECT  
FERC NO. 2149**

Revised: April 2024

Prepared by:

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Prepared for:

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1250 West Alder Street  
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# REVISIONS TO OPERATION AND MAINTENANCE MANUAL for WELLS HYDROELECTRIC PROJECT April 2024

Section	Update
1.1: Description of Overall Facility Operations	Added summary of approved permit details and submission deadlines.
2.1: Sump System - Outfall No.1	Information added regarding the Ecology approval of Outfalls #14-23 to be replumbed directly into the Sump System and will be monitored as Outfall #1. Approval appended to manual in Appendix B.
2.3: Generator Air Coolers: Generator Thrust and Guide Bearing Outfall Nos. 3-12	Added clarification language to improve description of operation.
2.5: Mechanics Room HVAC System - Outfall No. 24	Updated HVAC system description to reflect outfall replumbing changes.
2.6: Fish Pump Turbine Bearing Cooling – Outfall Nos. 25 and 26	Added clarification language added to improve description of operation.
3.0: Monitoring and Wastewater Sampling Procedures	<p>Added Section 3.1 (Operational Procedures for Water Sampling) to capture details about temperature and flow recording and calculations, instrumentation calibration and referencing Flow and Temperature Monitoring Plan for details.</p> <p>Added Section 3.1.1 (Expected Changes to Sampling Procedures in 2024)</p>
4.0: Maintenance and Direction to Staff	Added Section 4.1 (Rotating Checks and Routine Operator Schedules) with clarification language to improve description of operation, operators and/or mechanic staff for routine schedule and monitoring of systems per S4.B.1 and include directions to staff maintaining equipment per S4.B.2
9.0: Facility Contact Information and Minimum Staffing	Added clarification language, additional facility contact and description to existing minimum staffing list per S4.B.4.
Minor editorial changes	Minor wordsmithing, formatting, and updates to figure captions and organization throughout.

## Table of Contents

---

1.0	Overview .....	1
1.1	Description of Overall Facility Operations.....	1
1.2	Description of Water Leakage Collection and Treatment System .....	1
1.2.1	Discharges to Oil/Water Separator System .....	2
2.0	Operations .....	2
2.1	Sump System - Outfall No. 1.....	2
2.2	Oil Water Separator - Outfall No. 2 .....	3
2.3	Generator Air Coolers: Generator Thrust and Guide Bearing - Outfall Nos. 3-12.....	4
2.4	Unit 5 Compressor Room - Outfall No. 13.....	5
2.5	Mechanics Room HVAC System - Outfall No. 24 .....	6
2.6	Fish Pumps Turbine Bearing Cooling - Outfall Nos. 25 and 26 .....	7
3.0	Monitoring and WasteWater Sampling Procedures.....	8
3.1	Operational Procedures for Water Sampling .....	8
3.1.1	Expected Changes to Sampling Procedures in 2024 .....	9
4.0	Maintenance and Directions to Staff.....	10
4.1	Rotating Checks and Routine Operator Schedules.....	10
5.0	Reporting and Recording Requirements.....	13
6.0	Location of Facility Records .....	14
7.0	Safety and Emergency Planning.....	14
8.0	Spare Parts .....	14
9.0	Facility Contact Information and Minimum Staffing .....	15
EXHIBIT A.....		17
EXHIBIT B.....		19
APPENDICES .....		21
APPENDIX A.....		22
APPENDIX B.....		23

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### List of Tables

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Table 1.	Wells Hydroelectric Project Permit Discharge Limits.....	2
Table 2.	Wells Hydroelectric Project Monitoring Guidelines .....	8
Table 3.	Preventative Maintenance Schedule for the Wells Project NPDES Permit.....	12
Table 4.	The Wells Project NPDES Permit Reporting Requirements .....	13
Table 5.	Stocked Spare Parts for Equipment Related to the NPDES Permit.....	15
Table 6.	Wells Project Senior Level Staff’s Contact Information .....	16

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### List of Figures

---

Figure 1.	Sump System (Outfall No. 1).....	2
Figure 2.	Oil Water Separator (Outfall No. 2) .....	3
Figure 3.	Generator Air Coolers System (Outfall Nos. 3-12) .....	4
Figure 4.	Unit 5 Compressor Room (Outfall No. 13) .....	5
Figure 5.	Mechanics Room HVAC System (Outfall No. 24) .....	6
Figure 6.	Fish Pump Turbine System (Outfall Nos. 25 and 26).....	7
Figure 7.	Wells Maintenance and Tracking SharePoint snapshot showing system used by Wells Project staff to track and report maintenance issues.....	10

## **1.0 OVERVIEW**

### **1.1 Description of Overall Facility Operations**

On March 7, 2022, Public Utility District No. 1 of Douglas County (Douglas PUD), owner and operator of the Wells Hydroelectric Project (Wells Project), was issued a National Pollutant Discharge Elimination System Waste Discharge (NPDES) Permit No. WA0991031 (Permit). The NPDES Permit was issued under requirements found in Section 402 of the Clean Water Act (Ecology, 2022a). Pursuant to the requirements of Section S4.A. of the NPDES Permit, Douglas PUD submitted an Operations and Maintenance (O&M) Manual to the State of Washington Department of Ecology (Ecology) on April 14, 2023, that meets the requirements of WAC 173-240-150.

Annually and in accordance with the NPDES Permit Section S.4.a.2-3., Douglas PUD will review and submit any revisions or updates to the O&M Manual with a review confirmation letter to Ecology on or before May 1 for the Wells Project.

The Wells Project is a hydropower generation facility located near Chelan, Washington on the Columbia River in Washington State. The right (west) bank development is comprised of a rockfill embankment approximately 40 feet in height and about 2,300 feet long and contains fish facilities with spawn channels and rearing ponds. The left (east) bank development is comprised of a rockfill embankment approximately 160 feet in height at its maximum section and about 1,000 feet in length. Concrete structures are situated between the two embankment sections with one fish facility structure at each end separated by a 1,000-foot structure comprised of 11 spillway bays integrated with 10 generating units. A 230kV switchyard spans the length of the 1,000-foot structure on the top deck at Elevation 795.

Six operational main transformers are located on the top deck of the hydrocombine at Elevation 795. The drainage piping from each containment is directed to collection tanks located inside of the Wells Project. Any water and/or oil from these tanks are then pumped to the oil water separator (OWS) located on the west bank development and then to the Columbia River.

### **1.2 Description of Water Leakage Collection and Treatment System**

Leakage water generated by the Wells Project is discharged to the OWS for processing and the processed water is subsequently discharged to the Columbia River under the Ecology issued NPDES Permit with an effective date of May 1, 2022. The current Permit is valid through April 30, 2027. The Permit is included in Appendix A.

A Spill Prevention Control and Countermeasures (SPCC) Plan conforming to the requirements of 40 CFR Part 112.8(b) is in place for the facility as a separate document.



### 1.2.1 Discharges to Oil/Water Separator System

The Wells Project is permitted to discharge 5.0 mg/L per day of oil and grease into the Columbia River. In addition to the discharge rate limit, the Wells Project is subject to a pH discharge limits of 6.5 – 8.5 and a heat load of 3.81E+09 kcal/day. Table 1 summarizes the discharge limits for the Wells Hydroelectric Project.

**Table 1. Wells Hydroelectric Project Permit Discharge Limits**

Parameter	Statistic	Discharge Limit	Unit
<b>Oil and Grease (total HEM)</b>	Maximum Daily	5.0	mg/L
<b>pH</b>	Min/Max	Between 6.5 – 8.5	Standard units
<b>Heat Load</b>	Monthly Average	3.81E+09	kcal/day

## 2.0 OPERATIONS

The following section describes the facilities, systems and equipment related to each of the outfall locations put in place to achieve compliance with the NPDES Permit.

### 2.1 Sump System - Outfall No. 1



**Figure 1. Sump System (Outfall No. 1)**

- The station sump collects dam leakage, water from unwatering the turbine scroll case, turbine draft tubes, or the fish ladders during their maintenance periods. It is capable of handling around 11,000 gpm with all pumps running simultaneously. The top elevation above sea level of the pumps are at 690' and extends down to 600'. It is designed to withstand forebay head pressure.

- Changes in 2024: Plan submitted to Ecology on February 12, 2024, and approved via email on March 28, 2024 (Appendix B) to replumb Outfalls 14 – 23 directly into the sump system discharge (Outfall 1). The replumbing work began upon notification of approval from Ecology and is anticipated to be complete in 2024. See Section 3.1.1 for further information on replumbing.
- The station sump is monitored for oil contamination by a General Electric ID-223/500 oil on water detection system. Detection of oil on the discharge water surface triggers an alarm and operations staff must place the sump pump controls to oil detection mode, which raises the sump water level to prevent discharge of oil into the river.
- The alarm also triggers an inspection by personnel physically going into the sump and looking for visible oil. If oil is detected personnel will deploy a surface type floating pumping system using an air actuated 50gpm diaphragm pump. The contents will be pumped into barrels, labeled, and stored in the hazardous waste containment area.
- An Abanaki Model 8 belt-type oil skimmer is used with a timer in auto mode and continuously during an oil detection event. The operation is disabled during temporary unit dewatering operations when extreme flows are possible, which cause the skimmer belt to become entangled.
- There are four pumps in the sump system, two building drainage pumps rated at 1500 gpm and two unwatering pumps rated at 4000gpm.
- Exhibit A in the Appendices shows an outline of the sump system.

## 2.2 Oil Water Separator - Outfall No. 2



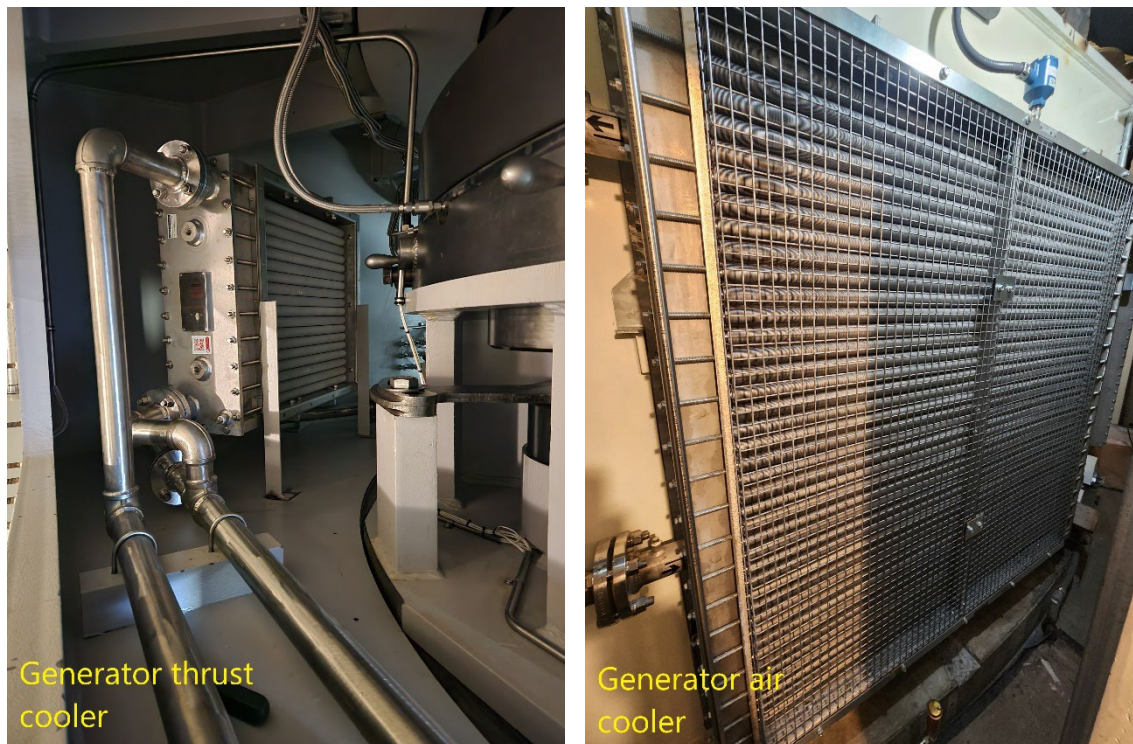
**Figure 2. Oil Water Separator (Outfall No. 2)**

- The oil water separator is a gravity/coalescing design for low solids applications and removal of oils and hydraulic fluids from water.
- The drainage piping and hoses from each of the transformers on the top deck (main, auto, potential and current) conveys rainwater from the individual transformer containments to the transformer/OWS containment sump below the oil water separator. Once a week the

sump is skimmed with a rope style oil skimmer. And the remaining water is pumped through the oil water separator.

- The floor drains at the 300 kW standby diesel generator also drain to the oil water separator.
- In the event of an oil spill within equipment containments, the oil would drain to the transformer/OWS sump for processing and removal.
- In 2009, modifications were made to generating Units 1 through 10 turbine drain pits to direct water and any incidental oil in the turbine pit to the oil water separator system instead of the drainage sump. Every two generating units have their own collection tanks fed by their corresponding head cover pumps. From those tanks the oily water is pumped to the separator system via the oil water separator header.
- Exhibit B in the Appendices shows an outline of the drainage system to the oil water separator.

### 2.3 Generator Air Coolers: Generator Thrust and Guide Bearing - Outfall Nos. 3-12



**Figure 3. Generator Air Coolers System (Outfall Nos. 3-12)**

- Non-contact cooling water is provided to the generator air coolers to cool each of the 10 generating units. The water is supplied directly from the forebay and controlled with a motor operated valve. It is also regulated for flow utilizing a globe valve. The coolers are located on the outside of the stator housing.



- The non-contact cooling water is also used to provide cooling to the generator thrust and guide bearings coolers via the Service Water System or the Critical Service Water System. This water is also supplied from the forebay and is controlled with motor operated valves. The thrust bearing coolers are encapsulated inside the thrust pot in an oil bath.
- In the event of an oil leak between the cooling water and the oil bath, water will leak into oil bath during normal operation rather than oil leaking into the water since the water is at higher pressure. Water flowing into the oil bath triggers a high-level alarm that will shut down the unit automatically and notify the operators. Immediately following the alarm, the operation staff will isolate the discharge valve preventing any oil contamination from reaching the river water. This allows for inspection to find the leak and fix it. Once the motor operated valve supplying the coolers is closed to fix the leak, it is possible for a small amount of oil to leak in the opposite direction, which is isolated by the two valves and allows proper cleaning and maintenance. Mitigation for this scenario is discussed in Douglas PUD's EAL Annual Report (April 2024).

## 2.4 Unit 5 Compressor Room - Outfall No. 13



**Figure 4. Unit 5 Compressor Room (Outfall No. 13)**

- The compressed air system contains compressors, air receivers, air dryers, air purifiers, and filters. All the pieces of equipment provides functional system air, draft tube gallery air, and breathing air systems. The cooling water for these compressors is provided by the critical service water system. The cooling jacket is a stainless steel air on one side and water on the other tube bundle. These are oil free compressors. The only oil these systems utilize is for the gear box which is not water cooled.

## 2.5 Mechanics Room HVAC System - Outfall No. 24



**Figure 5. Mechanics Room HVAC System (Outfall No. 24)**

The Mechanic Room HVAC system utilizes Trane equipment to provide heating and cooling of the mechanic shop located on Elevation 776 on the east end of the project.

This HVAC system is supplied with water from the service water system. This system takes in water from the forebay wall, which is then strained and pumped through the HVAC systems with the service water supply pumps. HVAC are maintained quarterly to ensure proper function.

## 2.6 Fish Pumps Turbine Bearing Cooling - Outfall Nos. 25 and 26



**Figure 6. Fish Pump Turbine System (Outfall Nos. 25 and 26)**

- Francis type turbines are located in each fish ladder (east and west). These turbines are used to pump water into the fish collection chamber providing variable water elevations to maintain fish attraction to the fish ladders. These units are referred to as fish pumps.
- The fish pumps run approximately 11 months of the year holding the collection chamber level around 1.5' above tailrace level to help with fish attraction. The other month of the year they are dewatered with the fish ladder for maintenance and cleaning. These outages take place during winter months.
- The turbine bearings for each pump are micarta bearings that utilize cooling water to lubricate and keep the bearing clear of foreign material. They do not use oil.

### 3.0 MONITORING AND WASTEWATER SAMPLING PROCEDURES

Sampling and analysis for wastewater discharge parameters are required as stated by the permit on a monthly and annual basis and a Flow and Temperature Monitoring Plan will be submitted to Ecology by May 1, 2025, per Section S11 of the NPDES permit. Table 2 summarizes the Permit monitoring requirements.

**Table 2. Wells Hydroelectric Project Monitoring Guidelines**

Parameter	Units	Sampling Frequency	Sample Type	Report
<b>Flow</b>	Million gallons/day (mgd)	Monthly	Calculated or Recorded	Monthly Average
<b>pH</b>	Standard units	Monthly	Grab	Minimum and Maximum
<b>Temperature</b>	°C	Monthly or Continuous	Grab	Daily Maximum, Daily Average, and 7-DAD Maximum
<b>Oil and Grease (Total HEM)</b>	mg/L	Monthly	Grab	Daily Maximum
<b>Priority Pollutants (PP) – Total Metals</b>	µg/L; ng/L for Mercury	Once per year	24-hour Composite; Grab for Mercury	
<b>Polychlorinated Biphenyls (PCBs)</b>	µg	Once per year	24-hours Composite	

#### 3.1 Operational Procedures for Water Sampling

The Wells Project has 26 permitted outfalls. After replumbing Outfalls 14-23 (see Section 2.1) and the flow and temperature monitoring equipment installation, Douglas PUD samples six outfalls monthly. The water sampling of the six outfall locations (Outfalls 1, 2, 13, and 24-26) is performed monthly by Douglas PUD's designated contractor and analyzed by an accredited laboratory for pH levels, temperature, and oil and grease (total HEM). Non-routine sampling may be completed by Douglas PUD's Natural Resource staff or Wells Project operators discussed further in Section 9.0. Amber glass bottles, preserved with hydrochloric acid, are filled from taps installed at outfalls, or immediately before outfalls. Samples (volumes of 1L) are collected, stored, packaged, and shipped, following chain of custody and procedures outlined in EPA method 1664 (See Permit requirements for HEM). pH samples are taken concurrently by

the contractor using a pH meter. While temperature and pH results are available immediately, HEM samples require offsite analysis.

Water temperatures are continuously recorded using resistance temperature detectors (RTDs). Outfall discharge is continuously monitored by flow meters or flow switches and then total flow is calculated by the Wells Project's engineering staff using recorded data. Pursuant to S2C and S11 of the NPDES Permit, flow calculations can be determined using manufacturer's maximum flow rate specifications, flow switches, or flow meters (see Flow and Temperature Monitoring Installation Report [April 2024] for additional information).

All samples, temperature readings, and flow calculations are then reported in the Monthly Discharge Monitoring Report (DMR) via a Secure Access Washington (SAW) account and following receiving laboratory results. Results from the lab generally are available within three weeks of sample collection, but timing has been variable.

Further details specific to instrumentation, calibration and operation of flow and temperature processes can be found in the Flow and Temperature Monitoring Plan that will be submitted to Ecology on or before May 1, 2025, as required per NPDES Permit Section S11.

### **3.1.1 Expected Changes to Sampling Procedures in 2024**

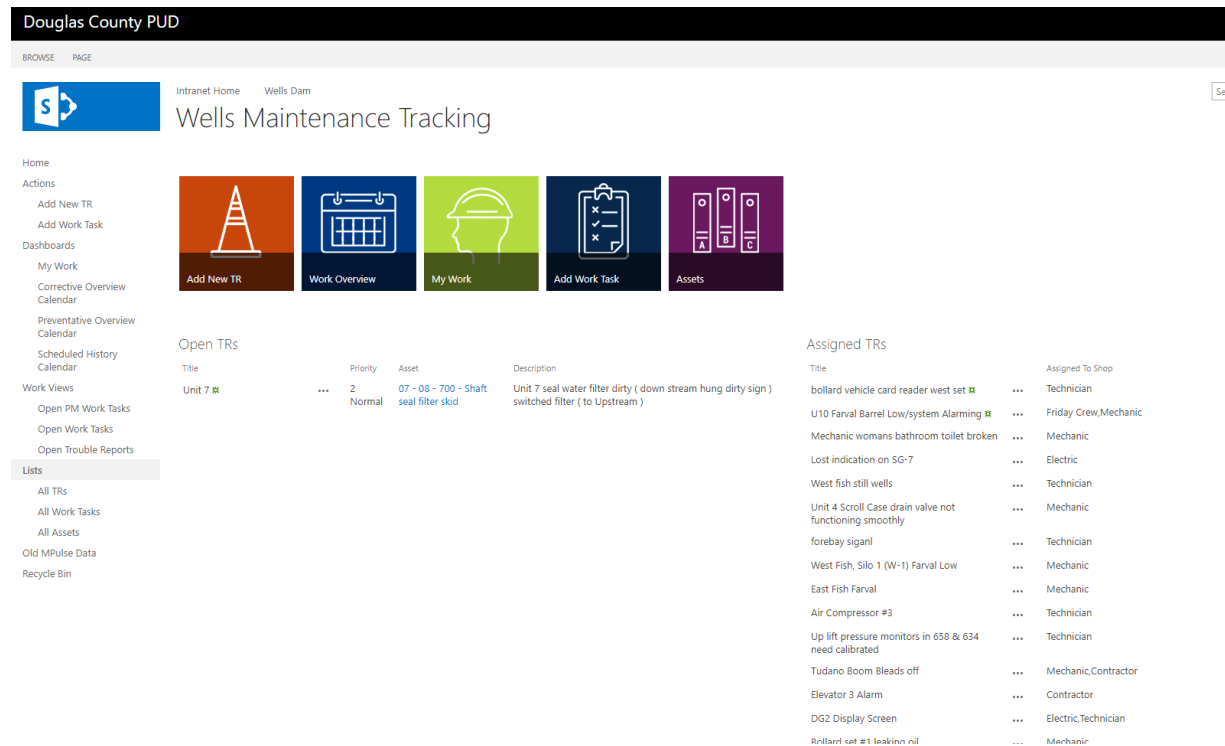
Beginning in 2024, HVAC systems that are responsible for serving Outfalls Nos. 14-23 will be replumbed to the sump discharge location (Outfall No. 1) where discharge waters are exposed to oil rope/skimmer and alarm and therefore have additional monitoring and/or treatment prior to discharge.

The replumbing plan was submitted to Ecology on February 12, 2024, and approved via email on March 28, 2024 (Exhibit B). The replumbing work began upon notification of approval from Ecology and is anticipated to be complete in 2024. The replumbing will be tested for proper functionality by the end of the second quarter of 2024 and implemented in a stepwise approach. If the replumbing of these outfalls exceeds the flow capacity of the drainage system to the sump, Douglas PUD will revert back to the original outfall sampling method. In the interim, DMRs will be continued appropriately.



## 4.0 MAINTENANCE AND DIRECTIONS TO STAFF

The Wells Project utilizes SharePoint as its maintenance management software to schedule, plan and delegate preventative maintenance tasks to personnel on the project.



**Figure 7. Wells Maintenance and Tracking SharePoint snapshot showing system used by Wells Project staff to track and report maintenance issues.**

### 4.1 Rotating Checks and Routine Operator Schedules

Each of the systems described are subject to routine checks via operator monitoring. On a daily basis, operators check various systems throughout the plant in addition to monitoring incoming data within the control room. If any issues are found, operators will write trouble reports (TRs) describing equipment issues that require immediate attention and are then designated to either the plant mechanics, plant electricians, or plant technicians.

Scheduled checks that are completed include the following:

#### Sump System (Outfall No. 1)

- The sump system oil monitor is calibrated by plant technicians as needed to maintain functionality. If the oil monitor detects oil, then plant personnel will perform an inspection of the sump. Operations staff perform a routine check of the sump and its systems daily and run the sump skimmer weekly to check for proper functionality.

- Motors associated with each of the sump pumps are maintained yearly. These motors have oil bath bearings. The oil is changed out yearly.
- Sump system pumps are serviced and maintained as needed. They are a deep well turbine style pump with oil free bearings. They are changed out about every 10 years or when the bearings fail and the motor load spikes.
- *Special Directions to staff:* Any abnormal findings will be trouble reported.
- Oil Water Separator (Outfall No. 2)
  - Both oil water separator tanks are drained and cleaned every 3 months. The oil collecting media inside is removed, washed, and reinstalled. All the water and oil used to wash the media is collected in the sump underneath the tanks. Once the process is complete a pumper truck takes the oily water to a treatment center.
  - Pumps that are located at the oil water separator are maintained and serviced yearly. This consists of changing gear box oil and greasing the motor bearings.
  - *Special Directions to staff:* Operations staff perform a routine inspection of the Oil Water Separator daily. Any abnormal finding will be trouble reported. The secondary containment sump is skimmed weekly or more frequently, as needed.
- Generator Air Coolers (Outfall Nos. 3-12)
  - There are twelve generator air coolers per generating unit. Generating units undergo maintenance once every 2.5 years (biennial maintenance). Coolers are replaced at unit biannual maintenance periods as needed.
  - Generator thrust bearing oil is changed out and filtered during biennial maintenance.
  - Oil lines for the generator thrust bearing undergo ultrasonic testing (UT) during biennial maintenance. This is to detect early signs of pipe erosion.
  - Generator thrust bearings coolers are inspected for damage or leakages during biennial maintenance using the fore bay pressure. Any leaks detected are fixed during the same outage.
  - *Special Directions to staff:* Operations staff monitor for high temperature alarms and adequate flow. Any abnormalities found will be trouble reported.
- Unit 5 Compressor Room (Outfall No. 13)
  - All compressors and associated equipment are serviced once a year. Douglas PUD contracts with a designated company to perform all maintenance on each of the compressors. However, Douglas PUD plans to begin performing the annual service in the future.
  - Two air cooled compressors are used for the primary plant air feed supply. When those compressors are taken offline for maintenance or repair, the water-cooled compressors are used instead.
  - The water-cooled compressors are oil free. Cooling water is used to cool the air coming out of the compressor head through the after cooler and into the air system. This is done utilizing a stainless-steel tube bundle style water jacket. This equipment is removed during the yearly inspection, cleaned, and reinstalled.
  - *Special Directions to staff:* Mechanical staff check for leaks and proper function of compressors weekly. Operations staff monitor compressor temperature and motor service alarms. Any abnormalities found will be trouble reported.

- **Mechanics Room HVAC Systems (Outfall No. 24)**
  - All HVAC units undergo maintenance quarterly.
  - HVAC condenser coils are cleaned, and leak checked yearly or more frequently as needed.
  - HVAC air handler belts are changed yearly or as needed.
  - HVAC filters are changed quarterly.
  - HVAC units do not use oil. Thus, they cannot contaminate the cooling water with oil.
  - *Special Directions to staff:* No special directions to staff. Unit can be taken out of service at any time.
- **Fish Pump Turbine East and West (Outfall Nos. 25 and 26)**
  - The fish pumps are visually inspected along with the surrounding fish ladders between November and March each year.
  - Water used for the fish pump bearings is supplied from the critical service water (CSW) system. This water is pumped into the guide bearings water bath to keep them free of debris.
  - Each end of the project has two fish pumps. These fish pumps mostly operate in tandem with one another although they are not required to. They utilize a combined CSW supply which separates to supply each bearing. Flow and temperature are taken from one bearing supply on each side of the project since it is the same supply header.
  - The water strainer that filters out debris from the river in the CSW system is cleaned out yearly according to the manufacturers' procedure.
  - CSW system pumps undergo maintenance yearly, where the motor and pumps are greased.
  - *Special Directions to staff:* Operations staff monitor differential pressure alarms on the CSW system and will back flush if automatic cycle is not sufficient. Fish pumps are inspected daily for any abnormalities, which will be trouble reported if found.

Table 3 summarizes preventative maintenance of equipment for each outfall location.

**Table 3. Preventative Maintenance Schedule for the Wells Project NPDES Permit**

System	Equipment	Maintenance	Frequency
<b>Station Sump</b>	Oil Detector	Cleaning and Calibration	As Needed
<b>Station Sump</b>	Motor	Inspected and/or Repaired	Yearly/As needed
<b>Station Sump</b>	Pump	Inspected and/or Replaced	As Needed / ~10 years
<b>Oil Water Separator</b>	Storage Tanks	Cleaning	Every 3 months
<b>Generator Air Cooler</b>	Air Cooler	Replacement	Every 2.5 years
<b>Generator Thrust Bearing</b>	Thrust Bearing Oil	Drained and Replaced	Every 2.5 years
<b>Generator Thrust Bearing</b>	Thrust Bearing Cooler	Inspected and/or Repaired	Every 2.5 years

System	Equipment	Maintenance	Frequency
Station Air Compressor	Compressor	Contractor Maintenance or PUD staff	Yearly
HVAC	Filter	Replacement	Quarterly
HVAC	Belts	Replacement	Yearly/As Needed

## 5.0 REPORTING AND RECORDING REQUIREMENTS

The Wells Project is required to report the following information to Ecology to comply with the Permit. Table 4 summarizes the required submittals and frequency that the submittals must be reported.

**Table 4. The Wells Project NPDES Permit Reporting Requirements**

Submittal	Frequency
Discharge Monitoring Report	Monthly
Annual Permit Renewal	Annually
Reporting Permit Violations	As necessary
Operation and Maintenance Manual	1/permit cycle
O&M Manual Review Confirmation Letter	Annually
Solid Waste Control Plan	1/permit cycle
Solid Waste Control Plan Update	1/permit cycle
Application for Permit Renewal	1/permit cycle
Non-routine and Unanticipated Discharges	As necessary
Updates to Spill Control and Countermeasure Plan	As necessary
Oil and Grease Accountability Plan (OGAP)	As necessary
Environmentally Acceptable Lubricants Report	Annually
Oil and Grease Report	Annually
Flow and Temperature Monitoring Plan	1/permit cycle
Flow and Temperature Monitoring Equipment Installation Report	1/permit cycle
PCB Management Plan	1/permit cycle
PCB Report	Annually
Notice of Change of Authorization	As necessary
Reporting Planned Changes	As necessary
Plan Review Required	As necessary
Notice of Permit Transfer	As necessary
Duty to Provide Information	As necessary
Compliance Schedules	As necessary

For each measurement and sample taken for the Wells Project's DMR reporting, the following information is recorded and maintained at the facility for proof of compliance:

1. The date, exact place, method, and time of sampling or measurement.
2. The individual who performed the sampling or measurement.
3. The dates the analyses were performed.
4. The individual who performed the analyses.
5. The analytical techniques or methods used.
6. The results of the analyses.

## **6.0 LOCATION OF FACILITY RECORDS**

All facility records applicable to regulatory compliance prepared by the Wells Project are maintained at the Wells Project for a period of three (3) years. Records include all calibration and maintenance records and all original recordings for continuous monitoring instrumentation, copies of all reports and records of all data used to complete the application of the Permit.

## **7.0 SAFETY AND EMERGENCY PLANNING**

The Wells Project holds the safety of its employees and the public as a core value. Safe operation and maintenance of the facility is ensured by the adherence to established policies and procedures through the following documents and programs:

- The Wells Project's safety manual covers a broad range of topics with policies for each.
- Regarding integrity of the dam structure, all employees working at or around the Wells Project are required to complete Dam Safety Awareness training annually. All employees are required to report any Dam Safety concerns that they observe.
- The Wells Project Emergency Action Plan (EAP) provides instructions for Wells Project operators and emergency responders in case of an emergency.
- Douglas PUD's SPCC Plan was revised most recently in 2023 and submitted to Ecology on January 3, 2024. It provides plans and procedures for Douglas PUD staff to follow during regular maintenance activities and during spill events to mitigate and prevent the release of oils and other chemicals to the environment.

## **8.0 SPARE PARTS**

Having spare parts readily available is essential to ensure continuous monitoring throughout the term of the NPDES permit. Table 5 summarizes some spare parts stocked for equipment installed to achieve compliance with the terms and conditions of the NPDES permit.

**Table 5. Stocked Spare Parts for Equipment Related to the NPDES Permit**

Equipment	Description	Catalog Number
Station Sump Pump	General Electric, 200HP, 4000GPM Pump	5K6285XC52A
Station Sump Pump	General Electric, 75HP, 1500GPM Pump	5K6267XC2A
Generator Stator Cooler	Thermofin, Air Cooler	12594-1, -2
Generator Thrust Bearing Cooler (Original)	Aerofin, Bearing Oil Cooler	BF081199-2/CFH99054-1
Generator Thrust Bearing Cooler (Updated)	Thermofin, Bearing Oil Cooler	12560-1
Generator Thrust Bearing Cooler Oil	Shell Turbo – Turbine Oil	Iso-Grade 8 Shell Turbo T68

Spare parts that are required for more frequent preventative maintenance tasks are inventoried and updated daily in the storeroom located at the Wells Project. Equipment for less frequent preventative maintenance tasks can be purchased any time before the scheduled outage.

## **9.0 FACILITY CONTACT INFORMATION AND MINIMUM STAFFING**

Minimum staff to adequately operate and maintain these Wells Project systems include: operators, mechanics, electricians, and senior level staff. Senior level staff overseeing those systems listed in the O&M Manual are identified below in Table 6.

An administrative team supports the implementation of this permit including the annual review of the O&M Manual and submissions of DMR reporting to Ecology. These administrative staff normally include at a minimum an engineer, administrative assistant, natural resources supervisor, and an aquatic resource biologist. This team of NPDES implementors meets regularly (currently monthly) but may move to quarterly as the permit implementation progresses. Douglas PUD's general manager (permit holder) is updated regularly on permit progress, implementation, and systems via weekly "Plant Calls" and more regular communications as necessary.

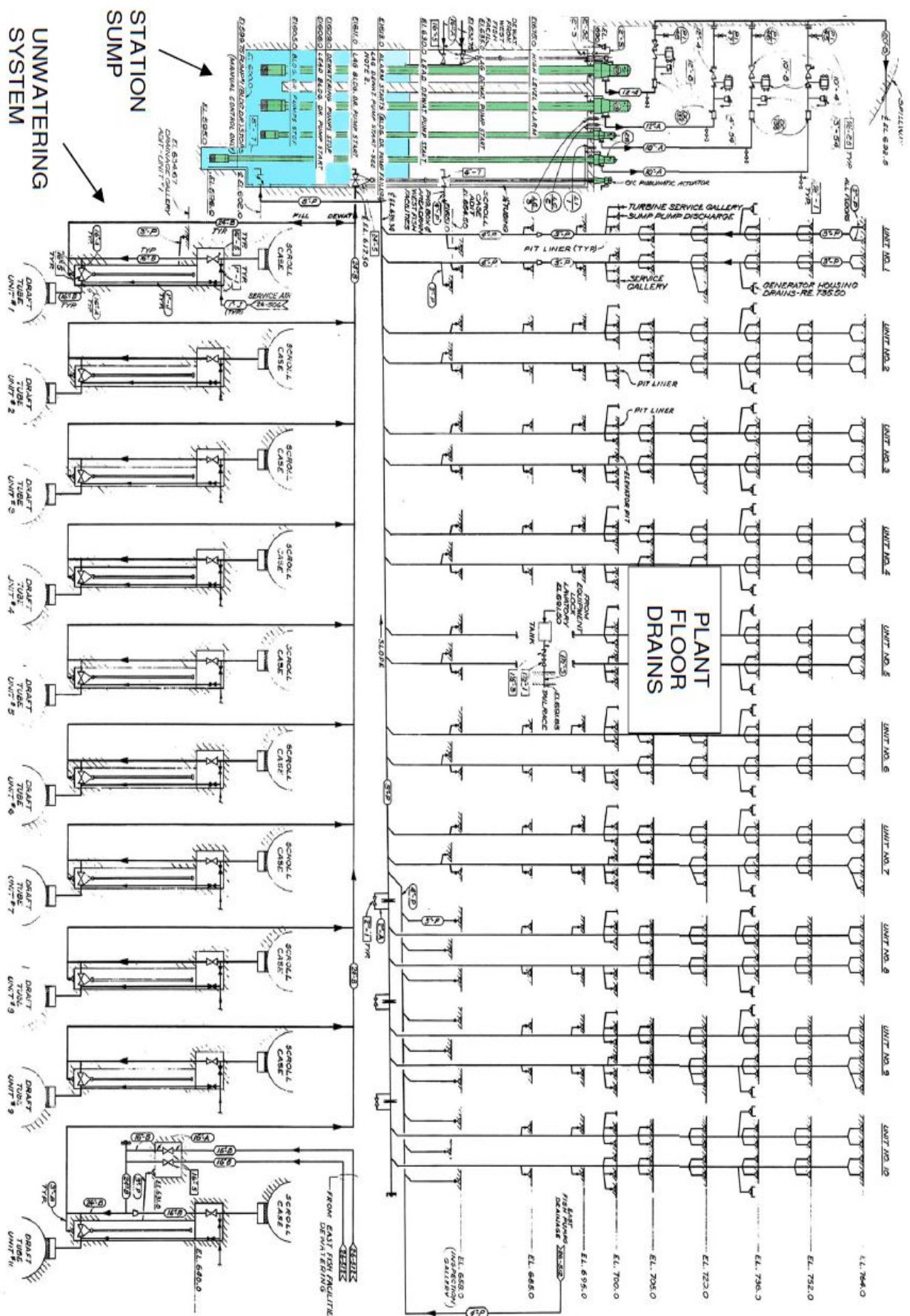
Outfall grab sampling for pH, HEM, and other sampling is normally completed by a designated company's technician contracted at Douglas PUD's cost and these samples are taken, preserved, shipped to an unaffiliated and accredited laboratory for analysis. Non-routine samples may be taken by Douglas PUD's Natural Resources staff, or operators who have been trained on sample collection, sample sheets, and chain of custody procedures.

**Table 6. Wells Project Senior Level Staff's Contact Information**

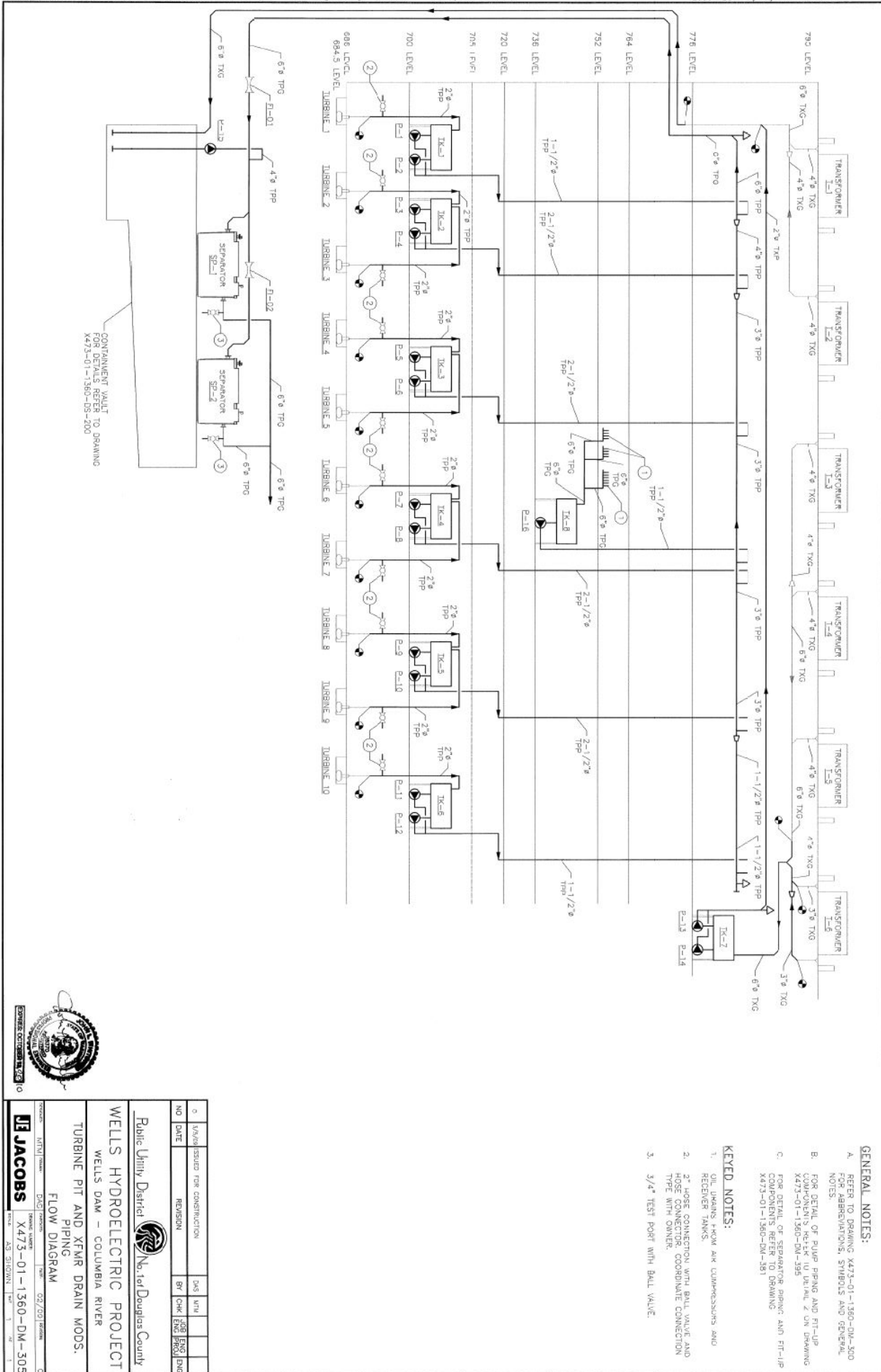
Company Personnel		Contact Information
Tyler Evans, Wells Project Superintendent		Phone: (509) 881-2465
		Email: <a href="mailto:tyler.evans@dcpud.org">tyler.evans@dcpud.org</a>
Matt Mullins, Operations Supervisor		Phone: (509) 881-2473
		Email: <a href="mailto:matt.mullins@dcpud.org">matt.mullins@dcpud.org</a>
Brian Schmidt, Maintenance Supervisor		Phone: (509) 881-2462
		Email: <a href="mailto:brian.schmidt@dcpud.org">brian.schmidt@dcpud.org</a>
Brian Ortiz, Technician Supervisor		Phone: (509) 881-2427
		Email: <a href="mailto:brian.ortiz@dcpud.org">brian.ortiz@dcpud.org</a>

# EXHIBIT A





## EXHIBIT B



# APPENDICES

## APPENDIX A

Issuance Date: March 7, 2022  
Effective Date: May 1, 2022  
Expiration Date: April 30, 2027

**National Pollutant Discharge Elimination System  
Waste Discharge Permit No. WA0991031**

State of Washington  
DEPARTMENT OF ECOLOGY  
Central Regional Office  
1250 West Alder Street  
Union Gap, WA 98903

In compliance with the provisions of  
The State of Washington Water Pollution Control Law  
Chapter 90.48 Revised Code of Washington  
and  
The Federal Water Pollution Control Act  
(The Clean Water Act)  
Title 33 United States Code, Section 1342 et seq.

**Douglas County Public Utility District  
Wells Dam  
485 Azwell Road  
Chelan, WA 98816**

is authorized to discharge in accordance with the Special and General Conditions that follow.

Facility Location: 485 Azwell Road Chelan, WA 98816	Receiving Water: Columbia River
Treatment Type: Oil/Water Separator	SIC Code: 4911
Industry Type: Hydroelectric	NAICS Code: 2211



Damon G. Roberts  
Section Manager  
Water Quality Program  
Central Regional Office  
Washington State Department of Ecology

## Table of Contents

<b>Summary of Permit Report Submittals .....</b>	<b>5</b>
<b>Special Conditions.....</b>	<b>7</b>
<b>S1. Discharge limits .....</b>	<b>7</b>
S1.A. Process wastewater discharges .....	7
<b>S2. Monitoring requirements .....</b>	<b>8</b>
S2.A. Monitoring schedule .....	8
S2.B. Sampling and analytical procedures .....	10
S2.C. Flow measurement, field measurement, and continuous monitoring devices .....	10
S2.D. Laboratory accreditation.....	11
S2.E. Request for reduction in monitoring .....	11
<b>S3. Reporting and recording requirements.....</b>	<b>12</b>
S3.A. Discharge monitoring reports .....	12
S3.B. Permit Submittals and Schedules .....	13
S3.C. Records retention .....	14
S3.D. Recording of results .....	14
S3.E. Additional monitoring by the Permittee.....	14
S3.F. Reporting permit violations.....	14
S3.G. Other reporting .....	16
S3.H. Maintaining a copy of this permit .....	16
<b>S4. Operation and maintenance .....</b>	<b>16</b>
S4.A. Operations and maintenance (O&M) manual .....	17
<b>S5. Solid wastes .....</b>	<b>17</b>
S5.A. Solid waste handling.....	17
S5.B. Leachate .....	18
S5.C. Solid waste control plan.....	18
<b>S6. Application for permit renewal or modification for facility changes.....</b>	<b>18</b>
<b>S7. Facility loading.....</b>	<b>19</b>
S7.A. Design criteria .....	19
<b>S8. Non-routine and unanticipated wastewater .....</b>	<b>19</b>
<b>S9. Spill control plan.....</b>	<b>20</b>
S9.A. Spill control plan submittals and requirements.....	20
S9.B. Spill control plan components .....	20
<b>S10. Oil, Grease, and Lubricant Management.....</b>	<b>21</b>
S10.A. Oil and Grease Accountability.....	21
S10.B. Environmentally Acceptable Lubricants .....	21
S10.C. Oil and Grease-Maintenance and Inspections.....	22

S11.	Flow and Temperature Monitoring Plan and Installation Report .....	22
S12.	Cooling Water Intake Structure Requirements to Minimize Adverse Impacts from Impingement and Entrainment .....	22
<i>General Conditions .....</i>		<b>24</b>
G1.	Signatory requirements.....	24
G2.	Right of inspection and entry .....	25
G3.	Permit actions .....	25
G4.	Reporting planned changes .....	27
G5.	Plan review required.....	27
G6.	Compliance with other laws and statutes .....	27
G7.	Transfer of this permit .....	27
G8.	Reduced production for compliance .....	28
G9.	Removed substances.....	28
G10.	Duty to provide information .....	28
G11.	Other requirements of 40 CFR.....	28
G12.	Additional monitoring .....	28
G13.	Payment of fees.....	29
G14.	Penalties for violating permit conditions .....	29
G15.	Upset .....	29
G16.	Property rights .....	30
G17.	Duty to comply .....	30
G18.	Toxic pollutants .....	30
G19.	Penalties for tampering.....	30
G20.	Reporting requirements applicable to existing manufacturing, commercial, mining, and silvicultural dischargers .....	30
G21.	Compliance schedules .....	31
<i>Appendix A—List Of Pollutants .....</i>		<b>32</b>
With Analytical Methods, Detection Limits And Quantitation Levels .....		32
Priority Pollutants.....		36



<b>Analytical Methods.....</b>	<b>45</b>
--------------------------------	-----------

## **List of Tables**

Table 1 - Summary of Permit Report Submittals .....	5
Table 2 - Effluent Limits .....	7
Table 3 - Monitoring Parameters.....	8
Table 4 – Sample Descriptions.....	8
Table 5 - TMDL Heat Load <sup>a</sup> (Outfalls 1-26, June 1-October 31).....	9
Table 6 - Permit Renewal Application Requirements – Final Wastewater Effluent - .....	9
Table 7- Design Criteria.....	19
Table A8: Conventional Pollutants.....	33
Table A9: NonConventional Pollutants.....	33
Table A10: Metals, Cyanide & Total Phenols .....	36
Table A11: Acid Compounds .....	37
Table A12: Volatile Compounds.....	38
Table A13: Base/Neutral Compounds (Compounds in Bold are Ecology PBTS) .....	40
Table A14: Dioxin .....	43
Table A15: Pesticides/PCBS.....	44

## Summary of Permit Report Submittals

Refer to the Special and General Conditions of this permit for additional submittal requirements. The following table is for quick reference only. Enforceable submittal requirements are contained in the permit narrative.

**Table 1 - Summary of Permit Report Submittals**

Permit Section	Submittal	Frequency	First Submittal Date
S3.A.3.a.	<b>Monthly</b> Discharge Monitoring Report (DMR)	Monthly	<b>June 15, 2022</b>
S3.A.3.b.	<b>Annual</b> Permit Renewal Application Monitoring Data	Annually	<b>January 15, 2023</b>
S3.F	Reporting Permit Violations	As necessary	
S4.A.a.1.	Operations and Maintenance Manual	One year after issuance	<b>May 1, 2023</b>
S4.A.a.2.	Operations and Maintenance Manual Review Confirmation Letter	1/year after submission of S4A.a.1 and annually thereafter	<b>May 1, 2024</b>
S5.C.a.1.	Solid Waste Control Plan	1/permit cycle	<b>May 1, 2024</b>
S5.C.a.4.	Update to Solid Waste Plan	1/permit cycle	<b>May 1, 2026</b>
S6.	Application for Permit Renewal	1/permit cycle	<b>May 1, 2026</b>
S8.	Non-Routine and Unanticipated Discharges	As necessary	
S9.	Updates to Spill Control and Countermeasure Plan	As necessary	
S10.A	Oil and Grease Accountability Plan (OGAP)	1/permit cycle	<b>May 1, 2025</b>
S10.B	Environmentally Acceptable Lubricants Annual Report	1/year	<b>May 1, 2023</b>
S10.C	Oil and Grease Report	1/year	<b>May 1, 2023</b>
S11.	Flow and Temperature Monitoring Plan	1/permit cycle	<b>May 1, 2025</b>

<b>Permit Section</b>	<b>Submittal</b>	<b>Frequency</b>	<b>First Submittal Date</b>
S11.	Flow and Temperature Monitoring Equipment Installation Report	1/permit cycle	<b>May 1, 2024</b>
S13.	PCB Management Plan	1/permit cycle	<b>May 1, 2025</b>
S13.	PCB Annual Report	1/year	<b>May 1, 2023</b>
G1.	Notice of Change in Authorization	As necessary	
G4.	Reporting Planned Changes	As necessary	
G5.	Plan Review Required	As necessary	
G7.	Notice of Permit Transfer	As necessary	
G10.	Duty to Provide Information	As necessary	
G21.	Compliance Schedules	As necessary	

## Special Conditions

### S1. Discharge limits

#### S1.A. Process wastewater discharges

All discharges and activities authorized by this permit must be consistent with the terms and conditions of this permit.

The discharge of any of the following pollutants more frequently than, or at a level in excess of that identified and authorized by this permit violates the terms and conditions of this permit.

Beginning on **the effective date of this permit**, the Permittee is authorized to discharge to the Columbia River from Outfalls 1-26 in accordance with the effluent limitations, monitoring requirements, and other conditions set forth herein. Accountability for EAL's and appurtenant contact water are subject to provisions in S10.

**Table 2 - Effluent Limits**

Parameter	Outfall	Statistic	Effluent Limitation	Unit
Oil and Grease	Outfall 1, 2, 13-26	Maximum Daily <sup>a</sup>	5.0	mg/L
pH	Outfall 1, 2, 13-26	Min./Max.	Between 6.5 - 8.5	standard units
Heat Load <sup>b</sup>	Outfall 1-26 <sup>c</sup>	Monthly Average	3.81E+09	Kcal/day

Footnote	Information
A	Maximum daily effluent limit is the highest allowable daily discharge.
B	This limit applies seasonally, from June to October. See Table 7 for details.
C	The heat load limit applies facility wide, to the sum of all outfall loads.

## S2. Monitoring requirements

### S2.A. Monitoring schedule

The Permittee must monitor in accordance with the following schedule and the requirements specified in **Appendix A**.

**Table 3 - Monitoring Parameters**

Parameter	Applicable Outfalls	Units & Speciation	Minimum Sampling Frequency	Sample Type	Report
Flow	1-26	mgd	Monthly	Calculated <sup>a</sup> or recorded	Monthly average
pH	1, 2, 13-26	standard units	Monthly	Grab	Minimum and Maximum
Temperature, Effluent <sup>b,c</sup>	1-26	°C	Monthly or Continuous	Grab or recorded	Daily maximum, Daily average, and 7DADMax <sup>d</sup>
Oil and Grease	1, 2, 13-26	mg/L	Monthly	Grab	Daily maximum

Footnote	Information
a	Flow calculation methodology will be submitted to Ecology for approval according to S11. below.
b	For two years after permit issuance, the permittee may use grab samples on a monthly basis. Temperature grab sampling must occur when the effluent is at or near its daily maximum temperature.
c	Within two years of permit issuance, the permittee must begin recording temperature continuously. Continuous monitoring instruments must measure at least once every half hour, achieve an accuracy of 0.2 degrees C, and the Permittee must verify accuracy annually. If continuous monitoring is unfeasible at a given outfall, another methodology may be approved by Ecology according to S.11.
d	Calculate a 7-DAD Max for each day by averaging the day's maximum temperature value with the maximum temperature of the six preceding days.

**Table 4 – Sample Descriptions**

Sample Type/Frequency	Description
Grab	Grab sample - an individual sample collected in less than 15 minutes time - more or less represents instantaneous conditions
Recorded	Recording meters such as for flow, turbidity, TOC, temperature, pH, conductivity, fluoride and DO
Monthly	Once every calendar month

**Table 5 - TMDL Heat Load<sup>a</sup> (Outfalls 1-26, June 1-October 31)**

Parameter	Units & Speciation	Report	Sample Type
Heat Load	Kcal/day	Average Monthly	Calculation <sup>b, c</sup>

Footnote	Information
<b>a</b>	Heat load reporting applies facility-wide, and must be calculated at every outfall.
<b>b</b>	The heat load for each outfall is the product of the monthly average temperature (°C), the average monthly flow (MGD), and the conversion factor of 3.78E+06  kcal/day/(°C x MGD).
<b>c</b>	The facility-wide monthly average heat load is the sum of the average monthly heat load for all outfalls:  $Facility\ Heat\ Load\ in\ \frac{kcal}{day} = \sum Q_x * T_x * 3.78 * 10^6 \frac{kcal}{MGD * ^\circ C * day}$ <p>Where:</p> <p><b>Q<sub>x</sub></b> = The monthly average flow of an outfall in MGD.</p> <p><b>T<sub>x</sub></b> = The monthly average temperature of an outfall in °C.</p>

**Table 6 - Permit Renewal Application Requirements – Final Wastewater Effluent -**

Parameter	Outfall	Units	Laboratory Method	Minimum Sampling Frequency	Sample Type
Priority Pollutants (PP) – Total Metals	1, 2, 13-26	µg/L; ng/L for Mercury	<a href="#">EPA 200.8</a> except <a href="#">EPA 1631E for Mercury</a>	Once per year	24-Hour composite <sup>a</sup> Grab <sup>b</sup> for Mercury
Polychlorinated Biphenyls (PCBs)	1, 2, 13-26	µg/L	<a href="#">EPA 608</a>	Once per year	24-Hour composite <sup>a</sup>

Footnote	Information
a	24-hour composite means a series of individual samples collected over a 24-hour period into a single container and analyzed as one sample.
b	Grab means an individual sample collected over a fifteen (15) minute, or less, period.

## **S2.B. Sampling and analytical procedures**

Samples and measurements taken to meet the requirements of this permit must represent the volume and nature of the monitored parameters, including representative sampling of any unusual discharge or discharge condition, including upsets, and maintenance-related conditions affecting effluent quality.

Sampling and analytical methods used to meet the monitoring requirements specified in this permit must conform to the latest revision of the [Guidelines Establishing Test Procedures for the Analysis of Pollutants](#) contained in [40 CFR Part 136](#) (or as applicable in [40 CFR subchapter N](#) [Parts 400–471] or [40 CFR subchapter O](#) [Parts 501-503]) unless otherwise specified in this permit. Ecology may only specify alternative methods for parameters without limits and for those parameters without an EPA approved test method in [40 CFR Part 136](#).

## **S2.C. Flow measurement, field measurement, and continuous monitoring devices**

The Permittee must:

1. Select and use appropriate flow measurement, field measurement, and continuous monitoring devices and methods consistent with accepted scientific practices.
2. Install, calibrate, and maintain these devices to ensure the accuracy of the measurements is consistent with the accepted industry standard, the

manufacturer's recommendation, and approved O&M manual procedures for the device and the wastestream.

3. Calibrate continuous monitoring instruments weekly unless it can demonstrate a longer period is sufficient based on monitoring records. The Permittee:
  - a. Must calibrate continuous pH measurement instruments according to the manufacturer's requirements when installed.
4. Calibrate micro-recording temperature devices, known as thermistors, using protocols from Ecology's Quality Assurance Project Plan Development Tool ([\*Standard Operating Procedures for Continuous Temperature Monitoring of Fresh Water Rivers and Streams Version 1.0 10/26/2011\*](#)). This document is available at:  
<https://fortress.wa.gov/ecy/publications/documents/1803205.pdf>

Calibration as specified in this document is not required if the Permittee uses recording devices certified by the manufacturer and calibrated in accordance with the manufacturer's instructions.

5. Use field measurement devices as directed by the manufacturer and do not use reagents beyond their expiration dates.
6. Establish a calibration frequency for each device or instrument in the O&M manual that conforms to the frequency recommended by the manufacturer.
7. Calibrate flow-monitoring devices at a minimum frequency of at least one calibration per year.
8. Maintain calibration records for at least three years.

#### **S2.D. Laboratory accreditation**

The Permittee must ensure that all monitoring data required by Ecology for permit specified parameters is prepared by a laboratory registered or accredited under the provisions of [chapter 173-50 WAC, Accreditation of Environmental Laboratories](#). Flow, temperature, and pH, are exempt from this requirement. The Permittee must obtain accreditation for pH if it must receive accreditation or registration for other parameters.

#### **S2.E. Request for reduction in monitoring**

The Permittee may request a reduction of the sampling frequency after twelve (12) months of monitoring. Ecology will review each request and at its discretion grant the request when it reissues the permit or by a permit modification.



The Permittee must:

1. Provide a written request.
2. Clearly state the parameters for which it is requesting reduced monitoring.
3. Clearly state the justification for the reduction.

### **S3. Reporting and recording requirements**

The Permittee must monitor and report in accordance with the following conditions. Falsification of information submitted to Ecology is a violation of the terms and conditions of this permit.

#### **S3.A. Discharge monitoring reports**

The first monitoring period begins on **the effective date of the permit** (unless otherwise specified). The Permittee must:

1. Summarize, report, and submit monitoring data obtained during each monitoring period on the electronic discharge monitoring report (DMR) form provided by Ecology within the Water Quality Permitting Portal. Include data for each of the parameters tabulated in Special Condition S2 and as required by the form. Report a value for each day sampling occurred (unless specifically exempted in the permit) and for the summary values (when applicable) included on the electronic form.

To find out more information and to sign up for the [Water Quality Permitting Portal](http://ecyapwq/wqwebportal/) go to: <http://ecyapwq/wqwebportal/>

2. Ensure that DMRs are electronically submitted no later than the dates specified below, unless otherwise specified in this permit.
3. Submit DMRs for parameters with the monitoring frequencies specified in S2 (monthly, quarterly, annual, etc.) at the reporting schedule identified below. The Permittee must:
  - a. Submit **monthly** DMRs by the 15th day of the following month.
  - b. Submit **yearly** permit renewal application monitoring data in WQWebDMR as required in Table 6 in Special Condition S2.A by January 15<sup>th</sup> of each year.
4. Enter the “No Discharge” reporting code for an entire DMR, for a specific monitoring point, or for a specific parameter as appropriate, if the Permittee did not discharge wastewater or a specific pollutant during a given monitoring period.
5. Report single analytical values below detection as “less than the detection level (DL)” by entering < followed by the numeric value of the detection

level (e.g. < 2.0) on the DMR. If the method used did not meet the minimum DL and quantitation level (QL) identified in the permit, report the actual QL and DL in the comments or in the location provided.

6. Report single analytical values between the detection level (DL) and the quantitation level (QL) by entering the estimated value, the code for estimated value/below quantitation limit (j) and any additional information in the comments. Submit a copy of the laboratory report as an attachment using WQWebDMR.
7. Report the test method used for analysis in the comments if the laboratory used an alternative method not specified in the permit and as allowed in Appendix A or S2.
8. Calculate average values and calculated total values (unless otherwise specified in the permit) using:
  - a. The reported numeric value for all parameters measured between the detection value and the quantitation value for the sample analysis.
  - b. One-half the detection value (for values reported below detection) if the lab detected the parameter in another sample from the same monitoring point for the reporting period.
  - c. Zero (for values reported below detection) if the lab did not detect the parameter in another sample for the reporting period.
9. Report single-sample grouped parameters on the WQWebDMR form and include: sample date, concentration detected, detection limit (DL) (as necessary), and laboratory quantitation level (QL) (as necessary).

The Permittee must also submit an electronic copy of the laboratory report as an attachment using WQWebDMR. The contract laboratory reports must also include information on the chain of custody, QA/QC results, and documentation of accreditation for the parameter.

### **S3.B. Permit Submittals and Schedules**

The Permittee must use the Water Quality Permitting Portal – Permit Submittals application (unless otherwise specified in the permit) to submit all other written permit-required reports by the date specified in the permit.

When another permit condition requires submittal of a paper (hard-copy) report, the Permittee must ensure that it is postmarked or received by Ecology no later than the dates specified by this permit. Send these paper reports to Ecology at:

Water Quality Permit Coordinator  
Department of Ecology

Central Regional Office  
1250 West Alder Street  
Union Gap, WA 98903

**S3.C. Records retention**

The Permittee must retain records of all monitoring information for a minimum of three (3) years. Such information must include all calibration and maintenance records and all original recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit. The Permittee must extend this period of retention during the course of any unresolved litigation regarding the discharge of pollutants by the Permittee or when requested by Ecology.

**S3.D. Recording of results**

For each measurement or sample taken, the Permittee must record the following information:

1. The date, exact place, method, and time of sampling or measurement.
2. The individual who performed the sampling or measurement.
3. The dates the analyses were performed.
4. The individual who performed the analyses.
5. The analytical techniques or methods used.
6. The results of all analyses.

**S3.E. Additional monitoring by the Permittee**

If the Permittee monitors any pollutant more frequently than required by Special Condition S2 of this permit, then the Permittee must include the results of such monitoring in the calculation and reporting of the data submitted in the Permittee's DMR unless otherwise specified by Special Condition S2.

**S3.F. Reporting permit violations**

The Permittee must take the following actions when it violates or is unable to comply with any permit condition:

1. Immediately take action to stop, contain, and cleanup unauthorized discharges or otherwise stop the noncompliance and correct the problem.

2. If applicable, immediately repeat sampling and analysis. Submit the results of any repeat sampling to Ecology within thirty (30) days of sampling.

**a. Twenty-four-hour reporting**

The Permittee must report the following occurrences by telephone, to Ecology at Central Regional Office 509-575-2490, within 24 hours from the time the Permittee becomes aware of any of the following circumstances:

1. Any noncompliance that may endanger health or the environment, unless previously reported under immediate reporting requirements.
2. Any upset that causes an exceedance of an effluent limit in the permit (See G.15, "Upset").
3. Any violation of a maximum daily or instantaneous maximum discharge limit for any of the pollutants in Section S1.A of this permit.
4. Turbine Runner Hub leakage, failure, or emergency maintenance.

**b. Report within five days**

The Permittee must also submit a written report within five days of the time that the Permittee becomes aware of any reportable event under subparts a or b, above. The report must contain:

1. A description of the noncompliance and its cause.
2. The period of noncompliance, including exact dates and times.
3. The estimated time the Permittee expects the noncompliance to continue if not yet corrected.
4. Steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.
5. If the noncompliance involves an overflow prior to the treatment works, an estimate of the quantity (in gallons) of untreated overflow.

**c. Waiver of written reports**

Ecology may waive the written report required in subpart b, above, on a case-by-case basis upon request if the Permittee has submitted a timely oral report.

**d. All other permit violation reporting**

The Permittee must report all permit violations, which do not require immediate or within 24 hours reporting, when it submits monitoring reports for S3.A ("Reporting"). The reports must contain the information listed in subpart c, above. Compliance with these requirements does not relieve the Permittee from responsibility to maintain continuous compliance with the terms and conditions of this permit or the resulting liability for failure to comply.

**S3.G. Other reporting**

**a. Spills of Oil or Hazardous Materials**

The Permittee must report a spill of oil or hazardous materials in accordance with the requirements of [RCW 90.56.280](#) and [chapter 173-303-145 WAC](#). You can obtain further instructions on [How to Report a Spill](#) at: <https://ecology.wa.gov/About-us/Get-involved/Report-an-environmental-issue/Report-a-spill> .

**b. Failure to submit relevant or correct facts**

Where the Permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application, or in any report to Ecology, it must submit such facts or information promptly.

**S3.H. Maintaining a copy of this permit**

The Permittee must keep a copy of this permit at the facility and make it available upon request to Ecology inspectors.

**S4. Operation and maintenance**

The Permittee must, at all times, properly operate and maintain all facilities or systems and control (and related appurtenances), which are installed to achieve compliance with the terms and conditions of this permit. Proper operation and maintenance also includes keeping records, adequate laboratory controls, and appropriate quality assurance procedures. This provision of the permit requires the Permittee to operate backup or auxiliary facilities or similar systems only when the operation is necessary to achieve compliance with the conditions of this permit.

The Permittee must schedule and carry out any facility maintenance during non-critical water quality periods and carry this maintenance out according to the approved O&M manual or as otherwise approved by Ecology.

#### **S4.A. Operations and maintenance (O&M) manual**

##### **a. O&M manual submittal and requirements**

The Permittee must:

1. Prepare an O&M Manual that meets the requirements of [173-240-150 WAC](#) and submit it to Ecology for approval by **May 1, 2023**
2. Review the O&M Manual at least annually and confirm this review by letter to Ecology by May 1st of each year.
3. Submit to Ecology for review and approval substantial changes or updates to the O&M Manual.
4. Keep the approved O&M Manual at the permitted facility.
5. Follow the instructions and procedures of this manual.

##### **b. O&M manual components**

In addition to the requirements of [WAC 173-240-150](#), the O&M Manual must include:

1. A review of system components installed to achieve compliance with the terms and conditions of this permit which if failed could pollute surface water or could impact human health. Provide a procedure for a routine schedule of checking the function of these components.
2. Any directions to maintenance staff when cleaning, or maintaining equipment installed to achieve compliance with the terms and conditions of this permit.
3. Wastewater sampling protocols and procedures for compliance with the sampling and reporting requirements in the wastewater discharge permit.
4. Minimum staffing adequate to operate, maintain equipment installed to achieve compliance with the terms and conditions of this permit, and carry out compliance monitoring required by the permit.
5. Schedule for maintaining equipment installed to achieve compliance with the terms and conditions of this permit.

#### **S5. Solid wastes**

##### **S5.A. Solid waste handling**

The Permittee must handle and dispose of all solid waste material in such a manner as to prevent its entry into state ground or surface water.

Solid Waste removed from the spillway or other dam appurtenances must be stored and disposed in accordance with applicable regulations.

**S5.B. Leachate**

The Permittee must not allow leachate from its solid waste material to enter state waters without providing all known, available, and reasonable methods of treatment, nor allow such leachate to cause violations of the [State Surface Water Quality Standards, Chapter 173-201A WAC](#), or the [State Ground Water Quality Standards, Chapter 173-200 WAC](#). The Permittee must apply for a permit or permit modification as may be required for such discharges to state ground or surface waters.

**S5.C. Solid waste control plan**

**a. Submittal Requirements**

The Permittee must:

1. Submit a solid waste control plan to Ecology by **May 1, 2024**
2. Submit to Ecology any proposed revision or modification of the solid waste control plan for review and approval at least 30 days prior to implementation.
3. Comply with the plan and any modifications.
4. Submit an update of the solid waste control plan by **May 1, 2026**.

**b. Solid waste control plan content**

The solid waste control plan must:

1. Follow [Ecology's guidance for preparing a solid waste control plan](https://fortress.wa.gov/ecy/publications/documents/0710024.pdf) (<https://fortress.wa.gov/ecy/publications/documents/0710024.pdf>) and address the following solid wastes generated by the permittee:
  - a. Debris removed from the spillway, boom structures, screen entrainment
  - b. Spill cleanup materials including pads, pigs, and absorbents.
2. Include at a minimum a description, source, generation rate, and disposal methods of these solid wastes.
3. Not conflict with local or state solid waste regulations.

**S6. Application for permit renewal or modification for facility changes**

The Permittee must submit an application for renewal of this permit by **May 1, 2026**.

The Permittee must also submit a new application or addendum at least one hundred eighty (180) days prior to commencement of discharges, resulting from the activities listed below, which may result in permit violations. These activities include any facility expansions, production increases, or other planned changes, such as process modifications, in the permitted facility.

## **S7. Facility loading**

### **S7.A. Design criteria**

The flows for the sumps must not exceed the following design criteria:

**Table 7- Design Criteria**

<b>Flows</b>	<b>Small Sump 1</b>	<b>Small Sump 2</b>	<b>Large Sump 1</b>	<b>Large Sump 2</b>
Maximum Pump Capacity	1500 gpm	1500 gpm	4000 gpm	4,000 gpm

## **S8. Non-routine and unanticipated wastewater**

1. Beginning on **the effective date of this permit**, the Permittee is authorized to discharge non-routine wastewater or unanticipated wastewater and therefore not listed on the permit application, on a case-by-case basis if approved by Ecology. Prior to any such discharge, the Permittee must contact Ecology and at a minimum provide the following information:
  - a. The proposed discharge location.
  - b. The nature of the activity that will generate the discharge.
  - c. Any alternatives to the discharge, such as reuse, storage, or recycling of the water.
  - d. The total volume of water it expects to discharge.
  - e. The results of the chemical analysis of the water.
  - f. The date of proposed discharge.
  - g. The expected rate of discharge discharged, in gallons per minute.
2. The Permittee must analyze the water for all constituents limited for the discharge and report them as required by subpart 1.e above. The analysis must also include any parameter deemed necessary by Ecology. All discharges must comply with the effluent limits as established in Special Condition S1 of this permit, water quality standards, and any other limits imposed by Ecology.



3. The Permittee must limit the discharge rate, as referenced in subpart 1.g above, so it will not cause erosion of ditches or structural damage to culverts and their entrances or exits.
4. The discharge cannot proceed until Ecology has reviewed the information provided and has authorized the discharge by letter to the Permittee or by an Administrative Order. Once approved and if the proposed discharge is to a municipal storm drain, the Permittee must obtain prior approval from the municipality and notify it when it plans to discharge.

## **S9. Spill control plan**

### **S9.A. Spill control plan submittals and requirements**

The Permittee shall comply with its most recent approved version of the Spill Prevention Control and Counter Measure (SPCC) Plan for the Wells Dam and shall continue to provide Ecology with copies of its most up-to-date versions.

### **S9.B. Spill control plan components**

The spill control plan must include the following:

1. A list of all oil and petroleum products and other materials used and/or stored on-site, which when spilled, or otherwise released into the environment, designate as Dangerous Waste (DW) or Extremely Hazardous Waste (EHW) by the procedures set forth in [WAC 173-303-070](#). Include other materials used and/or stored on-site which may become pollutants or cause pollution upon reaching state's waters.
2. A description of preventive measures and facilities (including an overall facility plot showing drainage patterns) which prevent, contain, or treat spills of these materials.
3. A description of the reporting system the Permittee will use to alert responsible managers and legal authorities in the event of a spill.
4. A description of operator training to implement the plan.

The Permittee may submit plans and manuals required by [40 CFR Part 112](#), contingency plans required by [Chapter 173-303 WAC](#), or other plans required by other agencies, which meet the intent of this section. Submittal of the Spill Control Plan with respect to this requirement does not constitute compliance with respect to the underlying requirement.

## **S10. Oil, Grease, and Lubricant Management**

Operations and maintenance is a significant task at this facility and often requires the use of contractors. Responsibility for the purchase, storage use, and disposal of oil, grease, and lubricants at the site is a shared responsibility and should have appropriate checks in place to ensure purchase, storage, use, and disposal of all materials is done in accordance with applicable regulations. Good materials management should mitigate risk of accidental release to the floor drains and potentially the Columbia River.

The facility should implement environmental stewardship with respect to oil, grease, and lubricants including: reduce inventories, reduce the generation of waste, and provide a safer work environment through the use of authorized environmentally safe materials.

### **S10.A. Oil and Grease Accountability**

The Permittee must submit an Oil and Grease Accountability Plan (OGAP) to Ecology by **May 1, 2025**. The plan should:

1. Identify the process for Oil and Grease Tracking and documentation.
2. Identify the procedure for contractor training for Oil/Grease Accountability that will ensure proper use, storage, and disposal of materials brought onsite.

### **S10.B. Environmentally Acceptable Lubricants**

The permittee must select Environmentally Acceptable Lubricants (EALs) for all oil to water interfaces including wicket gates, bearings, lubricated wire ropes, generators and other in-line equipment, unless technically infeasible.

EPA defines technically infeasible as “no EAL products are approved for use in a given application that meet manufacturer specifications for that equipment; products which come pre-lubricated (e.g., wire ropes) and have no available alternatives manufactured with EALs; or products meeting a manufacturer’s specifications are not available.”

EALs are lubricants demonstrated to meet standards for biodegradability, toxicity, and bioaccumulation potential that minimize their likely adverse consequences in the aquatic environment, compared to conventional lubricants.

The permittee will utilize Environmentally Acceptable Lubricants (EAL) unless technically infeasible and submit an Annual EAL Report:

1. Identify which equipment uses Conventional versus Environmentally Acceptable Lubricants.
2. An evaluation of the technical feasibility for using EALs for each equipment;

3. Develop a timeline for converting appropriate equipment to EAL usage.

The submittal is due **May 1, 2023**. The EAL Annual Report may use other EAL reports and studies that have been completed or will be completed to satisfy all or part of the EAL Annual Report requirement so long as the items listed above in this section are included. If other reports satisfy part of the items listed above, the permittee must supplement these reports with additional information to satisfy the EAL Annual Report requirement.

#### **S10.C. Oil and Grease-Maintenance and Inspections**

The facility must submit an Annual Oil and Grease Report by **May 1, 2023**. The report will detail:

1. Summary of facility work orders resulting from:
  - a) Any equipment with high or low levels or alarms
  - b) Malfunctioning automated grease systems
  - c) Emergency Maintenance
2. Total Procurement of Turbine oil, Transformer oil, other oil, and grease
3. Lost, Unaccounted, Non-recoverable, Spill Cleanup
4. Estimated Generator Oil Loss
5. EAL substitutions

#### **S11. Flow and Temperature Monitoring Plan and Installation Report**

The facility must adequately monitor effluent flow and temperature to ensure compliance with their heat load limits.

By **May 1, 2025**, the Permittee must provide to Ecology, for review and approval, a plan to monitor effluent flow and temperature at all outfalls. For temperature, the plan must include continuous monitoring for every outfall, or an alternative method where continuous monitoring is unfeasible. The plan must also detail outfall specific and facility wide flow sampling methodology and calculations. The facility may estimate flows while developing the Monitoring Plan.

Monitoring equipment must be installed as necessary and a Monitoring Equipment Installation Report submittal is due **May 1, 2024**.

#### **S12. Cooling Water Intake Structure Requirements to Minimize Adverse Impacts from Impingement and Entrainment**

1. Best Technology Available. The design, location, construction, and capacity of the permittee's cooling water intake structures (CWISs) shall reflect the best technology

available (BTA) for minimizing adverse environmental impacts from the impingement and entrainment of various life stages of fish (e.g., eggs, larvae, juveniles, adults) by the CWISs.

2. The following existing requirements are sufficient to satisfy the BTA requirement to minimize entrainment and to minimize impingement mortality:
  - a. Operate the Wells Fish Bypass System according to the Wells Habitat Conservation Plan (HCP) approved Bypass Operating Plan and Ecology approved Gas Abatement Plan.
  - b. Keep trash racks free of debris or other material through regular and preventive maintenance and inspections.
  - c. Operate the Wells Project following the terms of the Wells Anadromous Fish Agreement and Habitat Conservation Plan.

### **S13. PCB Management**

The facility must submit a PCB Management Plan (PMP) by **May 1, 2025**. The management plan will contain:

1. A list of all potential sources of PCBs at the dam with potential pathways to interact with discharge water associated with outfalls covered by this permit.
2. A description of actions that have been established prior to the issuance of this permit to prevent and/or track releases of PCBs from potential PCB sources, such as containing/isolating PCB sources.
3. A description of actions that will be taken during the remainder of the permit cycle to prevent releases of PCBs from potential PCB sources which must include BMPs that will decrease the likelihood of PCB releases.
4. Any outfalls identified as having potential pathways for PCB release must be identified explicitly. These outfalls will require characterization monitoring. The PMP must have a detailed explanation for why outfalls are or are not expected to be a pathway for PCB releases. At a minimum, the following should be considered: presence of transformers; exposure to equipment, paint, caulk, oil, or other materials that may have legacy PCBs; outfalls that could discharge PCBs if there is a failure in containment equipment.

The facility must submit a PCB Annual Report by **May 1, 2023**. The Annual Report will contain:

1. Results of the source identification investigation(s), including plans to implement BMPs to address the identified PCB sources, and progress on implementing these BMPs.
2. Progress to date, evaluating the effectiveness of BMPs in preventing PCB releases.
3. How BMP and other actions will be optimized during the remainder of the permit cycle.

## **General Conditions**

### **G1. Signatory requirements**

1. All applications submitted to Ecology must be signed and certified.
  - a. In the case of corporations, by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means:
    - A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or
    - The manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long-term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.
  - b. In the case of a partnership, by a general partner.
  - c. In the case of sole proprietorship, by the proprietor.
  - d. In the case of a municipal, state, or other public facility, by either a principal executive officer or ranking elected official.

Applications for permits for domestic wastewater facilities that are either owned or operated by, or under contract to, a public entity shall be submitted by the public entity.

2. All reports required by this permit and other information requested by Ecology must be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:
  - a. The authorization is made in writing by a person described above and submitted to Ecology.
  - b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility, such as the position of plant manager, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.)

3. Changes to authorization. If an authorization under paragraph G1.2, above, is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of paragraph G1.2, above, must be submitted to Ecology prior to or together with any reports, information, or applications to be signed by an authorized representative.
4. Certification. Any person signing a document under this section must make the following certification:

“I certify under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.”

## **G2. Right of inspection and entry**

The Permittee must allow an authorized representative of Ecology, upon the presentation of credentials and such other documents as may be required by law:

1. To enter upon the premises where a discharge is located or where any records must be kept under the terms and conditions of this permit.
2. To have access to and copy, at reasonable times and at reasonable cost, any records required to be kept under the terms and conditions of this permit.
3. To inspect, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, methods, or operations regulated or required under this permit.
4. To sample or monitor, at reasonable times, any substances or parameters at any location for purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act.

## **G3. Permit actions**

This permit may be modified, revoked and reissued, or terminated either at the request of any interested person (including the permittee) or upon Ecology's initiative. However, the permit may only be modified, revoked and reissued, or terminated for the reasons specified in [40 CFR 122.62](#), [40 CFR 122.64](#) or [WAC 173-220-150](#) according to the procedures of [40 CFR 124.5](#).

1. The following are causes for terminating this permit during its term, or for denying a permit renewal application:
  - a. Violation of any permit term or condition.

- b. Obtaining a permit by misrepresentation or failure to disclose all relevant facts.
  - c. A material change in quantity or type of waste disposal.
  - d. A determination that the permitted activity endangers human health or the environment, or contributes to water quality standards violations and can only be regulated to acceptable levels by permit modification or termination.
  - e. A change in any condition that requires either a temporary or permanent reduction, or elimination of any discharge or sludge use or disposal practice controlled by the permit.
  - f. Nonpayment of fees assessed pursuant to [RCW 90.48.465](#).
  - g. Failure or refusal of the Permittee to allow entry as required in [RCW 90.48.090](#).
2. The following are causes for modification but not revocation and reissuance except when the Permittee requests or agrees:
- a. A material change in the condition of the waters of the state.
  - b. New information not available at the time of permit issuance that would have justified the application of different permit conditions.
  - c. Material and substantial alterations or additions to the permitted facility or activities which occurred after this permit issuance.
  - d. Promulgation of new or amended standards or regulations having a direct bearing upon permit conditions, or requiring permit revision.
  - e. The Permittee has requested a modification based on other rationale meeting the criteria of [40 CFR Part 122.62](#).
  - f. Ecology has determined that good cause exists for modification of a compliance schedule, and the modification will not violate statutory deadlines.
  - g. Incorporation of an approved local pretreatment program into a municipality's permit.
3. The following are causes for modification or alternatively revocation and reissuance:
- a. When cause exists for termination for reasons listed in 1.a through 1.g of this section, and Ecology determines that modification or revocation and reissuance is appropriate.
  - b. When Ecology has received notification of a proposed transfer of the permit. A permit may also be modified to reflect a transfer after the effective date of an automatic transfer (General Condition G7) but will not be revoked and reissued after the effective date of the transfer except upon the request of the new Permittee.

#### **G4. Reporting planned changes**

The Permittee must, as soon as possible, but no later than one hundred eighty (180) days prior to the proposed changes, give notice to Ecology of planned physical alterations or additions to the permitted facility, production increases, or process modification which will result in:

1. The permitted facility being determined to be a new source pursuant to [40 CFR 122.29\(b\)](#).
2. A significant change in the nature or an increase in quantity of pollutants discharged.
3. A significant change in the Permittee's sludge use or disposal practices. Following such notice, and the submittal of a new application or supplement to the existing application, along with required engineering plans and reports, this permit may be modified, or revoked and reissued pursuant to [40 CFR 122.62\(a\)](#) to specify and limit any pollutants not previously limited. Until such modification is effective, any new or increased discharge in excess of permit limits or not specifically authorized by this permit constitutes a violation.

#### **G5. Plan review required**

Prior to constructing or modifying any wastewater control facilities, an engineering report and detailed plans and specifications must be submitted to Ecology for approval in accordance with [chapter 173-240 WAC](#). Engineering reports, plans, and specifications must be submitted at least one hundred eighty (180) days prior to the planned start of construction unless a shorter time is approved by Ecology. Facilities must be constructed and operated in accordance with the approved plans.

#### **G6. Compliance with other laws and statutes**

Nothing in this permit excuses the Permittee from compliance with any applicable federal, state, or local statutes, ordinances, or regulations.

#### **G7. Transfer of this permit**

In the event of any change in control or ownership of facilities from which the authorized discharge emanates, the Permittee must notify the succeeding owner or controller of the existence of this permit by letter, a copy of which must be forwarded to Ecology.

1. Transfers by Modification  
Except as provided in paragraph (2) below, this permit may be transferred by the Permittee to a new owner or operator only if this permit has been modified or revoked and reissued under [40 CFR 122.62\(b\)\(2\)](#), or a minor modification made under [40 CFR 122.63\(d\)](#), to identify the new Permittee and incorporate such other requirements as may be necessary under the Clean Water Act.



2. Automatic Transfers

This permit may be automatically transferred to a new Permittee if:

- a. The Permittee notifies Ecology at least thirty (30) days in advance of the proposed transfer date.
- b. The notice includes a written agreement between the existing and new Permittees containing a specific date transfer of permit responsibility, coverage, and liability between them.
- c. Ecology does not notify the existing Permittee and the proposed new Permittee of its intent to modify or revoke and reissue this permit. A modification under this subparagraph may also be minor modification under [40 CFR 122.63](#). If this notice is not received, the transfer is effective on the date specified in the written agreement.

**G8. Reduced production for compliance**

The Permittee, in order to maintain compliance with its permit, must control production and/or all discharges upon reduction, loss, failure, or bypass of the treatment facility until the facility is restored or an alternative method of treatment is provided. This requirement applies in the situation where, among other things, the primary source of power of the treatment facility is reduced, lost, or fails.

**G9. Removed substances**

Collected screenings, grit, solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of wastewaters must not be resuspended or reintroduced to the final effluent stream for discharge to state waters.

**G10. Duty to provide information**

The Permittee must submit to Ecology, within a reasonable time, all information which Ecology may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The Permittee must also submit to Ecology upon request, copies of records required to be kept by this permit.

**G11. Other requirements of 40 CFR**

All other requirements of [40 CFR 122.41](#) and [40 CFR 122.42](#) are incorporated in this permit by reference.

**G12. Additional monitoring**

Ecology may establish specific monitoring requirements in addition to those contained in this permit by administrative order or permit modification.

### **G13. Payment of fees**

The Permittee must submit payment of fees associated with this permit as assessed by Ecology.

### **G14. Penalties for violating permit conditions**

Any person who is found guilty of willfully violating the terms and conditions of this permit is deemed guilty of a crime, and upon conviction thereof shall be punished by a fine of up to ten thousand dollars (\$10,000) and costs of prosecution, or by imprisonment in the discretion of the court. Each day upon which a willful violation occurs may be deemed a separate and additional violation.

Any person who violates the terms and conditions of a waste discharge permit may incur, in addition to any other penalty as provided by law, a civil penalty in the amount of up to ten thousand dollars (\$10,000) for every such violation. Each and every such violation is a separate and distinct offense, and in case of a continuing violation, every day's continuance is deemed to be a separate and distinct violation.

### **G15. Upset**

Definition – “Upset” means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limits because of factors beyond the reasonable control of the Permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

An upset constitutes an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limits if the requirements of the following paragraph are met.

A Permittee who wishes to establish the affirmative defense of upset must demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

1. An upset occurred and that the Permittee can identify the cause(s) of the upset.
2. The permitted facility was being properly operated at the time of the upset.
3. The Permittee submitted notice of the upset as required in Special Condition S3.F.
4. The Permittee complied with any remedial measures required under S3.F of this permit.

In any enforcement action the Permittee seeking to establish the occurrence of an upset has the burden of proof.

## **G16. Property rights**

This permit does not convey any property rights of any sort, or any exclusive privilege.

## **G17. Duty to comply**

The Permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.

## **G18. Toxic pollutants**

The Permittee must comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants within the time provided in the regulations that establish those standards or prohibitions, even if this permit has not yet been modified to incorporate the requirement.

## **G19. Penalties for tampering**

The Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than two (2) years per violation, or by both. If a conviction of a person is for a violation committed after a first conviction of such person under this condition, punishment shall be a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than four (4) years, or by both.

## **G20. Reporting requirements applicable to existing manufacturing, commercial, mining, and silvicultural dischargers**

The Permittee belonging to the categories of existing manufacturing, commercial, mining, or silviculture must notify Ecology as soon as they know or have reason to believe:

1. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in this permit, if that discharge will exceed the highest of the following "notification levels:"
  - a. One hundred micrograms per liter (100 µg/L).
  - b. Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/L) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony.
  - c. Five (5) times the maximum concentration value reported for that pollutant in the permit application in accordance with [40 CFR 122.21\(g\)\(7\)](#).

- d. The level established by the Director in accordance with [40 CFR 122.44\(f\)](#).
- 2. That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in this permit, if that discharge will exceed the highest of the following “notification levels:”
  - a. Five hundred micrograms per liter (500µg/L).
  - b. One milligram per liter (1 mg/L) for antimony.
  - c. Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with [40 CFR 122.21\(g\)\(7\)](#).
  - d. The level established by the Director in accordance with [40 CFR 122.44\(f\)](#).

## **G21. Compliance schedules**

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit must be submitted no later than fourteen (14) days following each schedule date.

## **Appendix A—List Of Pollutants**

### **With Analytical Methods, Detection Limits And Quantitation Levels**

The Permittee must use the specified analytical methods, detection limits (DLs) and quantitation levels (QLs) in the following table for permit and application required monitoring unless:

- Another permit condition specifies other methods, detection levels, or quantitation levels.
- The method used produces measurable results in the sample and EPA has listed it as an EPA-approved method in 40 CFR Part 136

If the Permittee uses an alternative method, not specified in the permit and as allowed above, it must report the test method, DL, and QL on the discharge monitoring report or in the required report.

If the Permittee is unable to obtain the required DL and QL in its effluent due to matrix effects, the Permittee must submit a matrix-specific detection limit (MDL) and a quantitation limit (QL) to Ecology with appropriate laboratory documentation.

When the permit requires the Permittee to measure the base neutral compounds in the list of priority pollutants, it must measure all of the base neutral pollutants listed in the table below. The list includes EPA required base neutral priority pollutants and several additional polynuclear aromatic hydrocarbons (PAHs). The Water Quality Program added several PAHs to the list of base neutrals below from Ecology's Persistent Bioaccumulative Toxics (PBT) List. It only added those PBT parameters of interest to Appendix A that did not increase the overall cost of analysis unreasonably.

Ecology added this appendix to the permit in order to reduce the number of analytical "non-detects" in permit-required monitoring and to measure effluent concentrations near or below criteria values where possible at a reasonable cost.

The lists below include conventional pollutants (as defined in CWA section 502(6) and 40 CFR Part 122.), toxic or priority pollutants as defined in CWA section 307(a)(1) and listed in 40 CFR Part 122 Appendix D, 40 CFR Part 401.15 and 40 CFR Part 423 Appendix A), and nonconventionals. 40 CFR Part 122 Appendix D (Table V) also identifies toxic pollutants and hazardous substances which are required to be reported by dischargers if expected to be present. This permit appendix A list does not include those parameters.

**Table A8: Conventional Pollutants**

<b>Pollutant</b>	<b>CAS Number (if available)</b>	<b>Recommended Analytical Protocol</b>	<b>Detection (DL)<sup>1</sup> µg/L <i>Unless specified</i></b>	<b>Quantitation Level (QL)<sup>2</sup> µg/L <i>Unless specified</i></b>
Biochemical Oxygen Demand		SM5210-B		2 mg/L
Biochemical Oxygen Demand, Soluble		SM5210-B <sup>3</sup>		2 mg/L
Fecal Coliform		SM 9221E,9222	N/A	Specified in method sample aliquot dependent
Oil and Grease (HEM) (Hexane Extractable Material)		1664 A or B	1,400	5,000
pH		SM4500-H <sup>+</sup> B	N/A	N/A
Total Suspended Solids		SM2540-D		5 mg/L

**Table A9: NonConventional Pollutants**

<b>Pollutant</b>	<b>CAS Number (if available)</b>	<b>Recommended Analytical Protocol</b>	<b>Detection (DL)<sup>1</sup> µg/L <i>Unless specified</i></b>	<b>Quantitation Level (QL)<sup>2</sup> µg/L <i>Unless specified</i></b>
Alkalinity, Total		SM2320-B		5 mg/L as CaCO <sub>3</sub>
Aluminum, Total	7429-90-5	200.8	2.0	10
Ammonia, Total (as N)		SM4500-NH <sub>3</sub> -B and C/D/E/G/H		20
Barium Total	7440-39-3	200.8	0.5	2.0

<b>Pollutant</b>	<b>CAS Number (if available)</b>	<b>Recommended Analytical Protocol</b>	<b>Detection (DL)<sup>1</sup> <math>\mu\text{g/L}</math> <i>Unless specified</i></b>	<b>Quantitation Level (QL)<sup>2</sup> <math>\mu\text{g/L}</math> <i>Unless specified</i></b>
BTEX (benzene +toluene + ethylbenzene + m,o,p xylenes)		EPA SW 846 8021/8260	1	2
Boron, Total	7440-42-8	200.8	2.0	10.0
Chemical Oxygen Demand		SM5220-D		10 mg/L
Chloride		SM4500-CI B/C/D/E and SM4110 B		Sample and limit dependent
Chlorine, Total Residual		SM4500 CI G		50.0
Cobalt, Total	7440-48-4	200.8	0.05	0.25
Color		SM2120 B/C/E		10 color units
Dissolved oxygen		SM4500-OC/OG		0.2 mg/L
E.coli		SM 9221B, 9221F, 9223B	N/A	Specified in method - sample aliquot dependent
Enterococci		SM 9230B, 9230C, 9230D	N/A	Specified in method - sample aliquot dependent
Flow		Calibrated device		
Fluoride	16984-48-8	SM4500-F E	25	100
Hardness, Total		SM2340B		200 as CaCO <sub>3</sub>
Iron, Total	7439-89-6	200.7	12.5	50
Magnesium, Total	7439-95-4	200.7	10	50
Manganese, Total	7439-96-5	200.8	0.1	0.5

<b>Pollutant</b>	<b>CAS Number (if available)</b>	<b>Recommended Analytical Protocol</b>	<b>Detection (DL)<sup>1</sup> <math>\mu\text{g/L}</math> <i>Unless specified</i></b>	<b>Quantitation Level (QL)<sup>2</sup> <math>\mu\text{g/L}</math> <i>Unless specified</i></b>
Molybdenum, Total	7439-98-7	200.8	0.1	0.5
Nitrate + Nitrite Nitrogen (as N)		SM4500-NO <sub>3</sub> - E/F/H		100
Nitrogen, Total Kjeldahl (as N)		SM4500-N <sub>org</sub> B/C and SM4500NH <sub>3</sub> - B/C/D/EF/G/H		300
NWTPH Dx <sup>4</sup>		Ecology NWTPH Dx	250	250
NWTPH Gx <sup>5</sup>		Ecology NWTPH Gx	250	250
Phosphorus, Total (as P)		SM 4500 PB followed by SM4500-PE/PF	3	10
Salinity		SM2520-B		3 practical salinity units or scale (PSU or PSS)
Settleable Solids		SM2540 -F		Sample and limit dependent
Soluble Reactive Phosphorus (as P)		SM4500-P E/F/G	3	10
Sulfate (as mg/L SO <sub>4</sub> )		SM4110-B		0.2 mg/L
Sulfide (as mg/L S)		SM4500-S <sup>2</sup> F/D/E/G		0.2 mg/L
Sulfite (as mg/L SO <sub>3</sub> )		SM4500-SO <sub>3</sub> B		2 mg/L
Temperature (max. 7-day avg.)		Analog recorder or Use micro-recording devices known as thermistors		0.2° C
Tin, Total	7440-31-5	200.8	0.3	1.5



<b>Pollutant</b>	<b>CAS Number (if available)</b>	<b>Recommended Analytical Protocol</b>	<b>Detection (DL)<sup>1</sup> µg/L <i>Unless specified</i></b>	<b>Quantitation Level (QL)<sup>2</sup> µg/L <i>Unless specified</i></b>
Titanium, Total	7440-32-6	200.8	0.5	2.5
Total Coliform		SM 9221B, 9222B, 9223B	N/A	Specified in method - sample aliquot dependent
Total Organic Carbon		SM5310-B/C/D		1 mg/L
Total dissolved solids		SM2540 C		20 mg/L

## Priority Pollutants

**Table A10: Metals, Cyanide & Total Phenols**

<b>Priority Pollutants</b>	<b>PP #</b>	<b>CAS Number (if available)</b>	<b>Recommended Analytical Protocol</b>	<b>Detection (DL)<sup>1</sup> µg/L <i>Unless specified</i></b>	<b>Quantitation Level (QL)<sup>2</sup> µg/L <i>Unless specified</i></b>
Antimony, Total	114	7440-36-0	200.8	0.3	1.0
Arsenic, Total	115	7440-38-2	200.8	0.1	0.5
Beryllium, Total	117	7440-41-7	200.8	0.1	0.5
Cadmium, Total	118	7440-43-9	200.8	0.05	0.25
Chromium (hex) dissolved	119	18540-29-9	SM3500-Cr C	0.3	1.2
Chromium, Total	119	7440-47-3	200.8	0.2	1.0
Copper, Total	120	7440-50-8	200.8	0.4	2.0
Lead, Total	122	7439-92-1	200.8	0.1	0.5

Priority Pollutants	PP #	CAS Number (if available)	Recommended Analytical Protocol	Detection (DL) <sup>1</sup> $\mu\text{g/L}$ <i>Unless specified</i>	Quantitation Level (QL) <sup>2</sup> $\mu\text{g/L}$ <i>Unless specified</i>
Mercury, Total	123	7439-97-6	1631E	0.0002	0.0005
Nickel, Total	124	7440-02-0	200.8	0.1	0.5
Selenium, Total	125	7782-49-2	200.8	1.0	1.0
Silver, Total	126	7440-22-4	200.8	0.04	0.2
Thallium, Total	127	7440-28-0	200.8	0.09	0.36
Zinc, Total	128	7440-66-6	200.8	0.5	2.5
Cyanide, Total	121	57-12-5	335.4	5	10
Cyanide, Weak Acid Dissociable	121		SM4500-CN I	5	10
Cyanide, Free Amenable to Chlorination (Available Cyanide)	121		SM4500-CN G	5	10
Phenols, Total	65		EPA 420.1		50

**Table A11: Acid Compounds**

Priority Pollutants	PP #	CAS Number (if available)	Recommended Analytical Protocol	Detection (DL) <sup>1</sup> $\mu\text{g/L}$ <i>Unless specified</i>	Quantitation Level (QL) <sup>2</sup> $\mu\text{g/L}$ <i>Unless specified</i>
2-Chlorophenol	24	95-57-8	625.1	3.3	9.9
2,4-Dichlorophenol	31	120-83-2	625.1	2.7	8.1
2,4-Dimethylphenol	34	105-67-9	625.1	2.7	8.1

Priority Pollutants	PP #	CAS Number (if available)	Recommended Analytical Protocol	Detection (DL) <sup>1</sup> $\mu\text{g/L}$ <i>Unless specified</i>	Quantitation Level (QL) <sup>2</sup> $\mu\text{g/L}$ <i>Unless specified</i>
4,6-dinitro-o-cresol (2-methyl-4,6,- dinitrophenol)	60	534-52-1	625.1/1625B	24	72
2,4 dinitrophenol	59	51-28-5	625.1	42	126
2-Nitrophenol	57	88-75-5	625.1	3.6	10.8
4-Nitrophenol	58	100-02-7	625.1	2.4	7.2
Parachlorometa cresol (4-chloro-3- methylphenol)	22	59-50-7	625.1	3.0	9.0
Pentachlorophenol	64	87-86-5	625.1	3.6	10.8
Phenol	65	108-95-2	625.1	1.5	4.5
2,4,6-Trichlorophenol	21	88-06-2	625.1	2.7	8.1

**Table A12: Volatile Compounds**

Priority Pollutants	PP #	CAS Number (if available)	Recommended Analytical Protocol	Detection (DL) <sup>1</sup> $\mu\text{g/L}$ <i>Unless specified</i>	Quantitation Level (QL) <sup>2</sup> $\mu\text{g/L}$ <i>Unless specified</i>
Acrolein	2	107-02-8	624.1	5	10
Acrylonitrile	3	107-13-1	624.1	1.0	2.0
Benzene	4	71-43-2	624.1	4.4	13.2
Bromoform	47	75-25-2	624.1	4.7	14.1
Carbon tetrachloride	6	56-23-5	624.1/601 or SM6230B	2.8	8.4

Priority Pollutants	PP #	CAS Number (if available)	Recommended Analytical Protocol	Detection (DL) <sup>1</sup> $\mu\text{g/L}$ <i>Unless specified</i>	Quantitation Level (QL) <sup>2</sup> $\mu\text{g/L}$ <i>Unless specified</i>
Chlorobenzene	7	108-90-7	624.1	6.0	18.0
Chloroethane	16	75-00-3	624/601	1.0	2.0
2-Chloroethylvinyl Ether	19	110-75-8	624.1	1.0	2.0
Chloroform	23	67-66-3	624.1 or SM6210B	1.6	4.8
Dibromochloromethane (chlordibromomethane)	51	124-48-1	624.1	3.1	9.3
1,2-Dichlorobenzene	25	95-50-1	624.1	1.9	7.6
1,3-Dichlorobenzene	26	541-73-1	624.1	1.9	7.6
1,4-Dichlorobenzene	27	106-46-7	624.1	4.4	17.6
Dichlorobromomethane	48	75-27-4	624.1	2.2	6.6
1,1-Dichloroethane	13	75-34-3	624.1	4.7	14.1
1,2-Dichloroethane	10	107-06-2	624.1	2.8	8.4
1,1-Dichloroethylene	29	75-35-4	624.1	2.8	8.4
1,2-Dichloropropane	32	78-87-5	624.1	6.0	18.0
1,3-dichloropropene (mixed isomers) (1,2-dichloropropylene) <sup>6</sup>	33	542-75-6	624.1	5.0	15.0
Ethylbenzene	38	100-41-4	624.1	7.2	21.6
Methyl bromide (Bromomethane)	46	74-83-9	624/601	5.0	10.0
Methyl chloride (Chloromethane)	45	74-87-3	624.1	1.0	2.0

Priority Pollutants	PP #	CAS Number (if available)	Recommended Analytical Protocol	Detection (DL) <sup>1</sup> $\mu\text{g/L}$ <i>Unless specified</i>	Quantitation Level (QL) <sup>2</sup> $\mu\text{g/L}$ <i>Unless specified</i>
Methylene chloride	44	75-09-2	624.1	2.8	8.4
1,1,2,2-Tetrachloroethane	15	79-34-5	624.1	6.9	20.7
Tetrachloroethylene	85	127-18-4	624.1	4.1	12.3
Toluene	86	108-88-3	624.1	6.0	18.0
1,2-Trans-Dichloroethylene (Ethylene dichloride)	30	156-60-5	624.1	1.6	4.8
1,1,1-Trichloroethane	11	71-55-6	624.1	3.8	11.4
1,1,2-Trichloroethane	14	79-00-5	624.1	5.0	15.0
Trichloroethylene	87	79-01-6	624.1	1.9	5.7
Vinyl chloride	88	75-01-4	624/SM6200B	1.0	2.0

**Table A13: Base/Neutral Compounds (Compounds in Bold are Ecology PBTS)**

Priority Pollutants	PP #	CAS Number (if available)	Recommended Analytical Protocol	Detection (DL) <sup>1</sup> $\mu\text{g/L}$ <i>Unless specified</i>	Quantitation Level (QL) <sup>2</sup> $\mu\text{g/L}$ <i>Unless specified</i>
Acenaphthene	1	83-32-9	625.1	1.9	5.7
Acenaphthylene	77	208-96-8	625.1	3.5	10.5
Anthracene	78	120-12-7	625.1	1.9	5.7
Benzidine	5	92-87-5	625.1	44	132
Benzyl butyl phthalate	67	85-68-7	625.1	2.5	7.5

Priority Pollutants	PP #	CAS Number (if available)	Recommended Analytical Protocol	Detection (DL) <sup>1</sup> $\mu\text{g/L}$ <i>Unless specified</i>	Quantitation Level (QL) <sup>2</sup> $\mu\text{g/L}$ <i>Unless specified</i>
Benzo(a)anthracene	72	56-55-3	625.1	7.8	23.4
Benzo(b)fluoranthene (3,4-benzofluoranthene) <sup>7</sup>	74	205-99-2	610/625.1	4.8	14.4
<b>Benzo(j)fluoranthene</b> <sup>7</sup>		205-82-3	625	0.5	1.0
Benzo(k)fluoranthene (11,12-benzofluoranthene) <sup>7</sup>	75	207-08-9	610/625.1	2.5	7.5
<b>Benzo(r,s,t)pentaphene</b>		189-55-9	625	1.3	5.0
Benzo(a)pyrene	73	50-32-8	610/625.1	2.5	7.5
Benzo(ghi)Perylene	79	191-24-2	610/625.1	4.1	12.3
Bis(2-chloroethoxy)methane	43	111-91-1	625.1	5.3	15.9
Bis(2-chloroethyl)ether	18	111-44-4	611/625.1	5.7	17.1
Bis(2-chloro-1-methylethyl)Ether (Bis(2-chloroisopropyl)ether) <sup>10</sup>	42	108-60-1	625.1	5.7	17.1
Bis(2-ethylhexyl)phthalate	66	117-81-7	625.1	2.5	7.5
4-Bromophenyl phenyl ether	41	101-55-3	625.1	1.9	5.7
2-Chloronaphthalene	20	91-58-7	625.1	1.9	5.7
4-Chlorophenyl phenyl ether	40	7005-72-3	625.1	4.2	12.6
Chrysene	76	218-01-9	610/625.1	2.5	7.5
<b>Dibenzo (a,h)acridine</b>		226-36-8	610M/625M	2.5	10.0
<b>Dibenzo (a,i)acridine</b>		224-42-0	610M/625M	2.5	10.0

Priority Pollutants	PP #	CAS Number (if available)	Recommended Analytical Protocol	Detection (DL) <sup>1</sup> $\mu\text{g/L}$ <i>Unless specified</i>	Quantitation Level (QL) <sup>2</sup> $\mu\text{g/L}$ <i>Unless specified</i>
Dibenzo(a-h)anthracene (1,2,5,6-dibenzanthracene)	82	53-70-3	625.1	2.5	7.5
<b>Dibenzo(a,e)pyrene</b>		192-65-4	610M/625M	2.5	10.0
<b>Dibenzo(a,h)pyrene</b>		189-64-0	625M	2.5	10.0
3,3-Dichlorobenzidine	28	91-94-1	605/625.1	16.5	49.5
Diethyl phthalate	70	84-66-2	625.1	1.9	5.7
Dimethyl phthalate	71	131-11-3	625.1	1.6	4.8
Di-n-butyl phthalate	68	84-74-2	625.1	2.5	7.5
2,4-dinitrotoluene	35	121-14-2	609/625.1	5.7	17.1
2,6-dinitrotoluene	36	606-20-2	609/625.1	1.9	5.7
Di-n-octyl phthalate	69	117-84-0	625.1	2.5	7.5
1,2-Diphenylhydrazine (as Azobenzene)	37	122-66-7	1625B/625.1	5.0	20
Fluoranthene	39	206-44-0	625.1	2.2	6.6
Fluorene	80	86-73-7	625.1	1.9	5.7
Hexachlorobenzene	9	118-74-1	612/625.1	1.9	5.7
Hexachlorobutadiene	52	87-68-3	625.1	0.9	2.7
Hexachlorocyclopentadiene	53	77-47-4	1625B/625.1	2.0	4.0
Hexachloroethane	12	67-72-1	625.1	1.6	4.8

Priority Pollutants	PP #	CAS Number (if available)	Recommended Analytical Protocol	Detection (DL) <sup>1</sup> $\mu\text{g/L}$ <i>Unless specified</i>	Quantitation Level (QL) <sup>2</sup> $\mu\text{g/L}$ <i>Unless specified</i>
Indeno(1,2,3-cd)Pyrene	83	193-39-5	610/625.1	3.7	11.1
Isophorone	54	78-59-1	625.1	2.2	6.6
<b>3-Methyl cholanthrene</b>		56-49-5	625	2.0	8.0
Naphthalene	55	91-20-3	625.1	1.6	4.8
Nitrobenzene	56	98-95-3	625.1	1.9	5.7
N-Nitrosodimethylamine	61	62-75-9	607/625.1	2.0	4.0
N-Nitrosodi-n-propylamine	63	621-64-7	607/625.1	0.5	1.0
N-Nitrosodiphenylamine	62	86-30-6	625.1	1.0	2.0
<b>Perylene</b>		198-55-0	625	1.9	7.6
Phenanthrene	81	85-01-8	625.1	5.4	16.2
Pyrene	84	129-00-0	625.1	1.9	5.7
1,2,4-Trichlorobenzene	8	120-82-1	625.1	1.9	5.7

**Table A14: Dioxin**

Priority Pollutant	PP #	CAS Number (if available)	Recommended Analytical Protocol	Detection (DL) <sup>1</sup> $\mu\text{g/L}$ <i>Unless specified</i>	Quantitation Level (QL) <sup>2</sup> $\mu\text{g/L}$ <i>Unless specified</i>
2,3,7,8-Tetra-Chlorodibenzo-P-Dioxin (2,3,7,8 TCDD)	129	1746-01-6	1613B	1.3 pg/L	5 pg/L



**Table A15: Pesticides/PCBS**

Priority Pollutants	PP #	CAS Number (if available)	Recommended Analytical Protocol	Detection (DL) <sup>1</sup> $\mu\text{g/L}$ <i>Unless specified</i>	Quantitation Level (QL) <sup>2</sup> $\mu\text{g/L}$ <i>Unless specified</i>
Aldrin	89	309-00-2	608.3	4.0 ng/L	12 ng/L
alpha-BHC	102	319-84-6	608.3	3.0 ng/L	9.0 ng/L
beta-BHC	103	319-85-7	608.3	6.0 ng/L	18 ng/L
gamma-BHC (Lindane)	104	58-89-9	608.3	4.0 ng/L	12 ng/L
delta-BHC	105	319-86-8	608.3	9.0 ng/L	27 ng/L
Chlordane <sup>8</sup>	91	57-74-9	608.3	14 ng/L	42 ng/L
4,4'-DDT	92	50-29-3	608.3	12 ng/L	36 ng/L
4,4'-DDE	93	72-55-9	608.3	4.0 ng/L	12 ng/L
4,4' DDD	94	72-54-8	608.3	11ng/L	33 ng/L
Dieldrin	90	60-57-1	608.3	2.0 ng/L	6.0 ng/L
alpha-Endosulfan	95	959-98-8	608.3	14 ng/L	42 ng/L
beta-Endosulfan	96	33213-65-9	608.3	4.0 ng/L	12 ng/L
Endosulfan Sulfate	97	1031-07-8	608.3	66 ng/L	198 ng/L
Endrin	98	72-20-8	608.3	6.0 ng/L	18 ng/L
Endrin Aldehyde	99	7421-93-4	608.3	23 ng/L	70 ng/L
Heptachlor	100	76-44-8	608.3	3.0 ng/L	9.0 ng/L
Heptachlor Epoxide	101	1024-57-3	608.3	83 ng/L	249 ng/L

Priority Pollutants	PP #	CAS Number (if available)	Recommended Analytical Protocol	Detection (DL) <sup>1</sup> $\mu\text{g/L}$ <i>Unless specified</i>	Quantitation Level (QL) <sup>2</sup> $\mu\text{g/L}$ <i>Unless specified</i>
PCB-1242 <sup>9</sup>	106	53469-21-9	608.3	0.065	0.195
PCB-1254	107	11097-69-1	608.3	0.065	0.195
PCB-1221	108	11104-28-2	608.3	0.065	0.195
PCB-1232	109	11141-16-5	608.3	0.065	0.195
PCB-1248	110	12672-29-6	608.3	0.065	0.195
PCB-1260	111	11096-82-5	608.3	0.065	0.195
PCB-1016 <sup>9</sup>	112	12674-11-2	608.3	0.065	0.195
Toxaphene	113	8001-35-2	608.3	240 ng/L	720 ng/L

## Analytical Methods

1. **Detection level (DL)** – or detection limit means the minimum concentration of an analyte (substance) that can be measured and reported with a 99% confidence that the analyte concentration is greater than zero as determined by the procedure given in 40 CFR part 136, Appendix B.
2. **Quantitation Level (QL)** – also known as Minimum Level of Quantitation (ML) – The lowest level at which the entire analytical system must give a recognizable signal and acceptable calibration point for the analyte. It is equivalent to the concentration of the lowest calibration standard, assuming that the lab has used all method-specified sample weights, volumes, and cleanup procedures. The QL is calculated by multiplying the MDL by 3.18 and rounding the result to the number nearest to  $(1, 2, \text{ or } 5) \times 10^n$ , where  $n$  is an integer. (64 FR 30417).  
**Also Given As:** The smallest detectable concentration of analyte greater than the Detection Limit (DL) where the accuracy (precision & bias) achieves the objectives of the intended purpose. (Report of the Federal Advisory Committee on Detection and Quantitation Approaches and Uses in Clean Water Act Programs Submitted to the US Environmental Protection Agency December 2007).

3. **Soluble Biochemical Oxygen Demand** – method note: First, filter the sample through a Millipore Nylon filter (or equivalent) - pore size of 0.45-0.50 um (prep all filters by filtering 250 ml of laboratory grade deionized water through the filter and discard). Then, analyze sample as per method 5210-B.
4. **Northwest Total Petroleum Hydrocarbons Diesel Extended Range OR NWTPH Dx** – [Analytical Methods for Petroleum Hydrocarbons https://fortress.wa.gov/ecy/publications/documents/97602.pdf](https://fortress.wa.gov/ecy/publications/documents/97602.pdf)
5. **Northwest Total Petroleum Hydrocarbons Gasoline Extended Range OR NWTPH Gx** – [Analytical Methods for Petroleum Hydrocarbons https://fortress.wa.gov/ecy/publications/documents/97602.pdf](https://fortress.wa.gov/ecy/publications/documents/97602.pdf)
6. **1, 3-dichloroproylene (mixed isomers)** – You may report this parameter as two separate parameters: cis-1, 3-dichloropropene (10061-01-5) and trans-1, 3-dichloropropene (10061-02-6).
7. **Total Benzofluoranthenes** – Because Benzo(b)fluoranthene, Benzo(j)fluoranthene and Benzo(k)fluoranthene co-elute you may report these three isomers as total benzofluoranthenes.
8. **Chlordane** – You may report alpha-chlordane (5103-71-9) and gamma-chlordane (5103-74-2) in place of chlordane (57-74-9). If you report alpha and gamma-chlordane, the DL/PQLs that apply are 14/42 ng/L.  
**PCB 1016 & PCB 1242** – You may report these two PCB compounds as one parameter called PCB 1016/1242.
9. **Bis(2-Chloro-1-Methylethyl) Ether** – This compound was previously listed as Bis(2-Chloroisopropyl) Ether (39638-32-9)

## APPENDIX B

## **APPENDIX B**

**NOTIFICATION OF CHANGE TO OUTFALL LOCATION LETTER TO ECOLOGY  
DATED FEBRUAR 12, 2024 AND ECOLOGY'S CORRESPONDENCE EMAIL  
APPROVAL RECEIVED MARCH 28, 2024.**



# Public Utility District No. 1 of Douglas County

1151 Valley Mall Parkway • East Wenatchee, Washington 98802-4497 • 509/884-7191 • FAX 509/884-0553 • [www.douglaspu.org](http://www.douglaspu.org)

Via Electronic Filing – [keith.primm@ecy.wa.gov](mailto:keith.primm@ecy.wa.gov)

February 12, 2024

Keith Primm  
Permit Writer/Facility Manager  
Water Quality Program  
Ecology at Central Regional Office  
Union Gap, WA  
(509) 575-2490

Subject: **Wells Dam's National NPDES Wastewater Discharge Permit No. WA0991031  
Notification of Change to Outfall Locations**

Dear Mr. Primm,

The Public Utility District No. 1 of Douglas County (Douglas PUD) respectfully submits to Washington State Department of Ecology (Ecology) a notification of a change in the outfall discharge locations listed in our Wells Dam National Pollutant Discharge Elimination System (NPDES) Wastewater Discharge Permit No. WA0991031, per Section G4 (Page 27) of the permit.

*G4. Reporting planned changes*

*The Permittee must, as soon as possible, but no later than one hundred eighty (180) days prior to the proposed changes, give notice to Ecology of planned physical alterations or additions to the permitted facility, production increases, or process modification which will result in:*

- 1. The permitted facility being determined to be a new source pursuant to 40 CFR 122.29(b).*
- 2. A significant change in the nature or an increase in quantity of pollutants discharged.*
- 3. A significant change in the Permittee's sludge use or disposal practices. Following such notice, and the submittal of a new application or supplement to the existing application, along with required engineering plans and reports, this permit may be modified, or revoked and reissued pursuant to 40 CFR 122.62(a) to specify and limit any pollutants not previously limited. Until such modification is effective, any new or increased discharge in excess of permit limits or not specifically authorized by this permit constitutes a violation.*

Pursuant to Section G4 and beginning 180 days after submission of this letter, Outfalls 14 – 23 will be plumbed directly into the Wells Dam drainage sump rather than directly discharging into the Columbia River. The wastewater discharge from these systems will enter the drainage sump system and be tested for Hexane Extractable Materials (HEM) and temperature as part of the routine testing for Outfall No. 1: Sump System Discharge. There will be no change to the maximum volume of wastewater discharged from the Wells Project. The proposed modification would simply change the number of outfalls tested on a regular basis since point source discharge locations would be combined as shown in Attachment A. Douglas PUD is proposing to report “no discharge” for these outfalls following replumbing and would continue as such until the permit renewal process when these point source outfall locations would be removed from the new permit application.

Combining discharge locations have a number of benefits. Outfalls 14-23 are non-contact cooling HVAC systems with limited opportunities for additive HEM products. By combining these outfalls, the number of samples taken monthly would be reduced substantially and reduce the sample burden for Douglas PUD. Additionally, any process water that travels the sump system is exposed to wastewater monitoring and process capabilities that other direct discharge does not receive. These systems include an oil alarm (detection) and oil skimmer. As such, Douglas PUD believes that the discharge location change will have either a neutral or improved environmental outcome for state surface waters.

Plumbing these HVAC systems to the sump system discharge was part of the original Wells Dam drainage water system, however, it was never instituted. Further, the change in process flow is similar to how drainage water is handled at other hydroelectric facilities, such as those managed by Public Utility District No. 2 of Grant County.

Douglas PUD is not proposing a production or point source increase, adding new sources, or changing the quantity of pollutants discharged and, therefore, Douglas PUD believes that, pursuant to Section G4 of the permit, only a notification is required to stay compliant with our permit terms. Since there are no meaningful changes to the wastewater system, instead a minor change to plumbing, we also believe we are exempt from submitting an engineering report and detailed plans for review (NPDES Permit No. WA0991031, Section G5, Page 27):

*G5. Plan review required*

*Prior to constructing or modifying any wastewater control facilities, an engineering report and detailed plans and specifications must be submitted to Ecology for approval in accordance with chapter 173-240 WAC. Engineering reports, plans, and specifications must be submitted at least one hundred eighty (180) days prior to the planned start of construction unless a shorter time is approved by Ecology. Facilities must be constructed and operated in accordance with the approved plans.*

An update process flow line diagram is attached to this letter and should replace the process water flow and drainage system schematics issued in the Permit (Attachment A).

Should you have additional questions, please contact Mariah Mayfield, Aquatic Resource Biologist at ([mariah.mayfield@dcpud.org](mailto:mariah.mayfield@dcpud.org), 509-881-2326) or Andrew Gingerich Natural Resources Supervisor ([andrew.gingerich@dcpud.org](mailto:andrew.gingerich@dcpud.org), 509-881-2323).

Sincerely,



Gary R. Ivory  
General Manager

Cc: Erik Van Doren – Ecology  
Caleb Bos - Ecology  
Tyler Evans – Douglas PUD  
Matt Mullins – Douglas PUD  
Shane Bickford – Douglas PUD  
Andrew Gingerich – Douglas PUD

Attachment A. Updated Water Flow and Drainage System Schematic



**WELLS HYDROELECTRIC PROJECT NO. 2149  
NPDES PERMIT NO. WA0991031**

**ATTACHMENT A**

**UPDATED WATER FLOW AND DRAINAGE SYSTEM SCHEMATICS**

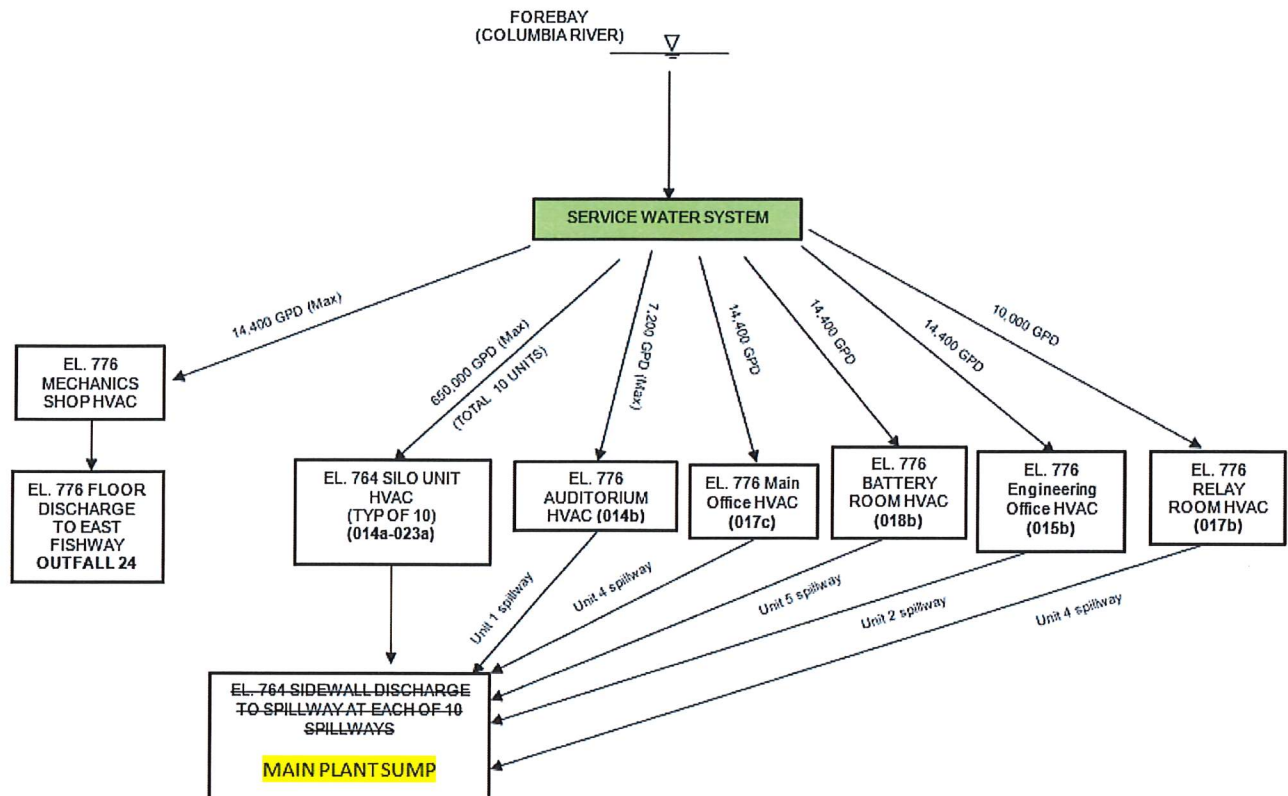


Figure 1: Service Water System Schematic for Temperature Point Source Discharges with Discharge Changes Planned for 2024 (highlighted in yellow).

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**From:** Primm, Keith (ECY) <[kepr461@ECY.WA.GOV](mailto:kepr461@ECY.WA.GOV)>  
**Sent:** Thursday, March 28, 2024 11:44 AM  
**To:** Andrew Gingerich <[andrew.gingerich@dcpud.org](mailto:andrew.gingerich@dcpud.org)>  
**Subject:** RE: Outfall replumbing at Wells Hydro

This does meet our approval. Even if the paperwork is slow. Call me if you need to.

Keith Primm  
Water Quality Program  
Central Regional Office  
509-406-0331

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**From:** Andrew Gingerich <[andrew.gingerich@dcpud.org](mailto:andrew.gingerich@dcpud.org)>  
**Sent:** Monday, February 12, 2024 1:45 PM  
**To:** Primm, Keith (ECY) <[kepr461@ECY.WA.GOV](mailto:kepr461@ECY.WA.GOV)>  
**Cc:** Mariah Mayfield <[mariah.mayfield@dcpud.org](mailto:mariah.mayfield@dcpud.org)>; Tyler Evans <[tyler.evans@dcpud.org](mailto:tyler.evans@dcpud.org)>; Van Doren, Erik (ECY) <[erva461@ECY.WA.GOV](mailto:erva461@ECY.WA.GOV)>; Brian Schmidt <[brian.schmidt@dcpud.org](mailto:brian.schmidt@dcpud.org)>; Gary Ivory <[gary.ivory@dcpud.org](mailto:gary.ivory@dcpud.org)>; Shane Bickford <[shane.bickford@dcpud.org](mailto:shane.bickford@dcpud.org)>; Amber Nealy <[amber.nealy@dcpud.org](mailto:amber.nealy@dcpud.org)>  
**Subject:** Outfall replumbing at Wells Hydro

External Email

Good afternoon Keith, please find a letter attached describing the District's plan to replumb Outfalls 14-23 directly to Outfall 1 "sump system discharge" as part of our NPDES permit implementation. We plan on beginning this work 180 days from today or soon after August, 10<sup>th</sup>, 2024 consistent with the 180 day notice requirement in the permit.

I will put a hardcopy of this letter in the mail.

I would welcome an opportunity to described our efforts and I look forward to addressing any concerns Ecology might have.

Thank you.

Andrew Gingerich  
Natural Resources Supervisor  
Douglas County Public Utility District

1151 Valley Mall Parkway  
East Wenatchee, WA 98802

Office: 509-881-2323

<https://douglaspud.org/environmental-stewardship/>

[Andrew.Gingerich@dcpud.org](mailto:Andrew.Gingerich@dcpud.org)