

Issuance Date: September 27, 2021  
Effective Date: November 1, 2021  
Expiration Date: October 31, 2026

**National Pollutant Discharge Elimination System  
Waste Discharge Permit No. WA0051063**

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

**City of West Richland Publicly Owned Treatment Works  
(West Richland POTW)  
3100 Belmond Blvd  
West Richland, WA 99353**

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

Plant Location:

320 N 46<sup>th</sup> Ave, West Richland WA 99353

Receiving Water:

Yakima River, River Mile 9.8

Treatment Type:

Activated Sludge (Biolac®), Ultraviolet  
Disinfection



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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.

Permit Section	Submittal	Frequency	First Submittal Date
S3.A.4.a.	<b>Monthly</b> Discharge Monitoring Report (DMR)	Monthly	<b>December 15, 2021</b>
S3.A.4.b	<b>Quarterly</b> DMR	Quarterly	<b>April 15, 2022</b>
S3.A.4.c.	<b>Annual</b> DMR	Annually	<b>January 15, 2023</b>
S3.A.4.d.	<b>Single Sample</b> DMR - Priority Pollutant Data - Single Sample Data	Summer 2024 and Winter 2024	<b>October 31, 2025</b>
S3.F	Reporting Permit Violations	As necessary	
S4.B	Plans for Maintaining Adequate Capacity	As necessary	
S4.D	Notification of New or Altered Sources	As necessary	
S4.E.4.	Infiltration and Inflow Evaluation	1/permit cycle	<b>October 1, 2023</b>
S4.F	Wasteload Assessment	1/permit cycle	<b>October 1, 2023</b>
S5.F	Bypass Notification	As necessary	
S5.G	Operations and Maintenance Manual Update	As necessary	
S5.G.a.1.	Operations and Maintenance Manual Review Confirmation Letter	Annually	<b>December 31, 2022</b>
S5.H.5.	Collection System Exfiltration Prevention Plan	1/permit cycle	<b>September 30, 2022</b>
S6.B.4.	Notify Ecology when Industrial Users violate discharge prohibitions	As necessary	
S6.C.2.	Notify Ecology of any proposed discharger which may be a SIU	As necessary	
S6.D	Submit copies of Industrial User notifications letters	As necessary	
S6.E	Industrial User Survey Submittal	1/permit cycle	<b>April 15, 2022</b>

<b>Permit Section</b>	<b>Submittal</b>	<b>Frequency</b>	<b>First Submittal Date</b>
S6.E	Annual List of Industrial Users	Annually	<b>April 15, 2023</b>
S8.	Application for Permit Renewal	1/permit cycle	<b>October 31, 2025</b>
S9.A.1.	Spill Control Plan Submittal "or" Update	1/permit cycle	<b>April 30, 2022</b>
S10.	Outfall Evaluation	1/permit cycle	<b>October 31, 2024</b>
S11.A.4.	Acute Toxicity Effluent Test Results - Submit with Permit Renewal Application	Summer 2024 and Winter 2024	<b>October 31, 2025</b>
S12.A.4.	Chronic Toxicity Effluent Test Results with Permit Renewal Application	Summer 2024 and Winter 2024	<b>October 31, 2025</b>
G1.	Notice of Change in Authorization	As necessary	
G4.	Reporting Planned Changes	As necessary	
G5.	Engineering Report for Construction or Modification Activities	As necessary	
G7.	Notice of Permit Transfer	As necessary	
G10.	Duty to Provide Information	As necessary	
G20.	Compliance Schedules	As necessary	
G21.	Contract Submittal	As necessary	

## Special Conditions

### S1. Discharge limits

#### S1.A. Effluent limits

All discharges and activities authorized by this permit must comply 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 **November 1, 2021**, the Permittee may discharge treated domestic wastewater to the Yakima River at the permitted location subject to compliance with the following limits:

#### Effluent Limits: Outfall 001

**Latitude 46.31130 Longitude -119.33772**

Parameter	Average Monthly <sup>a</sup>	Average Weekly <sup>b</sup>
Biochemical Oxygen Demand (5-day) (BOD <sub>5</sub> )	10 mg/L 125 lbs/day 85% removal of influent BOD <sub>5</sub>	10mg/L 125 lbs/day
Total Suspended Solids (TSS)	15 mg/L 187.7 lbs/day 85% removal of influent TSS	15 mg/L 187.7 lbs/day

Parameter	Minimum	Maximum
pH	6.5 standard units	8.5 standard units

Parameter	Monthly Geometric Mean	Weekly Geometric Mean
Fecal Coliform Bacteria <sup>c</sup>	100 organisms/100 mL	200 organisms/100 mL

Parameter	Daily Maximum <sup>d</sup>
Total Ammonia (as NH <sub>3</sub> -N)	1 mg/L and 12.6 lbs/day

Footnote	Information
a	Average monthly effluent limit means the highest allowable average of daily discharges over a calendar month. To calculate the discharge value to compare to the limit, you add the value of each daily discharge measured during a calendar month and divide this sum by the total number of daily discharges measured. See footnote c for fecal coliform calculations.
b	Average weekly discharge limit means the highest allowable average of daily discharges over a calendar week, calculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges' measured during that week. See footnote c for bacteria calculations.
c	Ecology provides directions to calculate the monthly and the weekly geometric mean in <a href="https://fortress.wa.gov/ecy/publications/SummaryPages/0410020.html">publication No. 04-10-020, Information Manual for Treatment Plant Operators</a> available at: <a href="https://fortress.wa.gov/ecy/publications/SummaryPages/0410020.html">https://fortress.wa.gov/ecy/publications/SummaryPages/0410020.html</a>
d	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. For pollutants with limits expressed in units of mass, calculate the daily discharge as the total mass of the pollutant discharged over the day. This does not apply to pH or temperature.

## **S1.B. Mixing zone authorization**

The paragraphs below defines the maximum boundaries of the mixing zones.

### **Chronic mixing zone**

The width of the chronic mixing zone is limited to a distance of 13.3 feet. The length of the chronic mixing zone extends 100 feet upstream and 304.3 feet downstream of the outfall. The mixing zone extends from the bottom to the top of the water column. The concentration of pollutants at the edge of the chronic zone must meet chronic aquatic life criteria and human health criteria.

### **Acute mixing zone**

The width of the acute mixing zone is limited to a distance of 1.3 feet in any horizontal direction from the outfall. The length of the acute mixing zone extends 10 feet upstream and 30.4 feet downstream of the outfall. The mixing zone extends from the bottom to the top of the water column. The



concentration of pollutants at the edge of the acute zone must meet acute aquatic life criteria.

**Available Dilution (dilution factor)**

Criteria	Factor
Acute Aquatic Life Criteria	3.6
Chronic Aquatic Life Criteria	35.2

## **S2. Monitoring requirements**

### **S2.A. Monitoring schedule**

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

#### **Wastewater influent**

Wastewater Influent means the raw sewage flow from the collection system into the treatment facility. Sample the wastewater entering the headworks of the treatment plant excluding any side-stream returns from inside the plant.

Parameter	Units	Minimum Sampling Frequency	Sample Type
Biochemical Oxygen Demand (BOD <sub>5</sub> )	mg/L	1/week	24-hr composite
Biochemical Oxygen Demand (BOD <sub>5</sub> )	lbs/day	1/week	Calculated
Total Suspended Solids (TSS)	mg/L	1/week	24-hr composite
Total Suspended Solids (TSS)	lbs/day	1/week	Calculated

### Final wastewater effluent

Final Wastewater Effluent means wastewater exiting the last treatment process or operation.

Parameter	Units	Minimum Sampling Frequency	Sample Type
Flow	MGD	Continuous <sup>a</sup>	Metered
BOD <sub>5</sub>	mg/L	1/week <sup>b</sup>	24-hr composite <sup>c</sup>
BOD <sub>5</sub>	lbs/day	1/week	Calculated <sup>d</sup>
BOD <sub>5</sub>	% removal <sup>e</sup>	1/week	Calculated
TSS	mg/L	1/week	24-hr composite
TSS	lbs/day	1/week	Calculated
TSS	% removal	1/week	Calculated
Fecal Coliform <sup>f</sup>	# /100 mL	1/week	Grab <sup>g</sup>
(Fecal Coliform, <i>E.Coli</i> ) <sup>h</sup>	MPN/100 mL	Monthly <sup>i</sup>	Grab
pH <sup>j</sup>	Standard Units	5/week <sup>k</sup>	Grab
Dissolved Oxygen <sup>l</sup>	mg/L	5/week	Grab
Temperature <sup>m</sup>	°C	Continuous	Measurement
7-DAD Max Temperature <sup>n</sup>	°C	1/day	Calculated
Ultraviolet (UV) Transmittance	%	1/day	Measurement
Number of Operating Tubes	#	1/day	Visual Observation

### Whole effluent toxicity testing – final wastewater effluent

Acute Toxicity Testing	As Specified in Special Condition S12
Chronic Toxicity Testing	As Specified in Special Condition S13

### Effluent characterization – final wastewater effluent

Parameter	Units & Speciation	Minimum Sampling Frequency	Sample Type
Total Phosphorus	mg/L as P	Quarterly °	Grab
Soluble Reactive Phosphorus	mg/L as P	Quarterly	Grab
Total Ammonia	mg/L as N	Quarterly	Grab
Nitrate plus Nitrite Nitrogen	mg/L as N	Quarterly	Grab
Total Kjeldahl Nitrogen (TKN)	mg/L as N	Quarterly	Grab

### Permit renewal application requirements – final wastewater effluent

The Permittee must record and report the wastewater treatment plant flow discharged on the day it collects the sample for priority pollutant testing with the discharge monitoring report.

Parameter	Units & Speciation	Minimum Sampling Frequency	Sample Type
Total Kjeldahl Nitrogen	+	Once per year	Grab
Total Ammonia	mg/L as N	Once per year	Grab
Nitrate plus Nitrite	mg/L as N	Once per year	Grab
Oil and Grease	mg/L	Once per year	Grab
Phosphorus (Total)	mg/L as P	Once per year	Grab
Total Dissolved Solids	mg/L	Once per year	Grab
Total Hardness	mg/L	Once per year	Grab
Cyanide	µg/L	Once per year	Grab

Parameter	Units & Speciation	Minimum Sampling Frequency	Sample Type
Total Phenolic Compounds	µg/L	Once per year	Grab
Priority Pollutants (PP) – Total Metals <sup>P</sup>	µg/L; ng/L for mercury	Summer 2024 and Winter 2024 <sup>Q</sup>	24-Hour composite Grab for mercury
PP – Volatile Organic Compounds	µg/L	Summer 2024 and Winter 2024	Grab
PP – Acid-extractable Compounds	µg/L	Summer 2024 and Winter 2024	24-Hour composite
PP – Base-neutral Compounds	µg/L	Summer 2024 and Winter 2024	24-Hour composite
PP – Pesticides/PCBs	ug/L or ng/L	Summer 2024 and Winter 2024	24-Hour composite
Footnote	Information		
a	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.		
b	1/week means one (1) times during each calendar week and on a rotational basis throughout the days of the week, except weekends and holidays.		
c	24-hour composite means a series of individual samples collected over a 24-hour period into a single container, and analyzed as one sample.		
d	Calculated means figured concurrently with the respective sample, using the following formula: Concentration (in mg/L) X Flow (in MGD) X Conversion Factor (8.34) = lbs/day		
e	Calculate the percent (%) removal of BOD <sub>5</sub> and TSS using the following equation: % removal = $\frac{\text{Influent concentration (mg/L)} - \text{Effluent concentration (mg/L)}}{\text{Influent concentration (mg/L)}} \times 100$		
f	Report a numerical value for fecal coliforms and E. coli following the procedures in Ecology's <a href="https://fortress.wa.gov/ecy/publications/SummaryPages/0410020.html">Information Manual for Wastewater Treatment Plant Operators, Publication Number 04-10-020</a> available at: <a href="https://fortress.wa.gov/ecy/publications/SummaryPages/0410020.html">https://fortress.wa.gov/ecy/publications/SummaryPages/0410020.html</a> . Do not report a result as too numerous to count (TNTC).		
g	Grab means an individual sample collected over a fifteen (15) minute, or less, period.		
h	The Permittee is required to monitor for both fecal coliform and <i>E.coli</i> for development of the site specific correlation. The grab samples for fecal coliform by most probable		

Parameter	Units & Speciation	Minimum Sampling Frequency	Sample Type
	number (MPN) and E. coli by MPN must be sampled for and analyzed at the same time.		
i	Monthly means once every calendar month. Concurrent monthly monitoring will begin January 2023 and end following December 2025 sampling.		
j	Report the daily pH and the minimum and maximum for the monitoring period.		
k	5/week means five (5) times during each calendar week, except weekends and holidays.		
l	Report the daily dissolved oxygen concentration and the minimum for the reporting period.		
m	The Permittee must 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.		
n	Calculate a 7-DAD Max for each day by averaging each days maximum temperature value with the daily maximum temperatures of the three (3) days prior and the three (3) days after that specific date (May 1 <sup>st</sup> – Sept 31).		
o	Quarterly sampling periods are January through March, April through June, July through September, and October through December. The Permittee must begin quarterly monitoring for the quarter beginning on <b>1/1/22</b> and submit results by <b>4/15/22</b> .		
p	Priority Pollutant Scans for Total Metals shall use total recoverable metal laboratory methods for all parameters except for hexavalent chromium. The 40 CFR 136 method for hexavalent chromium measures only its dissolved form.		
q	Collect Priority Pollutant samples at the same time the WET tests samples are taken. (once in the last summer and once in the last winter prior to submission of the application for permit renewal).		

## 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 bypasses, 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, 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. May calibrate apparatus for continuous monitoring of dissolved oxygen by air calibration.
  - b. 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 online 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.
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, settleable solids, conductivity, pH, and internal process control parameters are exempt from this requirement. The Permittee must obtain accreditation for conductivity and 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 **November 1, 2021** (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](https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Water-quality-permits-guidance/WQWebPortal-guidance) go to: <https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Water-quality-permits-guidance/WQWebPortal-guidance>

2. Ensure that DMRs are electronically submitted no later than the dates specified below, unless otherwise specified in this permit.
3. 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.
4. 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 15<sup>th</sup> day of the following month.
  - b. Submit **quarterly** DMRs, unless otherwise specified in the permit, by the 15<sup>th</sup> day of the month following the monitoring period. Quarterly sampling periods are January through March, April through June, July through September, and October through December. The Permittee must submit the first quarterly DMR on **April 15, 2022** for the quarter beginning on **January 1, 2022**.
  - c. Submit **annual** DMRs, unless otherwise specified in the permit, by January 15<sup>th</sup> for the previous calendar year. The annual sampling period is the calendar year.
  - d. Submit **single sample** DMR (permit renewal application monitoring data) in WQWebDMR as required in Special Condition S2, footnote q. To be submitted with the permit renewal application by **October 31, 2025**.
5. 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.
6. 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.
7. 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.

8. Not report zero for bacteria monitoring. Report as required by the laboratory method.
9. Calculate and report an arithmetic average value for each day for bacteria if multiple samples were taken in one day.
10. Calculate the geometric mean values for bacteria (unless otherwise specified in the permit) using:
11. The reported numeric value for all bacteria samples measured above the detection value except when it took multiple samples in one day. If the Permittee takes multiple samples in one day it must use the arithmetic average for the day in the geometric mean calculation.
12. The detection value for those samples measured below detection.
13. 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.
14. 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.
15. Report single-sample grouped parameters (for example: priority pollutants, PAHs, pulp and paper chlorophenolics, TTOs) on the WQWebDMR form and include: sample date, concentration detected, detection limit (DL) (as necessary), and laboratory quantitation level (QL) (as necessary).

### **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. Immediate reporting**

The Permittee must **immediately** report to Ecology and the Local Health Jurisdiction (at the numbers listed below), all:

- Failures of the disinfection system.
- Collection system overflows discharging to a waterbody used as a source for drinking water.
- Plant bypasses resulting in a discharge to a waterbody used as a source of drinking water.
- Any other failures of the sewage system (pipe breaks, etc).

Central Regional Office	509-575-2490
Benton Franklin Health District	509-460-4200

Additionally, for any sanitary sewer overflow (SSO) that discharges to a municipal separate storm sewer system (MS4), the Permittee must notify the appropriate MS4 owner or operator.

#### **b. Twenty-four-hour reporting**

The Permittee must report the following occurrences of noncompliance 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 unanticipated bypass that causes an exceedance of an effluent limit in the permit (See Part S5.F, "Bypass Procedures").

3. Any upset that causes an exceedance of an effluent limit in the permit (See G.15, "Upset").
4. Any violation of a maximum daily or instantaneous maximum discharge limit for any of the pollutants in Section S1.A of this permit.
5. Any overflow prior to the treatment works, whether or not such overflow endangers health or the environment or exceeds any effluent limit in the permit.

**c. 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.

**d. 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.

**e. 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. Facility loading**

### **S4.A. Design criteria**

The flows or waste loads for the permitted facility must not exceed the following design criteria:

#### **Design criteria**

<b>Flow</b>	<b>Unit</b>
Maximum Month Design Flow (MMDF)	1.50 MGD
BOD <sub>5</sub> Influent Loading for Maximum Month	3,128 lb/day
TSS Influent Loading for Maximum Month	3,128 lb/day

### **S4.B. Plans for maintaining adequate capacity**

#### **a. Conditions triggering plan submittal**

The Permittee must submit a plan and a schedule for continuing to maintain capacity to Ecology when:

1. The actual flow or waste load reaches 85 percent of any one of the design criteria in S4.A for three consecutive months.

2. The projected plant flow or loading would reach design capacity within five years.

**b. Plan and schedule content**

The plan and schedule must identify the actions necessary to maintain adequate capacity for the expected population growth and to meet the limits and requirements of the permit. The Permittee must consider the following topics and actions in its plan.

1. Analysis of the present design and proposed process modifications
2. Reduction or elimination of excessive infiltration and inflow of uncontaminated ground and surface water into the sewer system
3. Limits on future sewer extensions or connections or additional waste loads
4. Modification or expansion of facilities
5. Reduction of industrial or commercial flows or waste loads

Engineering documents associated with the plan must meet the requirements of [WAC 173-240-060](#), "Engineering Report," and be approved by Ecology prior to any construction.

**S4.C. Duty to mitigate**

The Permittee must take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit that has a reasonable likelihood of adversely affecting human health or the environment.

**S4.D. Notification of new or altered sources**

1. The Permittee must submit written notice to Ecology whenever any new discharge or a substantial change in volume or character of an existing discharge into the wastewater treatment plant is proposed which:
  - a. Would interfere with the operation of, or exceed the design capacity of, any portion of the wastewater treatment plant.
  - b. Is not part of an approved general sewer plan or approved plans and specifications.
  - c. Is subject to pretreatment standards under [40 CFR Part 403](#) and [Section 307\(b\) of the Clean Water Act](#).

2. This notice must include an evaluation of the wastewater treatment plant's ability to adequately transport and treat the added flow and/or waste load, the quality and volume of effluent to be discharged to the treatment plant, and the anticipated impact on the Permittee's effluent [[40 CFR 122.42 \(b\)](#)].

**S4.E. Infiltration and inflow evaluation**

1. The Permittee must conduct an infiltration and inflow evaluation once per permit cycle. Refer to the U.S. [EPA publication, I/I Analysis and Project Certification, available as Publication No. 97-03](#) at: <https://fortress.wa.gov/ecy/publications/SummaryPages/9703.html>
2. The Permittee may use monitoring records to assess measurable infiltration and inflow.
3. The Permittee must prepare a report summarizing any measurable infiltration and inflow. If infiltration and inflow have increased by more than 15 percent from that found in the previous report based on equivalent rainfall, the report must contain a plan and a schedule to locate the sources of infiltration and inflow and to correct the problem.
4. The Permittee must submit a report summarizing the results of the evaluation and any recommendations for corrective actions by **October 1, 2023**.

**S4.F. Wasteload assessment**

The Permittee must conduct an assessment of its influent flow and waste load and submit a report to Ecology once per permit cycle, by **October 1, 2023**. The report must contain:

1. A description of compliance or noncompliance with the permit effluent limits.
2. A comparison between the existing and design:
  - a. Monthly average dry weather and wet weather flows.
  - b. BOD<sub>5</sub> loading.
  - c. Total suspended solids loadings.
3. The percent change in the above parameters since the previous report (except for the first report).
4. The present and design population or population equivalent.
5. The projected population growth rate.

6. The estimated date upon which the Permittee expects the wastewater treatment plant to reach design capacity, according to the most restrictive of the parameters above.

Ecology may modify the interval for review and reporting if it determines that a different frequency is sufficient.

## **S5. Operation and maintenance**

The Permittee must at all times properly operate and maintain all facilities and systems of treatment 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 a daily operation logbook (paper or electronic), 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.

### **S5.A. Certified operator**

This permitted facility must be operated by an operator certified by the state of Washington for at least a **Class III** plant. This operator must be in responsible charge of the day-to-day operation of the wastewater treatment plant. An operator certified for at least a **Class II** plant must be in charge during all regularly scheduled shifts. The Permittee must notify Ecology when the operator in charge at the facility changes. It must provide the new operator's name and certification level and provide the name of the operator leaving the facility.

### **S5.B. Operation and maintenance program**

The Permittee must:

1. Institute an adequate operation and maintenance program for the entire sewage system.
2. Keep maintenance records on all major electrical and mechanical components of the treatment plant, as well as the sewage system and pumping stations. Such records must clearly specify the frequency and type of maintenance recommended by the manufacturer and must show the frequency and type of maintenance performed.
3. Make maintenance records available for inspection at all times.

### **S5.C. Short-term reduction**

The Permittee must schedule any facility maintenance, which might require interruption of wastewater treatment and degrade effluent quality, during



non-critical water quality periods and carry this maintenance out according to the approved O&M manual or as otherwise approved by Ecology.

If a Permittee contemplates a reduction in the level of treatment that would cause a violation of permit discharge limits on a short-term basis for any reason, and such reduction cannot be avoided, the Permittee must:

1. Give written notification to Ecology, if possible, thirty (30) days prior to such activities.
2. Detail the reasons for, length of time of, and the potential effects of the reduced level of treatment.

This notification does not relieve the Permittee of its obligations under this permit.

**S5.D. Electrical power failure**

The Permittee must ensure that adequate safeguards prevent the discharge of untreated wastes or wastes not treated in accordance with the requirements of this permit during electrical power failure at the treatment plant and/or sewage lift stations. Adequate safeguards include, but are not limited to, alternate power sources, standby generator(s), or retention of inadequately treated wastes.

The Permittee must maintain Reliability Class II ([EPA 430-99-74-001](#)) at the wastewater treatment plant. Reliability Class II requires a backup power source sufficient to operate all vital components and critical lighting and ventilation during peak wastewater flow conditions. Vital components used to support the secondary processes (i.e., mechanical aerators or aeration basin air compressors) need not be operable to full levels of treatment, but must be sufficient to maintain the biota.

**S5.E. Prevent connection of inflow**

The Permittee must strictly enforce its sewer ordinances and not allow the connection of inflow (roof drains, foundation drains, etc.) to the sanitary sewer system.

**S5.F. Bypass procedures**

A bypass is the intentional diversion of waste streams from any portion of a treatment facility. This permit prohibits all bypasses except when the bypass is for essential maintenance, as authorized in special condition S5.F.1, or is approved by Ecology as an anticipated bypass following the procedures in S5.F.2.

1. Bypass for essential maintenance without the potential to cause violation of permit limits or conditions.

This permit allows bypasses for essential maintenance of the treatment system when necessary to ensure efficient operation of the system. The Permittee may bypass the treatment system for essential maintenance only if doing so does not cause violations of effluent limits. The Permittee is not required to notify Ecology when bypassing for essential maintenance. However the Permittee must comply with the monitoring requirements specified in special condition S2.B.

2. Anticipated bypasses for non-essential maintenance

Ecology may approve an anticipated bypass under the conditions listed below. This permit prohibits any anticipated bypass that is not approved through the following process.

- a. If a bypass is for non-essential maintenance, the Permittee must notify Ecology, if possible, at least ten (10) days before the planned date of bypass. The notice must contain:
  - A description of the bypass and the reason the bypass is necessary.
  - An analysis of all known alternatives which would eliminate, reduce, or mitigate the potential impacts from the proposed bypass.
  - A cost-effectiveness analysis of alternatives.
  - The minimum and maximum duration of bypass under each alternative.
  - A recommendation as to the preferred alternative for conducting the bypass.
  - The projected date of bypass initiation.
  - A statement of compliance with SEPA.
  - A request for modification of water quality standards as provided for in [WAC 173-201A-410](#), if an exceedance of any water quality standard is anticipated.
  - Details of the steps taken or planned to reduce, eliminate, and prevent recurrence of the bypass.
- b. For probable construction bypasses, the Permittee must notify Ecology of the need to bypass as early in the planning process as possible. The Permittee must consider the analysis required above

during the project planning and design process. The project-specific engineering report as well as the plans and specifications must include details of probable construction bypasses to the extent practical. In cases where the Permittee determines the probable need to bypass early, the Permittee must continue to analyze conditions up to and including the construction period in an effort to minimize or eliminate the bypass.

- c. Ecology will determine if the Permittee has met the conditions of special condition S5.F.2 a and b and consider the following prior to issuing a determination letter, an administrative order, or a permit modification as appropriate for an anticipated bypass:
  - If the Permittee planned and scheduled the bypass to minimize adverse effects on the public and the environment.
  - If the bypass is unavoidable to prevent loss of life, personal injury, or severe property damage. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which would cause them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass.
  - If feasible alternatives to the bypass exist, such as:
    - The use of auxiliary treatment facilities.
    - Retention of untreated wastes.
    - Stopping production.
    - Maintenance during normal periods of equipment downtime, but not if the Permittee should have installed adequate backup equipment in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventative maintenance.
    - Transport of untreated wastes to another treatment facility.

## **S5.G. Operations and maintenance (O&M) manual**

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

The Permittee must:

1. Review the O&M Manual at least annually and confirm this review by letter to Ecology by **December 31, 2022**, and annually thereafter.

2. Submit to Ecology for review and approval substantial changes or updates to the O&M Manual.
3. Keep the approved O&M Manual at the permitted facility.
4. Follow the instructions and procedures of this manual.

**b. O&M manual components**

In addition to the requirements of [WAC 173-240-080\(1\) through \(5\)](#), the O&M Manual must be consistent with the guidance in Table G1-3 in the [Criteria for Sewage Works Design \(Orange Book\) 2008](#). The O&M Manual must include:

1. Emergency procedures for cleanup in the event of wastewater system upset or failure.
2. A review of system components 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.
3. Wastewater system maintenance procedures that contribute to the generation of process wastewater.
4. Reporting protocols for submitting reports to Ecology to comply with the reporting requirements in the discharge permit.
5. Any directions to maintenance staff when cleaning or maintaining other equipment or performing other tasks which are necessary to protect the operation of the wastewater system (for example, defining maximum allowable discharge rate for draining a tank, blocking all floor drains before beginning the overhaul of a stationary engine).
6. The treatment plant process control monitoring schedule.
7. Minimum staffing adequate to operate and maintain the treatment processes and carry out compliance monitoring required by the permit.

**S5.H. Collection system exfiltration prevention plan and testing**

The Permittee must prepare a plan to prevent exfiltration of wastewater from collection system sewers into critical areas, such as surface waters, ground water, or wellhead protection areas. The plan must address potential exfiltration from sewer pipes:

1. Identified in segments of the collection system that are routed under surface water.

2. Adjacent to (within 100 yards) surface water.
3. Placed over wellhead protection areas.
4. Operating at greater than atmospheric pressure.
5. Within 50 feet above the ground water table.

The Permittee must present this plan to Ecology for approval no later than **September 30, 2022**.

## **S6. Pretreatment**

### **S6.A. General requirements**

The Permittee must work with Ecology to ensure that all commercial and industrial users of the publicly owned treatment works (POTW) comply with the pretreatment regulations in [40 CFR Part 403](#) and any additional regulations that the Environmental Protection Agency (U.S. EPA) may promulgate under [Section 307\(b\) \(pretreatment\) and 308 \(reporting\) of the Federal Clean Water Act](#).

### **S6.B. Duty to enforce discharge prohibitions**

1. Under federal regulations ([40 CFR 403.5\(a\) and \(b\)](#)), the Permittee must not authorize or knowingly allow the discharge of any pollutants into its POTW which may be reasonably expected to cause pass through or interference, or which otherwise violate general or specific discharge prohibitions contained in [40 CFR Part 403.5](#) or [WAC 173-216-060](#).
2. The Permittee must not authorize or knowingly allow the introduction of any of the following into their treatment works:
  - a. Pollutants which create a fire or explosion hazard in the POTW (including, but not limited to waste streams with a closed cup flashpoint of less than 140 degrees Fahrenheit or 60 degrees Centigrade using the test methods specified in [40 CFR 261.21](#)).
  - b. Pollutants which will cause corrosive structural damage to the POTW, but in no case discharges with pH lower than 5.0, or greater than 11.0 standard units, unless the works are specifically designed to accommodate such discharges.
  - c. Solid or viscous pollutants in amounts that could cause obstruction to the flow in sewers or otherwise interfere with the operation of the POTW.

- d. Any pollutant, including oxygen-demanding pollutants, (BOD<sub>5</sub>, etc.) released in a discharge at a flow rate and/or pollutant concentration which will cause interference with the POTW.
  - e. Petroleum oil, non-biodegradable cutting oil, or products of mineral origin in amounts that will cause interference or pass through.
  - f. Pollutants which result in the presence of toxic gases, vapors, or fumes within the POTW in a quantity which may cause acute worker health and safety problems.
  - g. Heat in amounts that will inhibit biological activity in the POTW resulting in interference but in no case heat in such quantities such that the temperature at the POTW headworks exceeds 40 degrees Centigrade (104 degrees Fahrenheit) unless Ecology, upon request of the Permittee, approves, in writing, alternate temperature limits.
  - h. Any trucked or hauled pollutants, except at discharge points designated by the Permittee.
  - i. Wastewaters prohibited to be discharged to the POTW by the Dangerous Waste Regulations ([chapter 173-303 WAC](#)), unless authorized under the Domestic Sewage Exclusion ([WAC 173-303-071](#)).
3. The Permittee must also not allow the following discharges to the POTW unless approved in writing by Ecology:
- a. Noncontact cooling water in significant volumes.
  - b. Stormwater and other direct inflow sources.
  - c. Wastewaters significantly affecting system hydraulic loading, which do not require treatment, or would not be afforded a significant degree of treatment by the system.
4. The Permittee must notify Ecology if any industrial user violates the prohibitions listed in this section (S6.B), and initiate enforcement action to promptly curtail any such discharge.

**S6.C. Wastewater discharge permit required**

The Permittee must:

- 1. Establish a process for authorizing non-domestic wastewater discharges that ensures all SIUs in all tributary areas meet the applicable state waste discharge permit (SWDP) requirements in accordance with chapter 90.48 RCW and chapter [173-216 WAC](#).

2. Immediately notify Ecology of any proposed discharge of wastewater from a source, which may be a significant industrial user (SIU) [see fact sheet definitions or refer to [40 CFR 403.3\(v\)\(i\)\(ii\)](#)].
3. Require all SIUs to obtain a SWDP from Ecology prior to accepting their non-domestic wastewater, or require proof that Ecology has determined they do not require a permit.
4. Require the documentation as described in S6.C.3 at the earliest practicable date as a condition of continuing to accept non-domestic wastewater discharges from a previously undiscovered, currently discharging and unpermitted SIU.
5. Require sources of non-domestic wastewater, which do not qualify as SIUs but merit a degree of oversight, to apply for a SWDP and provide it a copy of the application and any Ecology responses.
6. Keep all records documenting that its users have met the requirements of S6.C.

**S6.D. Identification and reporting of existing, new, and proposed industrial users**

1. The Permittee must take continuous, routine measures to identify all existing, new, and proposed SIUs and potential significant industrial users (PSIUs) discharging or proposing to discharge to the Permittee's sewer system (see **Appendix C** of the fact sheet for definitions).
2. Within 30 days of becoming aware of an unpermitted existing, new, or proposed industrial user who may be a significant industrial user (SIU), the Permittee must notify such user by registered mail that, if classified as an SIU, they must apply to Ecology and obtain a State Waste Discharge Permit. The Permittee must send a copy of this notification letter to Ecology within this same 30-day period.
3. The Permittee must also notify all Potential SIUs (PSIUs), as they are identified, that if their classification should change to an SIU, they must apply to Ecology for a State Waste Discharge Permit within 30 days of such change.

**S6.E. Industrial user survey**

The Permittee must complete an industrial user survey listing all SIUs and potential significant industrial users (PSIUs) discharging to the POTW. The Permittee must submit the survey to Ecology by **April 15, 2022**. At a minimum, the Permittee must develop the list of SIUs and PSIUs by means of a telephone book search, a water utility billing

records search, and a physical reconnaissance of the service area. Information on PSIUs must include, at a minimum, the business name, telephone number, address, description of the industrial process(s), and the known wastewater volumes and characteristics.

The Permittee must update the industrial user survey **annually**. The Permittee must submit the updated Industrial User Survey to Ecology by **April 15, each year following the initial industrial user survey**. The updated survey must include a list of all new industrial users, as well as existing industrial users, which are known or discovered to have significantly altered processes or disposal practices since submittal of the last survey or survey update. For industrial users for which there are potentially significant non-domestic discharges, the Permittee must obtain and include in the report the minimum information described in the paragraph above for PSIUs.

## **S7. Solid wastes**

### **S7.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.

### **S7.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.

## **S8. Application for permit renewal or modification for facility changes**

The Permittee must submit an application for renewal of this permit by **October 31, 2025**.

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.



## **S9. Spill control plan**

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

The Permittee must:

1. Submit to Ecology an update to the existing spill control plan by **April 30, 2022**.
2. Review the plan at least annually and update the spill plan as needed.
3. Send changes to the plan to Ecology.
4. Follow the plan and any supplements throughout the term of the permit.

### **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](#).

## **S10. Outfall evaluation**

The Permittee must inspect, once per permit cycle, the submerged portion of the outfall line and diffuser to document its integrity and continued function. If conditions allow for a photographic verification, the Permittee must include such verification in the report. By **October 31, 2024** the Permittee must submit the inspection report to Ecology through the Water Quality Permitting Portal – Permit Submittals application. The Permittee must submit hard-copies of any video files

to Ecology as required by Permit Condition S3.B. The Portal does not support submittal of video files.

The inspector must at minimum:

- Assess the physical condition of the outfall pipe, diffuser, and associated couplings.
- Determine the extent of sediment accumulation in the vicinity of the diffuser.
- Ensure diffuser ports are free of obstructions and are allowing uniform flow.
- Confirm physical location (latitude/longitude) and depth (at MLLW) of the diffuser section of the outfall.
- Assess physical condition of the submarine line.
- Assess physical condition of anchors used to secure the submarine line.
- Confirm the diffuser alignment angle in relation to the flow of the river
- Confirm the total length of the outfall pipe (including the diffuser) into the river.
- Confirm the number and diameter of the ports/nozzles.

## S11. Acute toxicity

### S11.A. Testing when there is no permit limit for acute toxicity

The Permittee must:

1. Conduct acute toxicity testing on final effluent once in the last summer and once in the last winter prior to submission of the application for permit renewal.
2. Conduct acute toxicity testing on a series of at least five concentrations of effluent, including 100% effluent and a control.
3. Use each of the following species and protocols for each acute toxicity test:

#### Acute Toxicity Tests

Acute Toxicity Tests	Species	Method
Fathead minnow 96-hour static-renewal test	<i>Pimephales promelas</i>	EPA-821-R-02-012
Daphnid 48-hour static test	<i>Ceriodaphnia dubia</i> , <i>Daphnia pulex</i> , OR <i>Daphnia magna</i>	EPA-821-R-02-012

4. Submit the results to Ecology by **October 31, 2025** (with the permit renewal application).

**S11.B. Sampling and reporting requirements**

1. The Permittee must submit all reports for toxicity testing in accordance with the most recent version of [Ecology Publication No. WQ-R-95-80, Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria](#). Reports must contain toxicity data, bench sheets, and reference toxicant results for test methods. In addition, the Permittee must submit toxicity test data in electronic format (CETIS export file preferred) for entry into Ecology's database.
2. The Permittee must collect **24-hour composite effluent samples** for toxicity testing. The Permittee must cool the samples to 0 - 6 degrees Celsius during collection and send them to the lab immediately upon completion. The lab must begin the toxicity testing as soon as possible but no later than 36 hours after sampling was completed.
3. The laboratory must conduct water quality measurements on all samples and test solutions for toxicity testing, as specified in the most recent version of [Ecology Publication No. WQ-R-95-80, Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria](#).
4. All toxicity tests must meet quality assurance criteria and test conditions specified in the most recent versions of the EPA methods listed in Subsection C and the [Ecology Publication No. WQ-R-95-80, Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria](#). If Ecology determines any test results to be invalid or anomalous, the Permittee must repeat the testing with freshly collected effluent.
5. The laboratory must use control water and dilution water meeting the requirements of the EPA methods listed in Section A or pristine natural water of sufficient quality for good control performance.
6. The Permittee must conduct whole effluent toxicity tests on an unmodified sample of final effluent.
7. The Permittee may sample receiving water at the same time as the effluent and instruct the lab to measure the hardness of both and increase the hardness of the effluent sample to match the hardness of the receiving water sample prior to beginning the toxicity test. Otherwise, the Permittee must conduct whole effluent toxicity tests on an unmodified sample of final effluent.
8. The Permittee may choose to conduct a full dilution series test during compliance testing in order to determine dose response. In this case, the series must have a minimum of five effluent concentrations and a

control. The series of concentrations must include the acute critical effluent concentration (ACEC). The ACEC equals **27.8%** effluent.

9. All whole effluent toxicity tests, effluent screening tests, and rapid screening tests that involve hypothesis testing must comply with the acute statistical power standard of 29% as defined in [WAC 173-205-020](#). If the test does not meet the power standard, the Permittee must repeat the test on a fresh sample with an increased number of replicates to increase the power.

## **S12. Chronic toxicity**

### **S12.A. Testing when there is no permit limit for chronic toxicity**

The Permittee must:

1. Conduct chronic toxicity testing on final effluent once in the last winter and once in the last summer prior to submission of the application for permit renewal.
2. Conduct chronic toxicity testing on a series of at least five concentrations of effluent and a control. This series of dilutions must include the acute critical effluent concentration (ACEC). The ACEC equals **27.8%** effluent. The series of dilutions should also contain the CCEC of **2.8%** effluent.
3. Compare the ACEC to the control using hypothesis testing at the 0.05 level of significance as described in Appendix H, [EPA/600/4-90/001](#).
4. Submit the results to Ecology **October 31, 2025** (with the permit renewal application).
5. Use each of the following species and protocols for each chronic toxicity test:

#### **Freshwater Chronic Test**

<b>Freshwater Chronic Test</b>	<b>Species</b>	<b>Method</b>
Fathead minnow survival and growth	<i>Pimephales promelas</i>	EPA-821-R-02-013
Water flea survival and reproduction	<i>Ceriodaphnia dubia</i>	EPA-821-R-02-013

### **S12.B. Sampling and reporting requirements**

1. The Permittee must submit all reports for toxicity testing in accordance with the most recent version of [Ecology Publication No. WQ-R-95-80, Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria](#). Reports must contain toxicity data, bench sheets, and reference toxicant results for test methods. In addition, the Permittee must submit toxicity test data in electronic format (CETIS export file preferred) for entry into Ecology's database.
2. The Permittee must collect **24-hour composite effluent samples** for toxicity testing. The Permittee must cool the samples to 0 - 6 degrees Celsius during collection and send them to the lab immediately upon completion. The lab must begin the toxicity testing as soon as possible but no later than 36 hours after sampling was completed.
3. The laboratory must conduct water quality measurements on all samples and test solutions for toxicity testing, as specified in the most recent version of [Ecology Publication No. WQ-R-95-80, Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria](#).
4. All toxicity tests must meet quality assurance criteria and test conditions specified in the most recent versions of the EPA methods listed in Section C. and the [Ecology Publication no. WQ-R-95-80, Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria](#). If Ecology determines any test results to be invalid or anomalous, the Permittee must repeat the testing with freshly collected effluent.
5. The laboratory must use control water and dilution water meeting the requirements of the EPA methods listed in Subsection C. or pristine natural water of sufficient quality for good control performance.
6. The Permittee must conduct whole effluent toxicity tests on an unmodified sample of final effluent.
7. The Permittee may choose to conduct a full dilution series test during compliance testing in order to determine dose response. In this case, the series must have a minimum of five effluent concentrations and a control. The series of concentrations must include the CCEC and the ACEC. The CCEC and the ACEC may either substitute for the effluent concentrations that are closest to them in the dilution series or be extra effluent concentrations. The CCEC equals **27.8%** effluent. The ACEC equals **2.8%** effluent.
8. All whole effluent toxicity tests that involve hypothesis testing must comply with the chronic statistical power standard of 39% as defined in WAC 173-205-020. If the test does not meet the power standard, the

Permittee must repeat the test on a fresh sample with an increased number of replicates to increase the power.

## **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 emanate, 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. 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.

### **G21. Service agreement review**

The Permittee must submit to Ecology any proposed service agreements and proposed revisions or updates to existing agreements for the operation of any wastewater treatment facility covered by this permit. The review is to ensure consistency with chapters 90.46 and 90.48 RCW as required by RCW 70.150.040(9). In the event that Ecology does not comment within a thirty-day (30) period, the Permittee may assume consistency and proceed with the service agreement or the revised/updated service agreement.

## **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 1: Conventional Pollutants**

<b>Pollutant</b>	<b>CAS Number</b> (if available)	<b>Recommended Analytical Protocol</b>	<b>Detection (DL)<sup>1</sup> <math>\mu\text{g/L}</math></b> <i>Unless specified</i>	<b>Quantitation Level (QL)<sup>2</sup> <math>\mu\text{g/L}</math></b> <i>Unless specified</i>
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 2: NonConventional Pollutants**

<b>Pollutant</b>	<b>CAS Number</b> (if available)	<b>Recommended Analytical Protocol</b>	<b>Detection (DL)<sup>1</sup> <math>\mu\text{g/L}</math></b> <i>Unless specified</i>	<b>Quantitation Level (QL)<sup>2</sup> <math>\mu\text{g/L}</math></b> <i>Unless specified</i>
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

<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>
Barium Total	7440-39-3	200.8	0.5	2.0
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-Cl B/C/D/E and SM4110 B		Sample and limit dependent
Chlorine, Total Residual		SM4500 Cl 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

<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>
Magnesium, Total	7439-95-4	200.7	10	50
Manganese, Total	7439-96-5	200.8	0.1	0.5
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 <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/G		0.2 mg/L
Sulfite (as mg/L SO <sub>3</sub> )		SM4500-SO3B		2 mg/L



<b>Pollutant</b>	<b>CAS Number</b> (if available)	<b>Recommended Analytical Protocol</b>	<b>Detection (DL)<sup>1</sup> <math>\mu\text{g/L}</math></b> <i>Unless specified</i>	<b>Quantitation Level (QL)<sup>2</sup> <math>\mu\text{g/L}</math></b> <i>Unless specified</i>
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
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 3: Metals, Cyanide & Total Phenols**

<b>Priority Pollutants</b>	<b>PP #</b>	<b>CAS Number</b> (if available)	<b>Recommended Analytical Protocol</b>	<b>Detection (DL)<sup>1</sup> <math>\mu\text{g/L}</math></b> <i>Unless specified</i>	<b>Quantitation Level (QL)<sup>2</sup> <math>\mu\text{g/L}</math></b> <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

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>
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
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 4: 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
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 5: Volatile Compounds**

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

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>
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
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 6: 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
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

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>
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,j)acridine</b>		224-42-0	610M/625M	2.5	10.0
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

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>
2,4-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
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



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>
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 7: 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 8: 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

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>
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
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

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-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-dichloropropylene (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.
9. **PCB 1016 & PCB 1242** – You may report these two PCB compounds as one parameter called PCB 1016/1242.
10. **Bis(2-Chloro-1-Methylethyl) Ether** – This compound was previously listed as Bis(2-Chloroisopropyl) Ether (39638-32-9).