

Issuance Date: __?_
Effective Date: __?_
Expiration Date: __?_

**National Pollutant Discharge Elimination System
Waste Discharge Permit No. WA0991028**

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.

**Public Utility District No. 2 of Grant County
Wanapum Dam
PO Box 878
Ephrata, WA 98823**

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

Facility Location: 14353 HWY 243 S, Beverly, WA 99321	Receiving Water: Columbia River
Treatment Type: None	SIC Code: 4911
Industry Type: Hydroelectric	NAICS Code: 2211

David B. Bowen
Section Manager
Water Quality Program
Central Regional Office
Washington State Department of Ecology

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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.	Discharge Monitoring Report (DMR)	Monthly	<u>Enter a specific date</u>
S3.A.3.b.	Permit Renewal Application Monitoring Data	1/permit cycle	<u>Insert date, one year prior to permit expiration date</u>
S3.F	Reporting Permit Violations	As necessary	
S4.A.a.1.	Operations and Maintenance Manual	--	<u>180 days after effective date of permit.</u>
S4.A.a.2.	Operations and Maintenance Manual Update or Review Confirmation Letter	1/year	<u>JANUARY 15, 2021 and subsequent January 15</u>
S5.C.a.1.	Solid Waste Control Plan	1/permit cycle	<u>One year after effective date of permit.</u>
S5.C.a.4.	Modification to Solid Waste Plan	As necessary	
S6.	Application for Permit Renewal	1/permit cycle	<u>Insert date, one year prior to permit expiration date</u>
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	<u>Insert date, one year prior to permit expiration date</u>
S10.B	Environmentally Acceptable Lubricants Annual Report	1/year	<u>One year after effective date of permit.</u>
S10.C	Oil and Grease Report	1/year	<u>January 15, 2022 and subsequent January 15</u>

Permit Section	Submittal	Frequency	First Submittal Date
S12.A	Monitoring Plan	1/permit cycle	Insert date, ONE YEAR after permit effective date
S12.B	QAPP Review Report	--	Insert date, ONE YEAR after permit effective date
S12.B	QAPP or QAPP Update	As necessary	Insert date, ONE YEAR after permit effective date
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 temperature, Oil/Grease, and pH to the Columbia River from Outfalls W001-W012 subject to complying with the following limits:

Table 2 - Effluent Limits

Parameter	Maximum Daily ^a	Average Monthly ^b	Min/Max
Temperature Outfall 001-012	--	EPA WLA Kcal/day ^c	--
Flow ^d Outfall 001	26.9 MGD	--	--
Flow Outfall 012	7.5 MGD	--	--
Oil and Grease Outfall 001	5 mg/L	--	--
pH Outfall 001, 012	--	--	6.5/8.5 standard units

Footnote	Information
a	Maximum daily effluent limit is the highest allowable daily discharge. The daily discharge is the average discharge of a pollutant measured during a calendar day. The average daily measurement does not apply to pH or temperature.
b	Average monthly heat load (Kcal/day) is the sum of the discharge from all 12 outfalls combined.
c	Final EPA Wasteload Allocation. Compliance Schedule Wasteload Allocation Effluent Limit to be in effect [insert date, two years after permit effective date or 30 days after EPA issues final Temperature TMDL, whichever is later.] WLA limit seasonal effective months: July, August, September, October.
d	Represent flows at Outfalls 001 and 012 when all pumps operate at maximum capacity.

S2. Monitoring requirements

Table 3 - PARIS Sample Type and Description

PARIS Sample Type	Description
Grab	Grab sample - an individual sample collected in less than 15 minutes time - more or less represents instantaneous conditions
Composite Sample (24 hour)	Composite sample - where it is unspecified if it is a flow proportioned or time proportioned sample
Measurement	Measured in the field or on site at the point of discharge with a field kit, ruler, etc.
Metered/Recorded	Recording meters such as for flow, turbidity, TOC, temperature, pH, conductivity, fluoride and DO
Calculated	Calculated

Table 4 - PARIS Sample Frequency Definitions

Sample Frequency Type Display Name in PARIS	Description
1/Day	Once per day (Daily)
Annual	Once a year
Monthly	Monthly
1/Permit Cycle	Once During Permit Cycle
Continuous	Continuous

S2.A. Monitoring schedule

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

Table 5 - Wastewater Effluent Outfall W001 and W012 (Left and Right Bank Sumps)

Parameter	Units & Speciation	Minimum Sampling Frequency	Sample Type
Flow	mgd	Monthly ^a	Estimated ^e
pH ^b	standard units	Monthly	Grab ^c
Temperature ^d , Influent	°C	Continuous	Recorded
Temperature ^d , Effluent	°C	Monthly	Grab
Oil and Grease (Outfall 001)	mg/L	Monthly	Grab

Footnote	Information
a	Monthly means once every calendar month.
b	The Permittee must report the instantaneous maximum and minimum pH monthly. Do not average pH values.
c	Grab means an individual sample collected over a fifteen (15) minute, or less, period.
d	Temperature grab sampling must occur when the effluent is at or near its daily maximum temperature, which usually occurs in the late afternoon. If measuring temperature continuously, the Permittee must determine and report a daily maximum from half-hour measurements in a 24-hour period. Continuous monitoring instruments must achieve an accuracy of 0.2 degrees C and the Permittee must verify accuracy annually. Continuous monitoring equipment will be installed within 2 years of permit issuance.
e	Flow estimate as determined by pump run time meters, or other methodology approved by Ecology.

Table 6 - Cooling Water -- Outfall W002 through W011

Parameter	Units & Speciation	Minimum Sampling Frequency	Sample Type
Flow ^a	mgd	Continuous ^b / Monthly ^c	Recorded ^d / Estimated ^e
Temperature, Background ^f	°C	Continuous	Recorded
Temperature, Effluent ^g	°C	Continuous/ Monthly	Recorded/ Grab ^h

Footnote	Information
a	Flow grab sampling required during first 2 years after effective date of permit. Continuous flow monitoring required beginning 2 years after effective date of permit. Estimated flow monitoring may be applied where a similar cooling water discharge requires continuous flow monitoring. During periods when the unit on which the continuous flow meter is shut down (for example, for periodic maintenance), the PUD will estimate flows based on past monitoring data.
b	Continuous means uninterrupted except for brief lengths of time for calibration, power failure, or unanticipated equipment repair or maintenance. The time interval for the associated data logger must be no greater than 30 minutes. The Permittee must sample insert or describe Frequency when continuous monitoring is not possible.
c	Monthly means once every calendar month. Monthly monitoring may be applied where a similar cooling water discharge requires continuous monitoring.
d	Recording meters such as for flow, turbidity, TOC, temperature, pH, conductivity, fluoride and DO.
e	Estimated.
f	Influent temperature for all outfalls to be measured at Forebay Fixed Site Monitoring Station, pending QAPP review under Condition S12.B.
g	Monthly Grab sampling required during first 2 years after effective date of permit. Continuous temperature monitoring required for cooling water influent and effluent beginning 2 years after effective date of permit. Monthly temperature monitoring may be applied continue where a similar cooling water discharge requires continuous temperature monitoring.
h	Grab means an individual sample collected over a fifteen (15) minute, or less, period. Temperature grab sampling must occur when the effluent is at or near its daily maximum temperature. If measuring temperature continuously, the Permittee must determine and report a daily maximum from half-hour measurements in a 24-hour period. Continuous

Footnote	Information
a	Flow grab sampling required during first 2 years after effective date of permit. Continuous flow monitoring required beginning 2 years after effective date of permit. Estimated flow monitoring may be applied where a similar cooling water discharge requires continuous flow monitoring. During periods when the unit on which the continuous flow meter is shut down (for example, for periodic maintenance), the PUD will estimate flows based on past monitoring data.
b	Continuous means uninterrupted except for brief lengths of time for calibration, power failure, or unanticipated equipment repair or maintenance. The time interval for the associated data logger must be no greater than 30 minutes. The Permittee must sample insert or describe Frequency when continuous monitoring is not possible.
	monitoring instruments must achieve an accuracy of 0.2 degrees C and the Permittee must verify accuracy annually.

Table 7 - TMDL Heat Load (July-October) -- Outfalls W001 through W012^a

Parameter	Units & Speciation	Minimum Sampling Frequency	Sample Type
Heat Load	Kcal/day	Daily	Calculation ^b
Heat Load	Kcal/day	Average Monthly	Calculation ^c

Footnote	Information
a	Monitoring must begin no later than [insert date 2-years after permit effective date]
b	Daily Heat Load Calculation = Total Daily Flow (mgd) x Avg Daily Temperature x 3,776,291
c	The average monthly heat load is calculated as the product of the average monthly temperature, average monthly flow, and a conversion factor of 3,776,290.63038. The average monthly temperature is calculated as the sum of average daily temperatures divided by the number of daily discharges measured in the month. The average monthly flow is calculated as the sum of average daily flows divided by the number of daily discharges measured in the month.

Table 8 - Permit Renewal Application Requirements – Final Wastewater Effluent - (Outfalls W001 and W012)

Parameter	Units	Laboratory Method	Minimum Sampling Frequency	Sample Type
Priority Pollutants (PP) – Total Metals	µg/L; ng/L for Mercury	EPA 200.8 except EPA 1631E for Mercury	Once per year	24-Hour composite ^a Grab for Mercury
Polychlorinated Biphenyls (PCBs)	µg/L	EPA 608	Once per year	24-Hour composite ^a

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.
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 10 in Special Condition S2.A by **January 15th 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 the telephone numbers listed above, 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.
5. Any Alarm conditions in the sump that trigger an obligation for the PUD to report to Ecology and the National Response Center pursuant to the Wanapum Development Spill Prevention, Control and Countermeasure (SPCC) Plan, dated November 2017, and the circumstances causing the alarm.

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 c, 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 180 days after effective date of permit.
2. Review the O&M Manual at least annually and confirm this review by letter to Ecology by Insert Date 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 [Insert Date \(ONE years after issuance\)](#).
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 [Insert the application for permit renewal date](#).

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 [Insert Date at least one year prior to expiration date](#).

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 left and right bank sumps must not exceed the following design criteria:

Table 9 - Design Criteria

Flows	Left Bank	Right Bank
Peak Instantaneous Pump Rate	18,700 gal/min 26.9 MGD	5,190 gal/min 7.5 MGD

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 Wanapum 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. Approval of the Spill Control Plan with respect to this requirement does not constitute approval of the plans and manuals 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 hazardous waste, provide a safer work environment through the use of authorized environmentally safe materials.

Table 4 of the facility SPCC plan identifies all the oil containing equipment and storage of hazardous materials ≥ 55 gallons. Section 500 identifies maintenance and inspection procedures for these materials.

S10.A. Oil and Grease Accountability

The Permittee must submit an Oil and Grease Accountability Plan (OGAP) to Ecology. The plan should:

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

S10.B. Environmentally Acceptable Lubricants

EALs are lubricants that have been demonstrated to meet standards for biodegradability, toxicity, and bioaccumulation potential that minimize their likely adverse consequences in the aquatic environment, compared to conventional lubricants. Whether or not the use of EALs is "technically infeasible" will be based on consideration of applicable legal requirements; facility operational requirements; costs of conversion; risk of potential damage to equipment; and maintenance and outage schedules.

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. Table 4 of the SPCC identifies the Type of Oil for containers and equipment \geq 55 gallons.
2. Discuss potential for converting to EAL for each process/equipment (AKART).
3. Develop a timeline for converting appropriate equipment to EAL usage.

S10.C. Oil and Grease Maintenance and Inspections

The facility will perform Maintenance and Inspection Procedures in accordance with Section 500 of the facility SPCC Plan. The facility must submit an Annual Oil and Grease Report detailing:

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 Kaplan Generator Oil Loss
5. EAL substitutions

S11. Compliance schedule

S11.A. Monitoring Plan and Equipment

The facility must adequately monitor influent and effluent for flow, temperature, and Oil and Grease. By [insert date one year after permit effective date], the Permittee must provide to Ecology for review and approval, a plan including continuous temperature monitoring at cooling water and sump outfalls as well as details for calculating flows. Monitoring equipment must be installed as necessary by the end of the compliance schedule [insert date two years after permit effective date].

S11.B. Quality Assurance Project Plan (QAPP)

The facility must ensure effluent temperature loading does not exceed the Final TMDL WLA. The existing non-point Quality Assurance Project Plan for Monitoring Selected Water Quality Parameters within the Priest Rapids Hydroelectric Project (2018) (QAPP) may not be sufficient to establish accurate upstream ambient conditions for assessing the impact of effluent heat loading. The facility must evaluate whether or not existing QAPP data for ambient river temperatures are representative of ambient background conditions upstream of Wanapum Dam. QAPP review must be completed by [insert date one year after permit effective date]. The facility must update the existing QAPP or establish a new QAPP by the end of the compliance schedule [insert date two years after permit effective date] if existing QAPP data are not representative of ambient background conditions.

S11.C. Temperature Total Maximum Daily Load

By [insert date two years after permit effective date or 30 days after final Temperature TMDL is issued, whichever is later], the Permittee must achieve and maintain compliance with the wasteload allocation (WLA) given for the Wanapum Dam in the 2020 USEPA Columbia and Lower Snake Rivers Temperature Total Maximum Daily Load (or any subsequent revision made before the compliance deadline). Commence continuous temperature monitoring according to provisions detailed in the Monitoring Plan.

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 10: Conventional Pollutants

Pollutant	CAS Number (if available)	Recommended Analytical Protocol	Detection (DL)¹ µg/L <i>Unless specified</i>	Quantitation Level (QL)² µg/L <i>Unless specified</i>
Biochemical Oxygen Demand		SM5210-B		2 mg/L
Biochemical Oxygen Demand, Soluble		SM5210-B ³		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 ⁺ B	N/A	N/A
Total Suspended Solids		SM2540-D		5 mg/L

Table 11: NonConventional Pollutants

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

Pollutant	CAS Number (if available)	Recommended Analytical Protocol	Detection (DL)¹ µg/L <i>Unless specified</i>	Quantitation Level (QL)² µg/L <i>Unless specified</i>
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 ₃
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

Pollutant	CAS Number (if available)	Recommended Analytical Protocol	Detection (DL)¹ µg/L <i>Unless specified</i>	Quantitation Level (QL)² µg/L <i>Unless specified</i>
Molybdenum, Total	7439-98-7	200.8	0.1	0.5
Nitrate + Nitrite Nitrogen (as N)		SM4500-NO3- E/F/H		100
Nitrogen, Total Kjeldahl (as N)		SM4500-N _{org} B/C and SM4500NH ₃ - B/C/D/EF/G/H		300
NWTPH Dx ⁴		Ecology NWTPH Dx	250	250
NWTPH Gx ⁵		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 ₄)		SM4110-B		0.2 mg/L
Sulfide (as mg/L S)		SM4500-S ² F/D/E/G		0.2 mg/L
Sulfite (as mg/L SO ₃)		SM4500-SO3B		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

Pollutant	CAS Number (if available)	Recommended Analytical Protocol	Detection (DL)¹ µg/L <i>Unless specified</i>	Quantitation Level (QL)² µg/L <i>Unless specified</i>
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 12: Metals, Cyanide & Total Phenols

Priority Pollutants	PP #	CAS Number (if available)	Recommended Analytical Protocol	Detection (DL)¹ µg/L <i>Unless specified</i>	Quantitation Level (QL)² µg/L <i>Unless specified</i>
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) ¹ µg/L <i>Unless specified</i>	Quantitation Level (QL) ² µg/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 13: Acid Compounds

Priority Pollutants	PP #	CAS Number (if available)	Recommended Analytical Protocol	Detection (DL) ¹ µg/L <i>Unless specified</i>	Quantitation Level (QL) ² µg/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) ¹ µg/L <i>Unless specified</i>	Quantitation Level (QL) ² µg/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 14: Volatile Compounds

Priority Pollutants	PP #	CAS Number (if available)	Recommended Analytical Protocol	Detection (DL) ¹ µg/L <i>Unless specified</i>	Quantitation Level (QL) ² µg/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) ¹ µg/L <i>Unless specified</i>	Quantitation Level (QL) ² µg/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) ⁶	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) ¹ µg/L <i>Unless specified</i>	Quantitation Level (QL) ² µg/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 15: Base/Neutral Compounds (Compounds in Bold are Ecology PBTs)

Priority Pollutants	PP #	CAS Number (if available)	Recommended Analytical Protocol	Detection (DL) ¹ µg/L <i>Unless specified</i>	Quantitation Level (QL) ² µg/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) ¹ µg/L <i>Unless specified</i>	Quantitation Level (QL) ² µg/L <i>Unless specified</i>
Benzo(a)anthracene	72	56-55-3	625.1	7.8	23.4
Benzo(b)fluoranthene (3,4-benzofluoranthene) ⁷	74	205-99-2	610/625.1	4.8	14.4
Benzo(j)fluoranthene⁷		205-82-3	625	0.5	1.0
Benzo(k)fluoranthene (11,12-benzofluoranthene) ⁷	75	207-08-9	610/625.1	2.5	7.5
Benzo(r,s,t)pentaphene		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) ¹⁰	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
Dibenzo (a,h)acridine		226-36-8	610M/625M	2.5	10.0
Dibenzo (a,i)acridine		224-42-0	610M/625M	2.5	10.0

Priority Pollutants	PP #	CAS Number (if available)	Recommended Analytical Protocol	Detection (DL) ¹ µg/L <i>Unless specified</i>	Quantitation Level (QL) ² µg/L <i>Unless specified</i>
Dibenzo(a-h)anthracene (1,2,5,6-dibenzanthracene)	82	53-70-3	625.1	2.5	7.5
Dibenzo(a,e)pyrene		192-65-4	610M/625M	2.5	10.0
Dibenzo(a,h)pyrene		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) ¹ µg/L <i>Unless specified</i>	Quantitation Level (QL) ² µg/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
3-Methyl cholanthrene		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
Perylene		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 16: Dioxin

Priority Pollutant	PP #	CAS Number (if available)	Recommended Analytical Protocol	Detection (DL) ¹ µg/L <i>Unless specified</i>	Quantitation Level (QL) ² µg/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 17: Pesticides/PCBS

Priority Pollutants	PP #	CAS Number (if available)	Recommended Analytical Protocol	Detection (DL) ¹ µg/L <i>Unless specified</i>	Quantitation Level (QL) ² µg/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 ⁸	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) ¹ µg/L <i>Unless specified</i>	Quantitation Level (QL) ² µg/L <i>Unless specified</i>
PCB-1242 ⁹	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 ⁹	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.
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.
8. **Bis(2-Chloro-1-Methylethyl) Ether** – This compound was previously listed as Bis(2-Chloroisopropyl) Ether (39638-32-9)