

Issuance Date: February 8, 2019
Effective Date: March 1, 2019
Expiration Date: February 29, 2024

**National Pollutant Discharge Elimination System
Waste Discharge Permit No. WA0024031**

State of Washington
DEPARTMENT OF ECOLOGY
Northwest Regional Office
3190 160th Avenue SE
Bellevue, WA 98008-5452

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 Lynnwood
19100 44th Avenue West
Lynnwood, WA 98046

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

Plant Location:

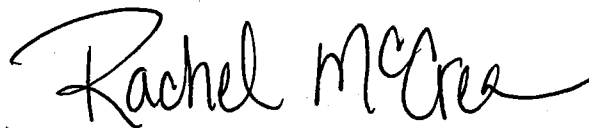
City of Lynnwood Wastewater Treatment Plant
17000 76th Avenue West
Edmonds, WA 98026

Receiving Water:

Browns Bay – Puget Sound

Treatment Type:

Activated sludge



Rachel McCrea
Water Quality Section Manager
Northwest 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.

Permit Section	Submittal	Frequency	First Submittal Date
S3.A	Discharge Monitoring Report (DMR)	Monthly	April 15, 2019
S3.A	Discharge Monitoring Report (DMR)	Quarterly	July 15, 2019
S3.A	Discharge Monitoring Report (DMR)	Annual	January 15, 2020
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	Infiltration and Inflow Evaluation	Annual	June 30, 2019
S5.F	Bypass Notification	As necessary	
S5.G	O&M Manual Update	1/permit cycle	March 31, 2019
S6.A.5	Pretreatment Annual Report	Annual	March 31, 2019
S6.A.6	Request to make changes to pretreatment program	As necessary	
S8.C.3	Acute Toxicity: Compliance Monitoring Reports	Quarterly	July 30, 2019
S8.D	Acute Toxicity: Response to noncompliance reporting	As necessary	
S8.D	Acute Toxicity: TI/RE Plan	As necessary	
S9.A.2	Chronic Toxicity: Characterization	2/permit cycle	January 30, 2023 July 30, 2023
S10	Outfall Evaluation	1/permit cycle	December 31, 2021
S11	Application for Permit Renewal	1/permit cycle	August 31, 2023
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 the effective date of this permit, the Permittee may discharge treated domestic wastewater to Browns Bay – Puget Sound at the permitted location subject to compliance with the following limits:

Effluent Limits: Outfall 001		
Latitude: 47.8478 Longitude: -122.3425		
Parameter	Average Monthly^a	Average Weekly^b
Carbonaceous Biochemical Oxygen Demand (5-day) (CBOD ₅)	25 milligrams/liter (mg/L) 1,543 pounds/day (lbs/day) 85% removal of influent CBOD ₅	40 mg/L 2,469 lbs/day
Total Suspended Solids (TSS)	30 mg/L 1,851 lbs/day 85% removal of influent TSS	45 mg/L 2,777 lbs/day
Parameter	Minimum	Maximum
pH	6.0 standard units	9.0 standard units
Parameter	Monthly Geometric Mean	Weekly Geometric Mean
Fecal Coliform Bacteria ^c	200/100 milliliter (mL)	400/100 mL
Parameter	Average Monthly	Maximum Daily^d
Total Residual Chlorine	278 µg/L	728 µg/L
The effluent limit for acute toxicity is: No acute toxicity detected in a test concentration representing the acute critical effluent concentration (ACEC). The ACEC means the maximum concentration of effluent during critical conditions at the boundary of the acute mixing zone, defined in Section 8 of this permit. The ACEC equals 1.8% effluent. See S8 for more 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, 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 fecal coliform calculations.	
^c	Ecology provides directions to calculate the monthly and the weekly geometric mean in publication No. 04-10-020, Information Manual for Treatment Plant Operators available at: https://fortress.wa.gov/ecy/publications/SummaryPages/0410020.html	
^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

Mixing zone for Outfall 001

The following paragraphs define the maximum boundaries of the mixing zones:

Chronic mixing zone

The mixing zone is an oblong circle around the discharge ports that is 837 feet long by 596 feet wide. 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 mixing zone is an oblong circle around the discharge ports that is 301 feet long by 59.6 feet wide. 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)	
Acute Aquatic Life Criteria	56
Chronic Aquatic Life Criteria	217
Human Health Criteria - Carcinogen	217
Human Health Criteria - Non-carcinogen	217

S2. Monitoring requirements

S2.A. Monitoring schedule

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

Parameter	Units & Speciation	Minimum Sampling Frequency	Sample Type
(1) 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.			
Biochemical Oxygen Demand (BOD ₅)	mg/L	1/week ^a	24-hour composite ^b
BOD ₅	lbs/day ^c	1/week	Calculated
CBOD ₅	mg/L	5/week ^a	24-hour composite
TSS	mg/L	5/week	24-hour composite
TSS	lbs/day	5/week	Calculated
(2) Final wastewater effluent			
Final Wastewater Effluent means wastewater exiting the last treatment process or operation. Typically, this is after or at the exit from the chlorine contact chamber or other disinfection process. The Permittee may take effluent samples for the BOD ₅ analysis before or after the disinfection process. If taken after, the Permittee must dechlorinate and reseed the sample.			
Flow	mgd	Continuous ^d	Metered/recorded
CBOD ₅	mg/L	5/week	24-hour composite
CBOD ₅	lbs/day	5/week	Calculated

Parameter	Units & Speciation	Minimum Sampling Frequency	Sample Type
CBOD ₅	% removal ^e	5/week	Calculated
TSS	mg/L	5/week	24-hour composite
TSS	lbs/day	5/week	Calculated
TSS	% removal	5/week	Calculated
Fecal Coliform ^f	# /100 ml	Daily ^a	Grab ⁱ
pH ^g	Standard Units	Continuous	Metered/recorded
Total Residual Chlorine	µg/L	Daily	Grab
Temperature ^h	Degrees centigrade (°C)	Continuous	Measurement
(3) Effluent characterization – final wastewater effluent			
The final wastewater effluent characterization data must be submitted in the quarterly DMR reports.			
Total Ammonia	mg/L as N	Quarterly ^j	24-hour composite
Nitrate plus Nitrite (N)	mg/L as N	Quarterly	24-hour composite
Total Kjeldahl Nitrogen (TKN)	mg/L as N	Quarterly	24-hour composite
Total Phosphorus	mg/L as P	Quarterly	24-hour composite
Soluble Reactive Phosphorus	mg/L as P	Quarterly	24-hour composite
(4) Permit renewal application requirements – final wastewater effluent			
Permit renewal application effluent monitoring data must be submitted in the quarterly DMR reports.			
Dissolved Oxygen	mg/L	Quarterly	Grab
Total Dissolved Solids	mg/L	Quarterly	24-hour composite
Total Hardness	mg/L	Quarterly	24-hour composite
(5) Whole effluent toxicity testing – final wastewater effluent			
Acute Toxicity Testing – Compliance	See S8	Quarterly	24-hour composite
Chronic Toxicity Testing – Characterization	See S9	2/permit cycle	24-hour composite
(6) Pretreatment testing – influent, effluent, and biosolids. See Special Condition S6.			
The Permittee must monitor influent, effluent, and biosolids from the treatment system for parameters noted below according to the indicated schedule. The Permittee must conduct all monitoring following instructions in Special Condition S6.B. In addition to fulfilling required pretreatment monitoring, the Permittee may use the results of effluent sampling done according to the following schedule for testing required for the next permit application. The schedule for pH below applies only to influent and biosolids since the effluent monitoring schedules above require more frequent monitoring for that parameter. Oil and grease monitoring applies only to influent and effluent.			
pH (influent and biosolids)	Standard units	Quarterly	Grab
Oil and Grease (influent and effluent)	mg/L	Quarterly	Grab
Cyanide	micrograms/liter (µg/L)	Quarterly	Grab
Total Phenolic Compounds	µg/L	Quarterly	Grab
Priority Pollutants (PP) – Total Metals	µg/L; nanograms (ng/L) for mercury	Quarterly	24-hour composite Grab for mercury
PP – Volatile Organic Compounds	µg/L	Once per year ^a	Grab
PP – Acid-extractable Compounds	µg/L	Once per year	24-hour composite
PP – Base-neutral Compounds	µg/L	Once per year	24-hour composite
PP – Pesticides/PCBs	ug/L	Once per year	24-hour composite
^a	1/week means one time during each calendar week. 5/week means five times during each calendar week. Daily means one per day. Once per year means one time during each calendar year.		
^b	24-hour composite means a series of individual samples collected over a 24-hour period into a single container, and analyzed as one sample.		

Parameter	Units & Speciation	Minimum Sampling Frequency	Sample Type
c	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		
d	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.		
e	$\% \text{ removal} = \frac{\text{Influent concentration (mg/L)} - \text{Effluent concentration (mg/L)}}{\text{Influent concentration (mg/L)}} \times 100$ Calculate the percent (%) removal of BOD ₅ and TSS using the above equation.		
f	Report a numerical value for fecal coliforms following the procedures in Ecology's <i>Information Manual for Wastewater Treatment Plant Operators</i> , Publication Number 04-10-020 available at: https://fortress.wa.gov/ecy/publications/SummaryPages/0410020.html . Do not report a result as too numerous to count (TNTC).		
g	The Permittee must report the instantaneous maximum and minimum pH daily. Do not average pH values.		
h	If measuring temperature continuously, the Permittee must determine and report a daily maximum from half-hour measurements in a 24-hour period. Continuous monitoring instruments must achieve an accuracy of 0.2 degrees C and the Permittee must verify accuracy annually.		
i	Grab means an individual sample collected over a fifteen (15)-minute, or less, period.		
j	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 4/1/2019 and submit results by 7/15/2019.		

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. The Permittee must conduct representative sampling of any unusual discharge or discharge condition, including bypasses, upsets, and maintenance-related conditions that may affect 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 subchapters N [Parts 400–471] or O [Parts 501-503]) unless otherwise specified in this permit . Ecology may only specify alternative methods for parameters without permit limits and for those parameters without an EPA approved test method in 40 CFR Part 136.

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

The Permittee must:

1. Select and use appropriate flow measurement, field measurement, and continuous monitoring devices and methods consistent with accepted scientific practices.
2. Install, calibrate, and maintain these devices to ensure the accuracy of the measurements is consistent with the accepted industry standard, the manufacturer's recommendation, and approved O&M manual procedures for the device and the wastestream.
3. Calibrate continuous monitoring instruments weekly unless it can demonstrate a longer period is sufficient based on monitoring records. The Permittee:
 - a. May calibrate apparatus for continuous monitoring of dissolved oxygen by air calibration.
 - b. Must calibrate continuous pH measurement instruments using a grab sample analyzed in the lab with a pH meter calibrated with standard buffers and analyzed within 15 minutes of sampling.
 - c. Must calibrate continuous chlorine measurement instruments using a grab sample analyzed in the laboratory within 15 minutes of sampling.
4. Use field measurement devices as directed by the manufacturer and do not use reagents beyond their expiration dates.
5. Establish a calibration frequency for each device or instrument in the O&M manual that conforms to the frequency recommended by the manufacturer.
6. 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 the effective date of the permit (unless otherwise specified). The Permittee must:

1. Summarize, report, and submit monitoring data obtained during each monitoring period on the electronic discharge monitoring report (DMR) form provided by Ecology within the Water Quality Permitting Portal. Include data for each of the parameters tabulated in Special Condition S2 and as required by the form. Report a value for each day sampling occurred (unless specifically exempted in the permit) and for the summary values (when applicable) included on the electronic form.
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 15th day of the following month.
 - b. Submit **quarterly DMRs** by the 15th 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 **July 15, 2019**, for the quarter beginning on April 1, 2019.
 - c. Submit **annual DMRs** by January 15 for the previous calendar year. The annual sampling period is the calendar year. The Permittee must submit the first annual DMR on **January 15, 2020**, for the 2019 calendar year.
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:
 - a. 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.
 - b. The detection value for those samples measured below detection.
11. 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.
12. 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.
13. 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
Northwest Regional Office
3190 160th Avenue SE
Bellevue, WA 98008-5452

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 Department of Health, Shellfish Program, and the Local Health Jurisdiction (at the numbers listed below), all:

- Failures of the disinfection system.
- Collection system overflows.
- Plant bypasses discharging to marine surface waters.
- Any other failures of the sewage system (pipe breaks, etc.).

Northwest Regional Office	425-649-7000
Department of Health, Shellfish Program	360-236-3330 (business hours) 360-789-8962 (after business hours)
Snohomish Health District, Environmental Health Division	425-339-5250 (business hours) 425-339-5295 (after business hours)

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. You can obtain further instructions at the following website: <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:

Maximum Month Design Flow (MMDF)	7.4 MGD
BOD ₅ Influent Loading for Maximum Month	15,120 lb/day
TSS Influent Loading for Maximum Month	15,120 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 prepare a report documenting I/I status and program implementation. The I/I Report must be prepared and submitted annually to the WQWebPortal. The first report is due by June 30, 2019, and annually thereafter. The report must include the following information from the previous calendar year:
 - a. A summary of infiltration and inflow. Guidance regarding the content of an acceptable I/I report and sample I/I report form is included in Appendix I of the *Information Manual for Treatment Plant Operators*, <https://fortress.wa.gov/ecy/publications/SummaryPages/0410020.html>.
 - b. A summary of repairs and collection system projects completed to monitor or specifically target I/I reduction, including, but not limited to, I/I corrective measures listed in the *Lynnwood Infiltration and Inflow Study* (Gray & Osborne, Inc., March 2011).
 - c. A summary of illicit connection discovery, enforcement, removal and City code review as described in the *Lynnwood Infiltration and Inflow Study* (Gray & Osborne, Inc., March 2011).

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. Update the operations and maintenance (O&M) manual that meets the requirements of 173-240-080 WAC and submit it to Ecology for approval by **March 31, 2019**.
2. Submit to Ecology for review and approval substantial changes or updates to the O&M manual whenever it incorporates them into the 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.

S6. Pretreatment

S6.A. General requirements

1. The Permittee must implement the Industrial Pretreatment Program in accordance with the legal authorities, policies, procedures, and financial provisions described in the Permittee's approved pretreatment program submittal entitled "Industrial Pretreatment Program" and dated August 28, 1984; any approved revisions thereto; and the General Pretreatment Regulations (40 CFR Part 403). At a minimum, the Permittee must undertake the following pretreatment implementation activities:
 - a. Enforce categorical pretreatment standards under Section 307(b) and (c) of the Federal Clean Water Act (hereinafter, the Act), prohibited discharge standards as set forth in 40 CFR 403.5, local limits specified in Section 14.60.318 of the City of Lynnwood Municipal Code, or state standards, whichever are most stringent or apply at the time of issuance or modification of a local industrial waste discharge permit. Locally derived limits are defined as pretreatment standards under Section 307(d) of the Act and are not limited to categorical industrial facilities.

- b. Issue industrial waste discharge permits to all significant industrial users [SIUs, as defined in 40 CFR 403.3(v)(i)(ii)] contributing to the treatment system, including those from other jurisdictions. Industrial waste discharge permits must contain, as a minimum, all the requirements of 40 CFR 403.8 (f)(1)(iii). The Permittee must coordinate the permitting process with Ecology regarding any industrial facility that may possess a State Waste Discharge Permit issued by Ecology. Once issued, an industrial waste discharge permit takes precedence over a state-issued waste discharge permit.
- c. Maintain and update, as necessary, records identifying the nature, character, and volume of pollutants contributed by industrial users to the POTW. The Permittee must maintain records for at least a three-year period.
- d. Perform inspections, surveillance, and monitoring activities on industrial users to determine or confirm compliance with pretreatment standards and requirements. The Permittee must conduct a thorough inspection of SIUs annually. The Permittee must conduct regular local monitoring of SIU wastewaters commensurate with the character and volume of the wastewater but not less than once per year. The Permittee must collect and analyze samples in accordance with 40 CFR Part 403.12(b)(5)(ii)-(v) and 40 CFR Part 136.
- e. Enforce and obtain remedies for noncompliance by any industrial users with applicable pretreatment standards and requirements. Once it identifies violations, the Permittee must take timely and appropriate enforcement action to address the noncompliance. The Permittee's action must follow its enforcement response procedures and any amendments, thereof.
- f. Publish, at least annually in the largest daily newspaper in the Permittee's service area, a list of all non-domestic users which, at any time in the previous 12 months, were in significant noncompliance as defined in 40 CFR 403.8(f)(2)(vii).
- g. If the Permittee elects to conduct sampling of an SIU's discharge in lieu of requiring user self-monitoring, it must satisfy all requirements of 40 CFR Part 403.12. This includes monitoring and record keeping requirements of Sections 403.12(g) and (o). For SIUs subject to categorical standards (CIUs), the Permittee may either complete baseline and initial compliance reports for the CIU (when required by 403.12(b) and (d)) or require these of the CIU. The Permittee must ensure that it provides SIUs the results of sampling in a timely manner, inform SIUs of their right to sample, their obligations to report any sampling they do, to respond to noncompliance, and to submit other notifications. These include a slug load report (403.12(f)), notice of changed discharge (403.12(j)), and hazardous waste notifications (403.12(p)). If sampling for the SIU, the Permittee must not sample less than once in every six-month period unless the Permittee's

4. Whenever Ecology determines that any waste source contributes pollutants to the Permittee's treatment works in violation of Section (b), (c), or (d) of Section 307 of the Act, and the Permittee has not taken adequate corrective action, Ecology will notify the Permittee of this determination. If the Permittee fails to take appropriate enforcement action within 30 days of this notification, Ecology may take appropriate enforcement action against the source or the Permittee.

5. Pretreatment Report

The Permittee must provide to Ecology an annual report that briefly describes its program activities during the previous calendar year. The Permittee must start submitting the annual report electronically, via the WQWebPortal, by December 21, 2020, in accordance with 403.12(i).

The Permittee must submit the first annual report to Ecology by **March 31, 2019**. The report must include the following information:

- a. An updated non-domestic inventory.
- b. Results of wastewater sampling at the treatment plant as specified in S6.B. The Permittee must calculate removal rates for each pollutant and evaluate the adequacy of the existing local limits in Section 2.4 of Ordinance 2247-07 in prevention of treatment plant interference, pass through of pollutants that could affect receiving water quality, and sludge contamination.
- c. Status of program implementation, including:
 - Any substantial modifications to the pretreatment program as originally approved by Ecology, including staffing and funding levels.
 - Any interference, upset, or permit violations experienced at the POTW that are directly attributable to wastes from industrial users.
 - Listing of industrial users inspected and/or monitored, and a summary of the results.
 - Listing of industrial users scheduled for inspection and/or monitoring for the next year, and expected frequencies.
 - Listing of industrial users notified of promulgated pretreatment standards and/or local standards as required in 40 CFR 403.8(f)(2)(iii). The list must indicate which industrial users are on compliance schedules and the final date of compliance for each.
 - Listing of industrial users issued industrial waste discharge permits.
 - Planned changes in the approved local pretreatment program (see Subsection A.7, below).
- d. Status of compliance activities, including:
 - Listing of industrial users that failed to submit baseline monitoring reports or any other reports required under 40 CFR 403.12 and in Chapter 6 of the Permittee's pretreatment program, dated August 28, 1984.

- Listing of industrial users that were at any time during the reporting period not complying with federal, state, or local pretreatment standards or with applicable compliance schedules for achieving those standards, and the duration of such noncompliance.
 - Summary of enforcement activities and other corrective actions taken or planned against non-complying industrial users. The Permittee must supply to Ecology a copy of the public notice of facilities that were in significant noncompliance.
6. The Permittee must request and obtain approval from Ecology before making any significant changes to the approved local pretreatment program. The Permittee must follow the procedure in 40 CFR 403.18 (b) and (c).

S6.B. Monitoring requirements

The Permittee must:

1. Monitor its influent, effluent, and sludge for the priority pollutants identified in Tables II and III of Appendix D of 40 CFR Part 122 as amended, any compounds identified because of Special Condition S6.B.4, and any other pollutants expected from non-domestic sources using U.S. EPA-approved procedures for collection, preservation, storage, and analysis.
2. Test influent, effluent, and sludge samples for the priority pollutant metals (Table III, 40 CFR 122, Appendix D) on a quarterly basis throughout the term of this permit.
3. Test influent, effluent, and sludge samples for the organic priority pollutants (Table II, 40 CFR 122, Appendix D) on an annual basis. The Permittee may use the data collected for application purposes using Appendix A test methods to meet this requirement.
4. Sample POTW influent and effluent on a day when industrial discharges are occurring at normal-to-maximum levels.
5. Obtain 24-hour composite samples for the analysis of acid and base/neutral extractable compounds and metals.
6. Collect grab samples at equal intervals for a total of four grab samples per day for the analysis of volatile organic compounds. The laboratory may run a single analysis for volatile pollutants (Method 624) for each monitoring day by compositing equal volumes of each grab sample directly in the GC purge and trap apparatus in the laboratory, with no less than 1 ml of each grab included in the composite.
7. Ensure that all reported test data for metals represents the total amount of the constituents present in all phases, whether solid, suspended, or dissolved elemental or combined, including all oxidation states unless otherwise indicated.

8. Handle, prepare, and analyze all wastewater samples taken for GC/MS analysis in accordance with the U.S. EPA Methods 624 and 625 (October 26, 1984).
9. Collect a sludge sample concurrently with a wastewater sample as a single grab of residual sludge. Sludge organic priority pollutant sampling and analysis must conform to U.S. EPA Methods 624 and 625 unless the Permittee requests an alternate method and Ecology has approved. Sludge metals priority pollutant sampling and analysis must conform to U.S. EPA SW 846 6000/7000 Series Methods unless the Permittee requests an alternate method and Ecology has approved.
10. Collect grab samples for cyanide, phenols, and oils. Measure hexane soluble oils (or equivalent) only in the influent and effluent.
11. Make a reasonable attempt to identify all other substances and quantify all pollutants shown to be present by gas chromatograph/mass spectrometer (GC/MS) analysis per 40 CFR 136, Appendix A, Methods 624 and 625, in addition to quantifying pH, oil and grease, and all priority pollutants.

The Permittee should attempt to make determinations of pollutants for each fraction, which produces identifiable spectra on total ion plots (reconstructed gas chromatograms). The Permittee should attempt to make determinations from all peaks with responses 5% or greater than the nearest internal standard. The 5% value is based on internal standard concentrations of 30 µg/l, and must be adjusted downward if higher internal standard concentrations are used or adjusted upward if lower internal standard concentrations are used. The Permittee may express results for non-substituted aliphatic compounds as total hydrocarbon content.
12. Use a laboratory whose computer data processing programs are capable of comparing sample mass spectra to a computerized library of mass spectra, with visual confirmation by an experienced analyst.
13. Conduct additional sampling and appropriate testing to determine concentration and variability, and to evaluate trends for all detected substances determined to be pollutants.

S6.C. Reporting of monitoring results

The Permittee must include a summary of monitoring results in the Annual Pretreatment Report.

S6.D. Local limit development

As sufficient data become available, the Permittee, in consultation with Ecology, must reevaluate its local limits in order to prevent pass through or interference. If Ecology determines that any pollutant present causes pass through or interference, or exceeds established sludge standards, the Permittee must establish new local limits or revise existing local limits as required by 40 CFR 403.5. Ecology may also require the Permittee to revise or establish local limits for any pollutant discharged from the POTW that has a reasonable potential to exceed the Water

Quality Standards, Sediment Standards, or established effluent limits, or causes whole effluent toxicity. Ecology makes this determination in the form of an Administrative Order.

Ecology may modify this permit to incorporate additional requirements relating to the establishment and enforcement of local limits for pollutants of concern. Any permit modification is subject to formal due process procedures under state and federal law and regulation.

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. Acute toxicity

S8.A. Effluent limit for acute toxicity

The effluent limit for acute toxicity is:

No acute toxicity detected in a test concentration representing the acute critical effluent concentration (ACEC).

The ACEC means the maximum concentration of effluent during critical conditions at the boundary of the acute mixing zone, defined in Section S1.B of this permit. The ACEC equals 1.8% effluent.

S8.B. Compliance with the effluent limit for acute toxicity

Compliance with the effluent limit for acute toxicity means the results of the testing specified in Section C show no statistically significant difference in survival between the control and the ACEC.

If the test results show a statistically significant difference in survival between the control and the ACEC, and Ecology had not determined the test result to be anomalous under Section D, and the test is otherwise valid, the result is a violation of the effluent limit for acute toxicity. The Permittee must immediately conduct the additional testing described in Section D.

The Permittee must determine the statistical significance by conducting a hypothesis test at the 0.05 level of significance (Appendix H, EPA/600/4-89/001). If the difference in survival between the control and the ACEC is less than 10%, the Permittee must conduct the hypothesis test at the 0.01 level of significance.

S8.C. Compliance testing for acute toxicity

The Permittee must:

1. Perform the acute toxicity tests with 100% effluent, the ACEC, and a control, or with a full dilution series.
2. Conduct quarterly acute toxicity testing on the final effluent. Testing must begin by April 1, 2019. Quarters means January through March, April through June, July through September, and October through December.
3. Submit a quarterly written report to Ecology within 45 days of sampling and starting no later than **July 30, 2019**. Each subsequent report is due on April 30th, July 30th, October 30th, and January 30th of each year. Further instructions on testing conditions and test report content are in Section E, below.
4. The Permittee must perform compliance tests using each of the species and protocols listed below on a rotating basis:

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

S8.D. Response to noncompliance with the effluent limit for acute toxicity

If a toxicity test conducted under Section C determines a statistically significant difference in response between the ACEC and the control, using the statistical test described in Section B, the Permittee must begin additional testing within one week from the time of receiving the test results. The Permittee must:

1. Conduct one additional test each week for four consecutive weeks, using the same test and species as the failed compliance test.
2. Test at least five effluent concentrations and a control to determine appropriate point estimates. One of these effluent concentrations must equal the ACEC. The results of the test at the ACEC will determine compliance with the effluent limit for acute toxicity as described in Section B.
3. Return to the original monitoring frequency in Section C after completion of the additional compliance monitoring.

Anomalous test results: If a toxicity test conducted under Section C indicates noncompliance with the acute toxicity limit and the Permittee believes that the test result is anomalous, the Permittee may notify Ecology that the compliance test result may be anomalous. The Permittee may take one additional sample for toxicity testing and wait for notification from Ecology before completing the additional testing. The Permittee must submit the notification with the report of the compliance test result and identify the reason for considering the compliance test result to be anomalous.

If Ecology determines that the test result was not anomalous, the Permittee must complete all of the additional monitoring required in this section. Or,

If the one additional sample fails to comply with the effluent limit for acute toxicity, then the Permittee must complete all of the additional monitoring required in this section. Or,

If Ecology determines that the test result was anomalous, the one additional test result will replace the anomalous test result for the purpose of determining compliance with the acute toxicity limit.

If all of the additional testing in S8.D.1 complies with the permit limit, the Permittee must submit a report to Ecology on possible causes and preventive measures for the transient toxicity event, which triggered the additional compliance monitoring. This report must include a search of all pertinent and recent facility records, including:

- Operating records
- Monitoring results
- Inspection records
- Spill reports
- Weather records
- Production records
- Raw material purchases
- Pretreatment records, etc.

If the additional testing in this section shows another violation of the acute toxicity limit, the Permittee must submit a Toxicity Identification/Reduction Evaluation (TI/RE) plan to Ecology within sixty (60) days after the sample date (WAC 173-205-100(2)).

S8.E. *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 or grab 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 chemically dechlorinate final effluent samples for whole effluent toxicity testing with sodium thiosulfate just prior to test initiation. Do not add more sodium thiosulfate than is necessary to neutralize the chlorine. Provide in the test report the calculations to determine the amount of sodium thiosulfate necessary to just neutralize the chlorine in the sample.
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 acute critical effluent concentration (ACEC). The ACEC equals 1.8% effluent.
8. 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.

S9. Chronic toxicity

S9.A. Testing when there is no permit limit for chronic toxicity

The Permittee must:

1. Conduct chronic toxicity testing on the final effluent twice; once in the 4th quarter (October - December 2022) and once in the 2nd quarter (April – June 2023) prior to submission of the application for permit renewal.
2. Submit a written report to Ecology within 45 days of sampling. The Permittee must submit the first report by **January 30, 2023**, and the second report by **July 30, 2023**. Further instructions on testing conditions and test report content are in Section B below.
3. Conduct chronic toxicity testing during effluent characterization 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 1.8% effluent. The series of dilutions should also contain the CCEC of 0.46% effluent.
4. Compare the ACEC to the control using hypothesis testing at the 0.05 level of significance as described in Appendix H, EPA/600/4-89/001.

5. Perform chronic toxicity tests with all of the following species and the most recent version of the following protocols:

Saltwater Chronic Test	Species	Method
Topsmelt survival and growth	<i>Atherinops affinis</i>	EPA/600/R-95/136
Mysid shrimp survival and growth	<i>Americamysis bahia</i> (formerly <i>Mysidopsis bahia</i>)	EPA-821-R-02-014

S9.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 or grab 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 chemically dechlorinate final effluent samples for whole effluent toxicity testing with sodium thiosulfate just prior to test initiation. Do not add more sodium thiosulfate than is necessary to neutralize the chlorine. Provide in the test report the calculations to determine the amount of sodium thiosulfate necessary to just neutralize the chlorine in the sample.
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 0.46% effluent. The ACEC equals 1.8% 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.

S10. Outfall Evaluation

The Permittee must inspect 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. The Permittee must submit the inspection report to Ecology through the Water Quality Permitting Portal – Permit Submittals application by **December 31, 2021**. 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.

S11. Application for permit renewal or modification for facility changes

The Permittee must submit an application for renewal of this permit by **August 31, 2023**.

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.

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 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.

CONVENTIONAL POLLUTANTS

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

NONCONVENTIONAL POLLUTANTS

Pollutant & CAS No. (if available)	CAS Number (if available)	Recommended Analytical Protocol	Detection (DL)¹ µg/L unless specified	Quantitation Level (QL)² µg/L unless specified
Alkalinity, Total		SM2320-B		5 mg/L as CaCO ₃
Aluminum, Total	7429-90-5	200.8	2.0	10
Ammonia, Total (as N)		SM4500-NH ₃ -B and C/D/E/G/H		20
Barium Total	7440-39-3	200.8	0.5	2.0
BTEX (benzene +toluene + ethylbenzene + m,o,p xylenes)		EPA SW 846 8021/8260	1	2
Boron, Total	7440-42-8	200.8	2.0	10.0
Chemical Oxygen Demand		SM5220-D		10 mg/L
Chloride		SM4500-CI B/C/D/E and SM4110 B		Sample and limit dependent
Chlorine, Total Residual		SM4500 CI G		50.0
Cobalt, Total	7440-48-4	200.8	0.05	0.25
Color		SM2120 B/C/E		10 color units
Dissolved oxygen		SM4500-OC/OG		0.2 mg/L
Flow		Calibrated device		
Fluoride	16984-48-8	SM4500-F E	25	100
Hardness, Total		SM2340B		200 as CaCO ₃
Iron, Total	7439-89-6	200.7	12.5	50
Magnesium, Total	7439-95-4	200.7	10	50
Manganese, Total	7439-96-5	200.8	0.1	0.5
Molybdenum, Total	7439-98-7	200.8	0.1	0.5
Nitrate + Nitrite Nitrogen (as N)		SM4500-NO ₃ - E/F/H		100
Nitrogen, Total Kjeldahl (as N)		SM4500-N _{org} B/C and SM4500NH ₃ - B/C/D/EF/G/H		300
NWTPH Dx ⁴		Ecology NWTPH Dx	250	250
NWTPH Gx ⁵		Ecology NWTPH Gx	250	250
Phosphorus, Total (as P)		SM 4500 PB followed by SM4500-PE/PF	3	10
Salinity		SM2520-B		3 practical salinity units or scale (PSU or PSS)
Settleable Solids		SM2540 -F		Sample and limit dependent
Soluble Reactive Phosphorus (as P)		SM4500-P E/F/G	3	10
Sulfate (as mg/L SO ₄)		SM4110-B		0.2 mg/L
Sulfide (as mg/L S)		SM4500-S ² F/D/E/G		0.2 mg/L
Sulfite (as mg/L SO ₃)		SM4500-SO ₃ B		2 mg/L
Temperature (max. 7-day avg.)		Analog recorder or use micro-recording devices known as thermistors		0.2° C

NONCONVENTIONAL POLLUTANTS

Pollutant & CAS No. (if available)	CAS Number (if available)	Recommended Analytical Protocol	Detection (DL)¹ µg/L unless specified	Quantitation Level (QL)² µg/L unless specified
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	PP #	CAS Number (if available)	Recommended Analytical Protocol	Detection (DL)¹ µg/L unless specified	Quantitation Level (QL)² µg/L unless specified
METALS, CYANIDE & TOTAL PHENOLS					
Antimony, Total	114	7440-36-0	200.8	0.3	1.0
Arsenic, Total	115	7440-38-2	200.8	0.1	0.5
Beryllium, Total	117	7440-41-7	200.8	0.1	0.5
Cadmium, Total	118	7440-43-9	200.8	0.05	0.25
Chromium (hex) dissolved	119	18540-29-9	SM3500-Cr C	0.3	1.2
Chromium, Total	119	7440-47-3	200.8	0.2	1.0
Copper, Total	120	7440-50-8	200.8	0.4	2.0
Lead, Total	122	7439-92-1	200.8	0.1	0.5
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

PRIORITY POLLUTANTS	PP #	CAS Number (if available)	Recommended Analytical Protocol	Detection (DL)¹ µg/L unless specified	Quantitation Level (QL)² µg/L unless specified
ACID COMPOUNDS					
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

PRIORITY POLLUTANTS	PP #	CAS Number (if available)	Recommended Analytical Protocol	Detection (DL)¹ µg/L unless specified	Quantitation Level (QL)² µg/L unless specified
ACID COMPOUNDS					
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

PRIORITY POLLUTANTS	PP #	CAS Number (if available)	Recommended Analytical Protocol	Detection (DL)¹ µg/L unless specified	Quantitation Level (QL)² µg/L unless specified
VOLATILE COMPOUNDS					
Acrolein	2	107-02-8	624	5	10
Acrylonitrile	3	107-13-1	624	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	1.0	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	1.9	7.6
1,3-Dichlorobenzene	26	541-73-1	624	1.9	7.6
1,4-Dichlorobenzene	27	106-46-7	624	4.4	17.6
Dichlorobromomethane	48	75-27-4	624.1	2.2	6.6
1,1-Dichloroethane	13	75-34-3	624.1	4.7	14.1
1,2-Dichloroethane	10	107-06-2	624.1	2.8	8.4
1,1-Dichloroethylene	29	75-35-4	624.1	2.8	8.4
1,2-Dichloropropane	32	78-87-5	624.1	6.0	18.0
1,3-dichloropropene (mixed isomers)(1,2-dichloropropylene) ⁶	33	542-75-6	624.1	5.0	15.0
Ethylbenzene	38	100-41-4	624.1	7.2	21.6
Methyl bromide (Bromomethane)	46	74-83-9	624/601	5.0	10.0
Methyl chloride (Chloromethane)	45	74-87-3	624	1.0	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

PRIORITY POLLUTANTS	PP #	CAS Number (if available)	Recommended Analytical Protocol	Detection (DL)¹ µg/L unless specified	Quantitation Level (QL)² µg/L unless specified
VOLATILE COMPOUNDS					
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

PRIORITY POLLUTANTS	PP #	CAS Number (if available)	Recommended Analytical Protocol	Detection (DL)¹ µg/L unless specified	Quantitation Level (QL)² µg/L unless specified
BASE/NEUTRAL COMPOUNDS (compounds in bold are Ecology PBTs)					
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) ⁷	74	205-99-2	610/625.1	4.8	14.4
Benzo(j)fluoranthene ⁷		205-82-3	625	0.5	1.0
Benzo(k)fluoranthene (11,12-benzofluoranthene) ⁷	75	207-08-9	610/625.1	2.5	7.5
Benzo(r,s,t)pentaphene		189-55-9	625	1.3	5.0
Benzo(a)pyrene	73	50-32-8	610/625.1	2.5	7.5
Benzo(ghi)Perylene	79	191-24-2	610/625.1	4.1	12.3
Bis(2-chloroethoxy)methane	43	111-91-1	625.1	5.3	15.9
Bis(2-chloroethyl)ether	18	111-44-4	611/625.1	5.7	17.1
Bis(2-chloroisopropyl)ether	42	39638-32-9	625	0.5	1.0
Bis(2-ethylhexyl)phthalate	66	117-81-7	625.1	2.5	7.5
4-Bromophenyl phenyl ether	41	101-55-3	625.1	1.9	5.7
2-Chloronaphthalene	20	91-58-7	625.1	1.9	5.7
4-Chlorophenyl phenyl ether	40	7005-72-3	625.1	4.2	12.6
Chrysene	76	218-01-9	610/625.1	2.5	7.5
Dibenzo (a,h)acridine		226-36-8	610M/625M	2.5	10.0
Dibenzo (a,j)acridine		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
Dibenzo(a,e)pyrene		192-65-4	610M/625M	2.5	10.0
Dibenzo(a,h)pyrene		189-64-0	625M	2.5	10.0
3,3-Dichlorobenzidine	28	91-94-1	605/625.1	16.5	49.5
Diethyl phthalate	70	84-66-2	625.1	1.9	5.7
Dimethyl phthalate	71	131-11-3	625.1	1.6	4.8
Di-n-butyl phthalate	68	84-74-2	625.1	2.5	7.5
2,4-dinitrotoluene	35	121-14-2	609/625.1	5.7	17.1
2,6-dinitrotoluene	36	606-20-2	609/625.1	1.9	5.7
Di-n-octyl phthalate	69	117-84-0	625.1	2.5	7.5

PRIORITY POLLUTANTS	PP #	CAS Number (if available)	Recommended Analytical Protocol	Detection (DL)¹ µg/L unless specified	Quantitation Level (QL)² µg/L unless specified
BASE/NEUTRAL COMPOUNDS (compounds in bold are Ecology PBTs)					
1,2-Diphenylhydrazine (as Azobenzene)	37	122-66-7	1625B	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	2.0	4.0
Hexachloroethane	12	67-72-1	625.1	1.6	4.8
Indeno(1,2,3- <i>cd</i>)Pyrene	83	193-39-5	610/625.1	3.7	11.1
Isophorone	54	78-59-1	625.1	2.2	6.6
3-Methyl cholanthrene		56-49-5	625	2.0	8.0
Naphthalene	55	91-20-3	625.1	1.6	4.8
Nitrobenzene	56	98-95-3	625.1	1.9	5.7
N-Nitrosodimethylamine	61	62-75-9	607/625	2.0	4.0
N-Nitrosodi-n-propylamine	63	621-64-7	607/625	0.5	1.0
N-Nitrosodiphenylamine	62	86-30-6	625	1.0	2.0
Perylene		198-55-0	625	1.9	7.6
Phenanthrene	81	85-01-8	625.1	5.4	16.2
Pyrene	84	129-00-0	625.1	1.9	5.7
1,2,4-Trichlorobenzene	8	120-82-1	625.1	1.9	5.7

PRIORITY POLLUTANT	PP #	CAS Number (if available)	Recommended Analytical Protocol	Detection (DL)¹ µg/L unless specified	Quantitation Level (QL)² µg/L unless specified
DIOXIN					
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

PRIORITY POLLUTANTS	PP #	CAS Number (if available)	Recommended Analytical Protocol	Detection (DL)¹ µg/L unless specified	Quantitation Level (QL)² µg/L unless specified
PESTICIDES/PCBs					
Aldrin	89	309-00-2	608.3	4.0 ng/L	12 ng/L
alpha-BHC	102	319-84-6	608.3	3.0 ng/L	9.0 ng/L
beta-BHC	103	319-85-7	608.3	6.0 ng/L	18 ng/L
gamma-BHC (Lindane)	104	58-89-9	608.3	4.0 ng/L	12 ng/L
delta-BHC	105	319-86-8	608.3	9.0 ng/L	27 ng/L
Chlordane ⁸	91	57-74-9	608.3	14 ng/L	42 ng/L
4,4'-DDT	92	50-29-3	608.3	12 ng/L	36 ng/L
4,4'-DDE	93	72-55-9	608.3	4.0 ng/L	12 ng/L
4,4' DDD	94	72-54-8	608.3	11ng/L	33 ng/L
Dieldrin	90	60-57-1	608.3	2.0 ng/L	6.0 ng/L
alpha-Endosulfan	95	959-98-8	608.3	14 ng/L	42 ng/L
beta-Endosulfan	96	33213-65-9	608.3	4.0 ng/L	12 ng/L

PRIORITY POLLUTANTS	PP #	CAS Number (if available)	Recommended Analytical Protocol	Detection (DL)¹ µg/L unless specified	Quantitation Level (QL)² µg/L unless specified
PESTICIDES/PCBs					
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 ⁹	106	53469-21-9	608.3	0.065	0.195
PCB-1254	107	11097-69-1	608.3	0.065	0.195
PCB-1221	108	11104-28-2	608.3	0.065	0.195
PCB-1232	109	11141-16-5	608.3	0.065	0.195
PCB-1248	110	12672-29-6	608.3	0.065	0.195
PCB-1260	111	11096-82-5	608.3	0.065	0.195
PCB-1016 ⁹	112	12674-11-2	608.3	0.065	0.195
Toxaphene	113	8001-35-2	608.3	240 ng/L	720 ng/L

- 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.
- 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, or 5) x 10ⁿ, 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).
- Soluble Biochemical Oxygen Demand method note: First, filter the sample through a Millipore Nylon filter (or equivalent) - pore size of 0.45-0.50 µm (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.
- NWTPH Dx - Northwest Total Petroleum Hydrocarbons Diesel Extended Range – see <https://fortress.wa.gov/ecy/publications/documents/97602.pdf>
- NWTPH Gx - Northwest Total Petroleum Hydrocarbons Gasoline Extended Range – see <https://fortress.wa.gov/ecy/publications/documents/97602.pdf>
- 1, 3-dichloroproylene (mixed isomers) You may report this parameter as two separate parameters: cis-1, 3-dichloropropene (10061-01-5) and trans-1, 3-dichloropropene (10061-02-6).
- Total Benzofluoranthenes - Because Benzo(b)fluoranthene, Benzo(j)fluoranthene and Benzo(k)fluoranthene co-elute you may report these three isomers as total benzofluoranthenes.
- Chlordane – You may report alpha-chlordane (5103-71-9) and gamma-chlordane (5103-74-2) in place of chlordane (57-74-9). If you report alpha and gamma-chlordane, the DL/PQLs that apply are 14/42 ng/L.
- PCB 1016 & PCB 1242 – You may report these two PCB compounds as one parameter called PCB 1016/1242.