



Issuance Date: February 12, 2025
Effective Date: April 1, 2025
Expiration Date: March 31, 2030

National Pollutant Discharge Elimination System Waste Discharge Permit WA0991010

State of Washington DEPARTMENT OF ECOLOGY

Eastern Regional Office
4601 North Monroe Street
Spokane, Washington 99205-1265

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

Town of Spangle PO Box 147 Spangle Washington 99031

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

Facility Location:	675 N. Old SR 195, Spangle Washington
Treatment Type:	Biolac, Extended Aeration Activated Sludge System
Receiving Water:	Spangle Creek

Adriane Borgias
Water Quality Section Manager
Eastern Regional Office
Washington State Department of
Ecology

Table of Contents

SUMMARY OF PERMIT SUBMITTALS.....	4
SPECIAL CONDITIONS.....	6
S1. Discharge limits	6
S1.A. Effluent limits.....	6
S1.B. Mixing zone authorization	7
S2. Monitoring requirements	7
S2.A. Sampling and analytical procedures	10
S2.B. Flow measurement and continuous monitoring devices.....	11
S2.C. Laboratory accreditation.....	12
S2.D. Request for reduction in monitoring	12
S3. Reporting and recording requirements	12
S3.A. Discharge Monitoring Reports.....	12
S3.B. Permit submittals and schedules.....	14
S3.C. Records retention.....	14
S3.D. Recording of results	14
S3.E. Additional monitoring by the Permittee.....	15
S3.F. Reporting permit violations.....	15
S3.G. Other reporting	17
S3.H. Maintaining a copy of this permit.....	17
S4. Facility loading.....	18
S4.A. Design criteria	18
S4.B. Plans for maintaining adequate capacity.....	18
S4.C. Duty to mitigate	19
S4.D. Notification of new or altered sources	19
S4.E. Infiltration and inflow evaluation	19
S5. Operation and maintenance	20
S5.A. Certified operator	20
S5.B. Operation and maintenance program.....	20
S5.C. Short-term reduction	21
S5.D. Electrical power failure	21
S5.E. Prevent connection of inflow	21
S5.F. Bypass procedures.....	21
S5.G. Operations and maintenance (O&M) manual.....	23
S6. Pretreatment.....	24
S6.A. Duty to enforce discharge prohibitions	24
S6.B. Identification and notification of new industrial wastewater sources ...	26
S7. Solid wastes	26
S7.A. Solid waste handling	26
S7.B. Leachate	26
S8. Application for permit renewal or modification for facility changes.....	26
S9. Engineering documents	27
S10. Enforcement compliance schedule.....	27
S11. Water quality based effluent limit compliance schedule	28
S12. Receiving water study.....	29
References	31

GENERAL CONDITIONS.....	33
G1. Signatory requirements.....	33
G2. Right of inspection and entry	34
G3. Permit actions	34
G4. Reporting planned changes.....	35
G5. Plan review required	36
G6. Compliance with other laws and statutes.....	36
G7. Transfer of this permit.....	36
G8. Reduced production for compliance	36
G9. Removed substances	37
G10. Duty to provide information.....	37
G11. Other requirements of 40 CFR	37
G12. Additional monitoring	37
G13. Payment of fees.....	37
G14. Penalties for violating permit conditions.....	37
G15. Upset	37
G16. Property rights	38
G17. Duty to comply.....	38
G18. Toxic pollutants.....	38
G19. Penalties for tampering.....	38
G20. Compliance schedules.....	38
G21. Service agreement review	39
APPENDIX A.....	40

List of Tables

Table 1: Summary of Permit Submittals	4
Table 2: Effluent Limits: Outfall 001.....	6
Table 3: Wastewater Influent ^a	8
Table 4: Final Wastewater Effluent.....	8
Table 5: Design Criteria.....	18
Table 6: Enforcement Compliance Schedule	28
Table 7: Water Quality Based Effluent Limit Compliance Schedule	29

SUMMARY OF PERMIT SUBMITTALS

Refer to the Special and General Conditions of this permit for additional submittal requirements.

Table 1: Summary of Permit Submittals

Permit section	Submittal	Frequency	First submittal date
S3.A	Monthly Discharge Monitoring Report (DMR)	1/month	May 15, 2025
S3.A	Quarterly Discharge Monitoring Report (DMR)	1/quarter	July 15, 2025
S3.F.4	Reporting Permit Violations: Five-day Follow-up Report	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	1/permit cycle	February 1, 2027
S5.A	Operator Certification Renewal Card	1/year	May 15, 2025
S5.F	Bypass Notification	As necessary	---
S5.G	Operations and Maintenance Manual Update	1/permit cycle	March 1, 2026
S6.B.	Identification and Notification of New Industrial Users	As necessary	---
S8.	Application for Permit Renewal	1/permit cycle	February 28, 2029
S9.1	Engineering Documents	1/permit cycle	March 1, 2029
S10. Task 1	Effluent Temperature Thermistor Installation Notice of Completion.	1/permit cycle	March 1, 2026
S10. Task 2	Effluent Dissolved Oxygen Probe Installation Notice of Completion	1/permit cycle	June 9, 2025
S11. Task 1	Temperature Limit Compliance Report	1/year	March 1, 2026
S11. Task 2	Dissolved Oxygen Compliance Report	1/year	March 1, 2026

Permit section	Submittal	Frequency	First submittal date
S12.1	Receiving Water Study QAPP	1/permit cycle	March 1, 2026
S12.4	Receiving Water Study Results	1/permit cycle	March 1, 2029
G1.	Notice of Change in Authorization	As necessary	---
G4.	Reporting Planned Changes	180 days prior to the proposed changes	---
G5.	Engineering Report for Construction or Modification Activities	180 days prior to the planned start of construction	---
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, those 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 the Spangle Creek at the permitted location subject to compliance with the following limits:

Table 2: Effluent Limits: Outfall 001

Latitude: 47.43444°N Longitude: -117.3817°N

Parameter	Average Monthly ^a	Average Weekly ^b
Biochemical Oxygen Demand (5-day) (BOD ₅)	10.0 mg/L	15.0 mg/L
BOD ₅	5.7 lbs/day	8.5 lbs/day
BOD ₅	85% removal of influent BOD ₅	N/A
Total Suspended Solids (TSS)	15 mg/L	22.5 mg/L
TSS	8.5 lbs/day	12.8 lbs/day
TSS	85% removal of influent TSS	N/A
Total Ammonia (technology-based)	1.0 mg/L	1.5 mg/L

Parameter	Minimum	Maximum
pH	6.5 standard units	8.5 standard units

Parameter	Monthly Geometric Mean	Weekly Geometric Mean
Fecal Coliform Bacteria ^c	100/100 mL	200/100 mL

Parameter	Average Monthly	Maximum Daily ^d
Total Phosphorous (as P) (WQ-based)	5.7 mg/L	10.8 mg/L
Temperature Average 7- DADMax (interim)	No Increase	N/A
Temperature 7DADMax Final (March 1, 2035)	N/A	June – 18.2°C July –21.5°C August – 17.7°C
Interim Dissolved Oxygen Average Monthly Minimum Limit	No Increase	N/A
Final Dissolved Oxygen Average Monthly Minimum Limit (March 1, 2035)	8.0 mg/L	N/A

Table 2 Footnotes:

^a Average monthly effluent limit means the highest allowable average of daily discharges over a calendar month. To calculate the discharge value to compare to the limit, you add the value of each daily discharge measured during a calendar month and divide this sum by the total number of daily discharges measured.

^b Average weekly discharge limit means the highest allowable average of daily discharges over a calendar week, calculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges' measured during that week. See footnote c for bacteria calculations.

^c Ecology provides directions to calculate the monthly and the 7-day geometric mean in the [Information Manual for Treatment Plant Operators¹](#), Publication No. 04-10-020 (February 2004).

^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. The average daily measurement does not apply to pH or temperature.

S1.B. Mixing zone authorization

The permit does not authorize a mixing zone.

S2. Monitoring requirements

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

¹ <https://apps.ecology.wa.gov/publications/documents/0410020.pdf>

Table 3: Wastewater Influent ^a

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

Parameter	Units & speciation	Minimum sampling frequency	Sample type
BOD ₅	Milligrams per liter (mg/L)	Weekly ^b	24-hour Composite Sample ^c
TSS	mg/L	Weekly ^b	24-hour Composite Sample ^c

Table 3 Footnotes:

^a Loading was removed because there is no influent flow meter, it will be added back to sampling when an influent flow meter is installed.

^b Weekly means once every week during alternating days Monday-Friday.

^c 24-hour composite means a series of individual samples collected over a 24-hour period into a single container and analyzed as one sample.

Table 4: 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 BOD₅ analysis before or after the disinfection process. If taken after, the Permittee must dechlorinate and reseed the sample.

Parameter	Units & speciation	Minimum sampling frequency	Sample type
Flow	gpd	Continuous ^a	Metered/Recorded
pH ^b	Standard Units (s.u.)	Continuous ^c	Measurement
Dissolved Oxygen ^d	mg/L	Continuous ^c	Measurement
Dissolved Oxygen	mg/L	Daily ^r	Grab ^m
Temperature ^e	°C	Continuous ^c	Measurement
Temperature	°C	Daily ^q	Grab ^m
7-DAD Max Temperature ^f	°C	Daily ^g	Calculated

BOD ₅	mg/L	Weekly ^h	24-hour Composite Sample ⁱ
BOD ₅	lbs/day ^j	Weekly ^h	Calculated
BOD ₅	% removal ^k	Weekly ^h	Calculated
TSS	mg/L	Weekly ^h	24-hour Composite Sample ⁱ
TSS	lbs/day ^j	Weekly ^h	Calculated
TSS	% removal ^k	Weekly ^h	Calculated
Fecal Coliform ^l	# /100 mL	Weekly ^h	Grab ^m
E.coli ^l	#/100 mL	Monthly ^g	Grab ^m
Total Phosphorus	mg/L as P	Monthly ⁿ	24-hour Composite Sample ⁱ
Number of Operating UV Tubes ^s	#/day	5/week ^o	Visual Observation
Total Ammonia	mg/L as N	Quarterly ^p	24-hour Composite Sample ⁱ

Table 4 Footnotes:

^a Continuous totalizing flow meter recorded and reported.

^b Report the daily minimum and maximum pH.

^c 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. Sample every three hours between 7:00 AM and 11:00 PM when continuous monitoring is not possible.

^d Measure dissolved oxygen continuously, report a daily minimum from half-hour measurements over a 24-hour period. Continuous monitoring instruments must achieve an accuracy of 0.2 mg/L, and the Permittee must verify accuracy monthly.

^e Measure temperature continuously, report a daily maximum from half-hour measurements over a 24-hour period. Continuous monitoring instruments must achieve an accuracy of 0.2 °C and the Permittee must verify accuracy annually.

^f The 7-DADMax for any individual day is calculated by averaging that day's daily maximum temperature with the daily maximum temperatures of the three days prior and the three days after that date.

(daily sample + sum of prior 3 days of samples + sum of following 3 days of samples)/7)

^g Daily means everyday including weekends and holidays.

^h Weekly means once every week during alternating days Monday-Friday.

ⁱ 24-hour composite means a series of individual samples collected over a 24-hour period into a single container and analyzed as one sample.

^j lbs/day = Concentration (mg/L) x Flow (mgd) x 8.34/1,000,000

^k % removal = [Influent concentration (mg/L) – Effluent concentration (mg/L)] / Influent concentration (mg/L) x 100

^l Report a numeric value for fecal coliforms and E.coli following the procedures in the Information Manual for Wastewater Treatment Plant Operators, Publication 04-10-020 (Ecology, 2004). Do not report a result as Too Numerous To Count (TNTC).

^m Grab means an individual sample collected over a 15-minute, or less, period.

ⁿ Monthly means once every calendar month during alternate weeks.

^o 5/week means everyday excluding weekends and holidays.

^p Quarterly sampling periods are January through March, April through June, July through September, and October through December.

^q Temperature grab sample must be taken at the time when the effluent is at its maximum temperature. This will require the Permittee to take grab samples throughout the day to establish the approximate time of day when the effluent is at maximum temperature. This is typically late in the afternoon or early in the evening.

^r Dissolved oxygen (DO) grab samples must be taken at the time when the DO levels are the lowest in the effluent. This is typically when the temperature is the highest. The Permittee must take multiple samples as required in the S10 compliance schedule, to establish the time when the DO is lowest in the effluent.

^s Report the number of functioning bulbs in use for the UV disinfection system.

S2.A. Sampling and analytical procedures

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

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

S2.B. Flow measurement and continuous monitoring devices

The Permittee must:

1. Select and use appropriate flow measurement, and continuous monitoring pH meter, dissolved oxygen meter and thermistor 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 waste stream.
3. Calibrate continuous monitoring instruments weekly unless it can demonstrate a longer period is sufficient based on monitoring records.

The Permittee:

- a. May calibrate apparatus for continuous monitoring of dissolved oxygen by air calibration.
 - b. Must calibrate continuous pH measurement instruments according to the manufacturer's requirements.
 - c. Must verify effluent continuous temperature thermistor against calibrated thermometer weekly unless otherwise recommended by the manufacturer.
4. Calibrate micro-recording temperature devices, known as thermistors, using protocols from Standard Operating Procedure EAP080, Version 2.2, [Continuous Temperature Monitoring of Freshwater Rivers and Streams²](https://apps.ecology.wa.gov/publications/SummaryPages/2203216.html). Publication No. 22-03-216 (March 2022). Calibration as specified in this document is not required if the Permittee uses recording devices certified by the manufacturer.
 5. Use field measurement devices as directed by the manufacturer and do not use reagents beyond their expiration dates.
 6. Establish a calibration frequency for each device or instrument in the O&M manual that conforms to the frequency recommended by the manufacturer.
 7. Calibrate flow-monitoring devices at a minimum frequency of at least one calibration per year.
 8. Maintain calibration records for at least three years.

² <https://apps.ecology.wa.gov/publications/SummaryPages/2203216.html>

S2.C. 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 Washington Administrative Code (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.D. Request for reduction in monitoring

The Permittee may request a reduction of the sampling frequency after 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](https://secureaccess.wa.gov/ecy/wqwebportal/)³. Include data for each of the parameters tabulated in Special Conditions 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. Submit DMRs no later than the dates specified below, unless otherwise specified in this permit.
3. Submit DMRs for parameters with the monitoring frequencies specified in S2 (monthly, quarterly, annual, etc.) at the reporting schedule identified below.

The Permittee must:

- a. Submit **monthly** DMRs by the 15th day of the following month.

³ <https://secureaccess.wa.gov/ecy/wqwebportal/>

- b. Submit **quarterly** DMRs by the 15th day of the month following the monitoring period.

Quarterly Sampling Periods:

1 st Quarter	January – March	Due April 15
2 nd Quarter	April – June	Due July 15
3 rd Quarter	July – September	Due October 15
4 th Quarter	October – December	Due January 15

4. Enter the “No Discharge” reporting code for an entire DMR, for a specific monitoring point, or a specific parameter as appropriate, if the Permittee did not discharge wastewater or a specific pollutant during a given monitoring period.
5. Report single analytical values below detection as “less than the Detection Level (DL)” by entering the < followed by the numeric value of the detection level (e.g. < 2.0) on the DMR. If the method used did not meet the minimum DL and Quantitation Level (QL) identified in the permit report the actual QL and DL in the comments or in the location provided.
6. Report single analytical values between the DL and the QL by entering the estimated value, the code for estimated value/below quantitation limit (J) and any additional information in the comments.
7. When an outside laboratory performs the analysis, submit a copy of the laboratory report as an attachment using WQWebDMR. Contract laboratory reports must include the chain of custody and QA/QC results.
8. Submit bacteria monitoring results as follows:
 - a. Do not report zero for bacterial monitoring. Report as required by the laboratory method.
 - b. Calculate and report an arithmetic average value for each day for bacteria if multiple samples were taken in one day.
9. Calculate the geometric mean values for bacteria (unless otherwise specified in the permit) using the reported numeric value for all bacteria samples measured above the detection value except when it took multiple samples in one day. If multiple samples are taken in one day, use the arithmetic average for the day in the geometric mean calculation. Use the detection value for those samples measured below detection.
10. Report the test method used for analysis in the comments if the laboratory used an alternative method not specified in the permit and as allowed in Appendix A or Special Condition S2.
11. 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 (1/2) 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 reporting period.

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 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 Program
Department of Ecology
Eastern Regional Office
4601 North Monroe Street
Spokane, Washington 99205-1265

S3.C. Records retention

The Permittee must retain records of all monitoring information for a minimum of three 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 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 date and time the analysis was performed.
4. The individual who performed the analysis.
5. The analytical technique or method 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.

The Permittee must make reasonable attempts to collect a sample of any unusual discharge or discharge condition including prohibited bypasses, upsets, and maintenance-related conditions affecting effluent quality. The sample must be representative of the volume and nature of the uncharacteristic discharge and must represent a relevant subset of parameters required to be monitored under section S2.A, including at minimum the following parameters: BOD₅, TSS, and Fecal Coliforms. The additional monitoring results must be reported on the monthly DMR, along with a note of explanation. Refer to the [Information Manual for Treatment Plant Operators](#)⁴, Publication 04-10-020' (Ecology, 2004), for guidance on incorporating extra sampling results into DMR calculations.

2. Immediate reporting

The Permittee must immediately report (see definition of "immediate reporting" in Appendix C of the Fact Sheet) to Ecology and the local health jurisdiction at the numbers listed below:

- Failures of the disinfection system.
- Plant bypasses resulting in a discharge to a waterbody.
- Any upset that causes an exceedance of an effluent limit in the permit (See G.15, "Upset").
- Collection system overflows.
- Any other failures of the sewage system (pipe breaks, etc.).

Ecology Eastern Regional Office (509) 329-3400

Spokane Regional Health District (509) 324-1500

3. Twenty-four (24) hour reporting

The Permittee must report the following to Ecology at the telephone number listed in S3.F.2 and by email to the current Ecology Permit Manager within 24 hours from the time the Permittee becomes aware of any of the following:

⁴ <https://apps.ecology.wa.gov/publications/SummaryPages/0410020.html>

- Any violation of a minimum daily, maximum daily or instantaneous maximum discharge limit for any of the pollutants in Special Condition S1.A of this permit.
- Any noncompliance that may endanger health or the environment, unless previously reported under immediate reporting requirements.
- All sanitary sewer overflow (SSO). A sanitary sewer overflow is any event where wastewater touches the ground. This includes backups into homes and businesses.

4. Five-day follow up report

The Permittee must also submit a written report within five days of the time that the Permittee becomes aware of any reportable event under S3.F.3 or S3.F.4. (See definition of “Days (compliance period interval)” in Appendix C of the Fact Sheet).

Submit the written report electronically using the Water Quality Permitting Portal – Permit Submittals application.

The Permittee may use any reporting form that includes all the required content listed in this section.

The report must contain:

- a. A description of the noncompliance and its cause.
- b. The period of noncompliance, including exact dates and times.
- c. The estimated time the Permittee expects the noncompliance to continue if not yet corrected.
- d. Steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.
- e. If the noncompliance involves an overflow prior to the treatment works:
 - (i) Indicate the type of event (e.g., combined sewer overflow, sanitary sewer overflow, or bypass event).
 - (ii) Indicate the type of sewer overflow structure (e.g., manhole, combined sewer overflow outfall).
 - (iii) Estimate the quantity (in gallons) of the untreated overflow.
 - (iv) Indicate whether the noncompliance was related to wet weather; and
 - (v) Indicate the types of human health and environmental impacts of the event.
- f. Include a description of actions taken to stop, contain, and cleanup unauthorized discharges and to mitigate any associated environmental impacts.

- g. If an Environmental Reports Tracking System (ERTS) number was assigned to the event when it was initially reported, include this number in the five-day follow up report for reference.
- h. Identification of other agencies contacted per the emergency notification call list in S3.F.2.
- i. If samples were taken to characterize the event, provide any analytical results that are available with the five-day report. If the data was collected at the same monitoring points and for parameters specified on the DMR, the sample results must also be reported on the DMR.

5. Waiver of written reports

Ecology may waive the report required in S3.F.4 on a case-by-case basis if the Permittee has submitted a timely oral report. If a waiver is requested, the Permittee must obtain documentation of this waiver in writing or email from Ecology.

6. All other permit violation reporting

The Permittee must report all other permit violations when they submit monitoring reports under Special Condition S3.A. (Reporting). The reports must contain the information listed in S3.F.5. Compliance with these requirements does not relieve the Permittee from responsibility to maintain continuous compliance with the terms and conditions of this permit or from the resulting liability for failure to comply.

S3.G. Other reporting

1. Spills of oil or hazardous materials

In addition to the requirements in S3.F, the Permittee must report a spill of oil or hazardous materials in accordance with the requirements of Revised Code of Washington (RCW) 90.56.280 and WAC 173-303-145. Visit the website [How to Report a Spill⁵](#) for further instructions.

2. 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.

⁵ <https://ecology.wa.gov/About-us/Get-involved/Report-an-environmental-issue/Report-a-spill>

S4. Facility loading

S4.A. Design criteria

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

Table 5: Design Criteria

Parameter	Unit
Maximum Daily Flow	85,000 gallons per day
Average Daily Flow	68,000 gallons per day
Peak Hourly Flow	230,000 gallons per day
BOD ₅ Influent Loading for Maximum Month	137 pounds per day
TSS Influent Loading for Maximum Month	103 pounds per day
UV Bulbs	5 Tubes

S4.B. Plans for maintaining adequate capacity

1. The Permittee must submit an engineering report and a schedule for continuing to maintain capacity to Ecology when:
 - a. The actual flow or waste load reaches 85 percent of any one of the design criteria in S4.A for three consecutive months.
 - b. The projected plant flow or loading would reach design capacity within five years.
2. 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:
 - a. Analysis of the present design and proposed process modifications.
 - b. Reduction or elimination of excessive infiltration and inflow of uncontaminated ground and surface water into the sewer system.
 - c. Limits on future sewer extensions or connections or additional waste loads.
 - d. Modification or expansion of facilities.
 - e. Reduction of industrial or commercial flows or waste loads.

3. Notify Ecology that you are beginning planning.

Engineering documents associated with the plan must meet the requirements of WAC 173-240-060, "Engineering Report," and must 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.

1. The Permittee must identify a plan to mitigate discharge of waste sludge to the decommissioned lagoons.

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

The Permittee must conduct an infiltration and inflow (I&I) evaluation and submit a report **by February 1, 2027** identifying specific locations of I&I, impacts of flow on compliance, and evaluation of whether it is more cost effective to treat the excess flow or repair the issue. Refer to the publication 'Guide for Estimating Infiltration and Inflow' (EPA, 2014).

The report must include the following:

1. The Permittee may use monitoring records and flow measuring devices in the collection system to assess measurable infiltration and inflow.
2. The Permittee must prepare a report summarizing any measurable infiltration and inflow. The report must contain a plan and a schedule to locate the sources of infiltration and inflow and to correct the problem.
3. The Permittee must submit an Infiltration and Inflow Capital Improvement Plan and Construction Schedule providing the results of the evaluation, the recommendations for corrective actions and a capital improvements schedule for implementing the recommendations.

S5. Operation and maintenance

The Permittee must, always, properly operate and maintain all structures, equipment, or processes required to collect, carry away, treat, reclaim or dispose of wastewater, which are installed to achieve compliance with the terms and conditions of this permit.

Proper operations and maintenance also include keeping a daily operations logbook (paper or electronic), adequate laboratory controls, and appropriate monitoring 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 II 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:

1. Submit an electronic copy of operator certification renewal card for the current operator(s) in responsible charge **by May 15 each year.**
2. Immediately notify Ecology when the facility does not have a properly certified operator in responsible charge or if the current properly certified operator in responsible charge loses their certification.
3. Notify Ecology within 30 days when the operator in responsible charge at the facility changes.
 - a. Provide the new operators' name, certification number and certification level.
 - b. Provide a current copy of the contract if a contract operator is used.

The Permittee must notify Ecology if they are using a contract operator. The contract between Spangle and the contract operator must clearly identify that the contract operator will be in responsible charge of the day-to-day activities required to operate the wastewater treatment facility in compliance with the provisions of the permit.

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 conveyance 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. Keep an up-to-date operations and maintenance log documenting operational parameters, operational decisions, and summarizing operations and maintenance activities.

4. 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, 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 III (EPA 430-99-74-001) at the wastewater treatment plant. Reliability Class III 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 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 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

1. The Permittee must:
 - a. 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 1, 2026.**
 - b. The operator must review the manual annually and document review in the operator logbook.
 - c. Submit to Ecology for review and approval substantial changes or updates to the O&M Manual.
 - d. Keep the approved O&M Manual at the permitted facility.
 - e. Follow the instructions and procedures of this manual.
2. In addition to the requirements of WAC 173-240-080(1) through (5), the O&M Manual must be consistent with the guidance in Section G1-4.4 in the ‘Criteria for Sewage Works Design (Orange Book)’ (Ecology, 2023).

The O&M Manual must include:

- a. Emergency procedures for cleanup in the event of wastewater system upset or failure.

- b. 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.
- c. Wastewater system maintenance procedures that contribute to the generation of process wastewater.
- d. Reporting protocols for submitting reports to Ecology to comply with the reporting requirements in the discharge permit.
- e. 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).
- f. The treatment plant process control monitoring schedule.
- g. Minimum staffing adequate to operate and maintain the treatment processes, conveyance system and carry out compliance monitoring required by the permit.
- h. Updated schematic showing the actual system flow for solids and wastewater through the facility.
- i. Provide operator instructions for operations of the scum recycle during influent sampling.
- j. Provide sampling quality assurance requirements.
- k. Provide sampling equipment decontamination procedures.
- l. Provide sample handling procedures.
- m. Operations and maintenance procedures and staffing requirements for collection system.
- n. Collection system cleaning schedule.

S6. Pretreatment

The Permittee must work with Ecology to ensure that all industrial users (see “industrial user” and “industrial wastewater” definitions in the fact sheet glossary) of the publicly owned treatment works (POTW) comply with the pretreatment requirements of the federal Clean Water Act, Washington state law and the federal General Pretreatment Regulations. Pretreatment requirements apply to sewers, pipes, and other conveyances in addition to devices and systems used in the storage, treatment, recycling and reclamation of municipal sewage or industrial wastes of a liquid nature (see “POTW” definition in the fact sheet glossary).

S6.A. Duty to enforce discharge prohibitions

The Permittee must notify Ecology, within 30 days of becoming aware, if any industrial user violates the following discharge prohibitions and initiate enforcement action to promptly curtail any such discharge.

1. The Permittee must not authorize or knowingly allow the discharge of any pollutants into its POTW which may be reasonably expected to cause pass through or interference.
2. The Permittee must not authorize or knowingly allow the introduction of any of the following into their treatment works:
 - a. Pollutants which create a fire or explosion hazard in the POTW (including, but not limited to waste streams with a closed cup flashpoint of less than 140 degrees Fahrenheit or 60 degrees Centigrade using the test methods specified in 40 CFR 261.21).
 - b. Pollutants which will cause corrosive structural damage to the POTW, but in no case discharges with pH lower than 5.0, or greater than 11.0 standard units, unless the works are specifically designed to accommodate such discharges.
 - c. Solid or viscous pollutants in amounts that could cause obstruction to the flow in the collection system or otherwise cause interference with the POTW.
 - d. Any pollutant, including oxygen-demanding pollutants, (BOD₅, etc.) released in a discharge at a flow rate and/or pollutant concentration which will cause interference with the POTW.
 - e. Petroleum oil, non-biodegradable cutting oil, or products of mineral origin in amounts that will cause interference or pass through.
 - f. Pollutants which result in the presence of toxic gases, vapors, or fumes within the POTW in a quantity which may cause acute worker health and safety problems.
 - g. Heat in amounts that will inhibit biological activity in the POTW resulting in interference but in no case heat in such quantities that the temperature at the POTW headworks exceeds 40 degrees Celsius (104 degrees Fahrenheit) unless Ecology, upon request of the Permittee, approves alternate temperature limits in writing.
 - h. Any trucked or hauled pollutants, except at discharge points designated by the Permittee.
 - i. Wastewaters prohibited to be discharged to the POTW by the Dangerous Waste Regulations (chapter 173-303 WAC), unless authorized under the Domestic Sewage Exclusion (WAC 173-303-071).
3. The Permittee must not allow the following discharges to the POTW unless approved in writing by Ecology:
 - a. Noncontact cooling water in significant volumes.
 - b. Stormwater and other direct inflow sources.

- c. Wastewaters significantly affecting system hydraulic loading, which do not require treatment, or would not be afforded a significant degree of treatment by the system.

S6.B. Identification and notification of new industrial wastewater sources

The Permittee must establish a process for authorizing industrial wastewater discharges.

The Permittee must:

1. Immediately notify Ecology of any proposed industrial wastewater discharges from a source which is or may be a significant industrial user (SIU).
2. Within 30 days of becoming aware, notify Ecology of existing industrial users which change operations or increase wastewater discharge volume in a manner which makes them an SIU.
3. Within 30 days of becoming aware, notify Ecology of existing, unpermitted industrial users that are an SIU.
4. Require all SIUs to obtain a state waste discharge permit (SWDP) from Ecology prior to accepting or as a condition of continuing to accept their industrial wastewater.

S7. Solid wastes

S7.A. Solid waste handling

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

S7.B. Leachate

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

S8. Application for permit renewal or modification for facility changes

The Permittee must apply for renewal of this permit **by February 28, 2029**.

Mail the original, signed application to the Water Quality Program, Eastern Regional Office, Department of Ecology, 4601 N. Monroe Street, Spokane, Washington 99205-1265.

Send an electronic copy of the application (preferably as a PDF) by email to the Water Quality Program at ewqpermits@ecy.wa.gov. Scan any attachments to the application and submit them with the application.

The Permittee must also submit a new application or addendum at least 180 days prior to commencement of discharges, resulting from the activities listed below, which may result in permit violations.

These activities include any facility expansions, production increases, or other planned changes, such as process modifications, in the permitted facility.

S9. Engineering documents

1. The Permittee must prepare and submit an approvable engineering report within accordance with chapter 173-240 WAC that enables the Permittee to meet the requirements of the S11 compliance schedule Task 1 and 2 and identify AKART for the discharge of biosolids from the facility to Ecology for review and approval **by March 1, 2029**.
2. As required by RCW 90.48.112, the engineering report must address the feasibility of using reclaimed water as defined in RCW 90.46.010.
3. The report must contain any appropriate requirements as described in the following guidance:
 - a. [Criteria for Sewage Works Design⁶](#), Publication 98-37 (Orange Book) (Ecology, 2023)
 - b. [Reclaimed Water Facilities Manual: The Purple Book⁷](#), Publication 15-10-024 (Ecology and Department of Health, 2019)
4. The Permittee must include an implementation schedule with estimated dates by which plans and specifications, quality assurance plan and construction will be completed.
5. In addition to the electronic copy required by Section S3, the Permittee must submit one full size paper copy of the final version of the report to Ecology for its use to the address listed in Special Condition S3.B.

If the Permittee requests that Ecology provide a stamped, approved copy they must submit an additional paper copy (total of 2 paper copies).

S10. Enforcement compliance schedule

By the dates tabulated below, the Permittee must complete the following tasks. In addition, the Permittee must submit a report by August 1 of each year describing its progress in completing the tasks listed below. The report must, at a minimum, include the following:

- Whether the task is complete and, if not, the date by which the Permittee expects to complete the task.
- The reasons for any delay and the steps being taken to return the project to the established schedule.

⁶ <https://apps.ecology.wa.gov/publications/SummaryPages/9837.html>

⁷ <https://apps.ecology.wa.gov/publications/SummaryPages/1510024.html>

Table 6: Enforcement Compliance Schedule

Task	Description	Date Due
#1	Install continuous reading and recording thermistor on the effluent and submit written notification of completion to Ecology.	March 1, 2026
#2	Complete 5 days (June 2, 2025 - June 6, 2025) of effluent grab samples for temperature at the following times, 10 AM, 12 PM, 2 PM, 4 PM, 6 PM, and 8 PM each day. Identify the approximate time of maximum temperature. Notify Ecology of the approximate time of maximum daily temperature and continue daily grab samples per S2 at the identified time every day until the continuous temperature reading and recording device is installed and operating.	June 9, 2025
#3	Install continuous reading and recording dissolved oxygen sensor on the effluent and submit written notification of completion to Ecology.	March 1, 2026
#4	Complete 5 days (June 2, 2025 - June 6, 2025) of effluent grab samples for minimum dissolved oxygen at the following times, 10 AM, 12 PM, 2 PM, 4 PM, 6 PM, and 8 PM each day. Identify the approximate time of minimum dissolved oxygen. Notify Ecology of the approximate time of minimum daily dissolved oxygen and continue daily grab samples per S2 at the identified time every day until the continuous dissolved reading and recording device is installed and operating.	June 9, 2025
#5	Provide I&I and improvement plan and construction schedule to address inflow and infiltration in the collection system identified in the evaluation required by (S4.E).	February 1, 2027
#6	Provide an engineering report identifying alternatives for treatment waste activated sludge and biosolids that are currently being discharged to an unlined lagoon, that is protective of groundwater (S9).	March 1, 2029

S11. Water quality based effluent limit compliance schedule

By the dates tabulated below, the Permittee must complete the following tasks. In addition, the Permittee must submit a report by August 1 of each year describing its progress in completing the tasks listed below. The report must, at a minimum, include the following:

- Whether the task is complete and, if not, the date by which the Permittee expects to complete the task.
- The reasons for any delay and the steps being taken to return the project to the established schedule.

Table 7: Water Quality Based Effluent Limit Compliance Schedule

Task	Description	Date Due
#1	Provide an annual update memo each year, identifying progress toward achieving the final water quality limit in S1, Table 2 for temperature as soon as possible not to exceed 10 years.	March 1, 2026
#2	Provide an annual update memo each year identifying progress toward achieving the final water quality limit in S1, Table 2 for dissolved oxygen as soon as possible not to exceed 10 years.	March 1, 2026

S12. Receiving water study

The Permittee must collect receiving water information necessary to determine if the effluent has a reasonable potential to cause or contribute to a violation of the water quality standards.

The Permittee must:

1. Submit a sampling and quality assurance project plan (QAPP) for Ecology review and approval **by March 1, 2026**. Prepare all quality assurance plans in accordance with the guidelines given in [Guidelines for Preparing Quality Assurance Project Plans for Environmental Studies⁸](#), Publication 04-03-030 (Ecology, 2016).

The [Water Quality Individual Permit Guidance⁹](#) web page includes a Quality Assurance Plan template for receiving water studies.

2. Conduct all sampling and analysis in accordance with the approved quality assurance project plan.
 - a. Locate the receiving water sampling locations outside the zone of influence of the effluent. This should be approximately 100 feet upstream of the outfall pipe.
 - b. Use sampling station accuracy requirements of ± 66 feet.
 - c. Collect samples every two weeks from April 1 and continuing through October 31.
 - d. Collect field data for dissolved oxygen, temperature, and pH.
 - e. Complete ammonia analysis using the methods, and the detection levels identified in Appendix A of this permit.

⁸ <https://apps.ecology.wa.gov/publications/SummaryPages/0403030.html>

⁹ <https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Water-quality-permits-guidance>

3. Submit chemical and field data to [Ecology's Environmental Information System \(EIM\)](#)¹⁰. Data must be submitted to EIM according to the instructions on the EIM website. The EIM website provides information on submitting data, and a link to the EIM Help Center.
4. Submit the final report, summarizing the results of the study to Ecology **by March 1, 2029**. The final report must document when the data was successfully loaded into EIM.

Any subsequent sampling and analysis must also meet these requirements.

¹⁰ <https://ecology.wa.gov/Research-Data/Data-resources/Environmental-Information-Management-database>

REFERENCES

- Doneker, R. L., & Jirka, G. H. (2007). CORMIX User Manual: A Hydrodynamic Mixing Zone Model and Decision Support System for Pollutant Discharges into Surface Waters, EPA-823-K-07-001. Retrieved from <http://www.mixzon.com/downloads/>
- Ecology. (2004). Information Manual for Treatment Plant Operators, Publication 04-10-020. Retrieved from <https://apps.ecology.wa.gov/publications/SummaryPages/0410020.html>
- Ecology. (2016). Guidelines for Preparing Quality Assurance Project Plans for Environmental Studies. Retrieved from <https://apps.ecology.wa.gov/publications/summarypages/0403030.html>
- Ecology. (2016). Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria (Publication 95-80). Retrieved from <https://apps.ecology.wa.gov/publications/SummaryPages/9580.html>
- Ecology. (2018). Water Quality Program Permit Writer's Manual, Publication 92-109. Retrieved from <https://apps.ecology.wa.gov/publications/summarypages/92109.html>
- Ecology. (2021). Sediment Cleanup User's Manual SCUM. Retrieved from <https://apps.ecology.wa.gov/publications/SummaryPages/1209057.html>
- Ecology. (2022). Standard Operating Procedure EAP080, Version 2.2: Continuous Temperature Monitoring of Freshwater Rivers and Streams, Publication 22-03-216. Retrieved from <https://apps.ecology.wa.gov/publications/SummaryPages/2203216.html>
- Ecology. (2023). Criteria for Sewage Works Design, Publication 98-37 (Orange Book). Retrieved from <https://apps.ecology.wa.gov/publications/SummaryPages/9837.html>
- Ecology and Department of Health. (2019). Reclaimed Water Facilities Manual: The Purple Book. Retrieved from <https://apps.ecology.wa.gov/publications/SummaryPages/1510024.html>
- EPA. (2014). Guide for Estimating Infiltration and Inflow. EPA.
- Frick, W. E., Roberts, P. J., Davis, L. R., Keyes, D. J., & Baumgartner, G. K. (2003). Dilution Models for Effluent Discharges, 4th Edition (Visual Plumes). Athens, GA: Ecosystems Research Division, USEPA. Retrieved from <https://www.epa.gov/sites/production/files/documents/VP-Manual.pdf>
- Kilpatrick, F. A., & Cobb, E. D. (1985). Measurement of Discharge Using Tracers, Chapter A16, Techniques of Water-Resources Investigations of the USGS, Book 3, Application of Hydraulics. Reston VA: USGS. Retrieved from https://pubs.usgs.gov/twri/twri3-a16/pdf/TWRI_3-A16.pdf
- USEPA. (1985). Infiltration/Inflow: I/I Analysis and Project Certification. Retrieved from <https://apps.ecology.wa.gov/publications/SummaryPages/9703.html>

- USEPA. (1996). Method 1669: Sampling Ambient Water for Trace Metals at EPA Water Quality Criteria Levels. Retrieved from https://www.epa.gov/sites/default/files/2015-10/documents/method_1669_1996.pdf
- Wilson, J. F., Cobb, E. D., & Kilpatrick, F. A. (1986). Fluorometric Procedures for Dye Tracing, Chapter A12. Techniques of Water-Resources Investigations of the USGS, Book 3, Application of Hydraulics. Reston, VA: USGS. Retrieved from https://pubs.usgs.gov/twri/twri3-a12/pdf/TWRI_3-A12.pdf

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, vice-president, secretary, or treasurer 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 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 180-days prior to the planned start of construction unless a shorter time is approved by Ecology. Facilities must be constructed and operated in accordance with the approved plans.

G6. Compliance with other laws and statutes

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

G7. Transfer of this permit

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

1. Transfers by Modification

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

2. Automatic Transfers

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

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

G8. Reduced production for compliance

The Permittee, in order to maintain compliance with its permit, must control production and/or all discharges upon reduction, loss, failure, or bypass of the treatment facility until the facility is restored or an alternative method of treatment is provided.

This requirement applies in the situation where, among other things, the primary source of power of the treatment facility is reduced, lost, or fails.

G9. Removed substances

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

G10. Duty to provide information

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

G11. Other requirements of 40 CFR

All other requirements of 40 CFR 122.41 and 40 CFR 122.42 are incorporated in this permit by reference.

G12. Additional monitoring

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

G13. Payment of fees

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

G14. Penalties for violating permit conditions

Any person who is found guilty of willfully violating the terms and conditions of this permit is deemed guilty of a crime, and upon conviction thereof shall be punished by a fine of up to **\$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 \$10,000 for every such violation. Each 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:

4. An upset occurred and that the Permittee can identify the cause(s) of the upset.
5. The permitted facility was being properly operated at the time of the upset.
6. The Permittee submitted notice of the upset as required in Special Condition S3.F.
7. 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 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 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 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, Analytical Methods, Detection Levels and Quantitation Levels

The Permittee must use the specified analytical methods, detection levels (DLs) ¹ and quantitation levels (QLs) ² 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 level (MDL) and a quantitation level (QL) to Ecology with appropriate laboratory documentation when the detection levels are too high to provide results near or below criteria (or applicable permit limits).

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.

Appendix A Table 1 – Conventional Pollutants

Pollutant	CAS Number (if available)	Recommended Analytical Protocol	Detection Level (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, 9221F SM 9222D	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

Appendix A Table 2 - Nonconventional Pollutants

Pollutant	CAS Number (if available)	Recommended Analytical Protocol	Detection Level (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-NH3-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

Pollutant	CAS Number (if available)	Recommended Analytical Protocol	Detection Level (DL) ¹ µg/L Unless specified	Quantitation Level (QL) ² µg/L Unless specified
Chloride		SM4500-Cl B/C/D/E and SM4110 B		Sample and limit dependent
Chlorine, Total Residual		SM4500 Cl G		50.0
Cobalt, Total	7440-48-4	200.8	0.05	0.25
Color		SM2120 B/C/E		10 color units
Dissolved oxygen		SM4500- OC/OG		0.2 mg/L
E.coli		SM 9221B, 9221F, 9223B	N/A	Specified in method; sample aliquot dependent
Enterococci		EPA 1600 SM 9230B, 9230C, 9230D,	N/A	Specified in method; sample aliquot dependent
Flow		Calibrated device		
Fluoride	16984-48-8	SM4500-F E	25	100
Hardness, Total		SM2340B		200 as CaCO ₃
Iron, Total	7439-89-6	200.7	12.5	50
Magnesium, Total	7439-95-4	200.7	10	50
Manganese, Total	7439-96-5	200.8	0.1	0.5
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

Pollutant	CAS Number (if available)	Recommended Analytical Protocol	Detection Level (DL) ¹ µg/L Unless specified	Quantitation Level (QL) ² µg/L Unless specified
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- S2F/D/G		0.2 mg/L
Sulfite (as mg/L SO ₃)		SM4500-SO3B		2 mg/L
Temperature		Analog recorder or micro- recording devices (thermistors)		0.2°C
Tin, Total	7440-31-5	200.8	0.3	1.5
Titanium, Total	7440-32-6	200.8	0.5	2.5
Total Coliform		SM 9221B SM 9222B	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

Appendix A Table 3 - Priority Pollutants: Metals, Chromium (hex), Cyanide & Total Phenols

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

Appendix A Table 4 - Priority Pollutants: Acid Compounds

Priority Pollutants	PP #	CAS Number (if available)	Recommended Analytical Protocol	Detection Level (DL) ¹ µg/L Unless specified	Quantitation Level (QL) ² µg/L Unless specified
2-Chlorophenol	24	95-57-8	625.1	3.3	9.9
2,4-Dichlorophenol	31	120-83-2	625.1	2.7	8.1
2,4-Dimethylphenol	34	105-67-9	625.1	2.7	8.1
4,6-dinitro-o-cresol (2-methyl-4,6,- dinitrophenol)	60	534-52-1	625.1/1625B	24	72
2,4 dinitrophenol	59	51-28-5	625.1	42	126
2-Nitrophenol	57	88-75-5	625.1	3.6	10.8
4-Nitrophenol	58	100-02-7	625.1	2.4	7.2
Parachlorometa cresol (4-chloro-3- methylphenol)	22	59-50-7	625.1	3.0	9.0
Pentachlorophenol	64	87-86-5	625.1	3.6	10.8
Phenol	65	108-95-2	625.1	1.5	4.5
2,4,6- Trichlorophenol	21	88-06-2	625.1	2.7	8.1

Appendix A Table 5 - Priority Pollutants: Volatile Compounds

Priority Pollutants	PP #	CAS Number (if available)	Recommend ed Analytical Protocol	Detection Level (DL) ¹ µg/L Unless specified	Quantitatio n Level (QL) ² µg/L Unless specified
Acrolein	2	107-02-8	624.1	5	10
Acrylonitrile	3	107-13-1	624.1	1.0	2.0
Benzene	4	71-43-2	624.1	4.4	13.2
Bromoform	47	75-25-2	624.1	4.7	14.1
Carbon tetrachloride	6	56-23-5	624.1/601 or SM6230B	2.8	8.4
Chlorobenzene	7	108-90-7	624.1	6.0	18.0
Chloroethane	16	75-00-3	624/601	1.0	2.0

Priority Pollutants	PP #	CAS Number (if available)	Recommended Analytical Protocol	Detection Level (DL) ¹ µg/L Unless specified	Quantitation Level (QL) ² µg/L Unless specified
2-Chloroethylvinyl Ether	19	110-75-8	624.1	1.0	2.0
Chloroform	23	67-66-3	624.1 or SM6210B	1.6	4.8
Dibromochloro methane (chlordibromomethane)	51	124-48-1	624.1	3.1	9.3
1,2-Dichlorobenzene	25	95-50-1	624.1	1.9	7.6
1,3-Dichlorobenzene	26	541-73-1	624.1	1.9	7.6
1,4-Dichlorobenzene	27	106-46-7	624.1	4.4	17.6
Dichlorobromomethane	48	75-27-4	624.1	2.2	6.6
1,1-Dichloroethane	13	75-34-3	624.1	4.7	14.1
1,2-Dichloroethane	10	107-06-2	624.1	2.8	8.4
1,1-Dichloroethylene	29	75-35-4	624.1	2.8	8.4
1,2-Dichloropropane	32	78-87-5	624.1	6.0	18.0
1,3-dichloropropene (mixed isomers) (1,2-dichloropropylene) ⁶	33	542-75-6	624.1	5.0	15.0
Ethylbenzene	38	100-41-4	624.1	7.2	21.6

Priority Pollutants	PP #	CAS Number (if available)	Recommended Analytical Protocol	Detection Level (DL) ¹ µg/L Unless specified	Quantitation Level (QL) ² µg/L Unless specified
Methyl bromide (Bromomethane)	46	74-83-9	624/601	5.0	10.0
Methyl chloride (Chloromethane)	45	74-87-3	624.1	1.0	2.0
Methylene chloride	44	75-09-2	624.1	2.8	8.4
1,1,2,2-Tetrachloroethane	15	79-34-5	624.1	6.9	20.7
Tetrachloroethylene	85	127-18-4	624.1	4.1	12.3
Toluene	86	108-88-3	624.1	6.0	18.0
1,2-Trans-Dichloroethylene (Ethylene dichloride)	30	156-60-5	624.1	1.6	4.8
1,1,1-Trichloroethane	11	71-55-6	624.1	3.8	11.4
1,1,2-Trichloroethane	14	79-00-5	624.1	5.0	15.0
Trichloroethylene	87	79-01-6	624.1	1.9	5.7
Vinyl chloride	88	75-01-4	624/SM6200B	1.0	2.0

Appendix A Table 6 - Priority Pollutants: Base/Neutral Compounds

Priority Pollutants	PP #	CAS Number (if available)	Recommended Analytical Protocol	Detection Level (DL) ¹ µg/L Unless specified	Quantitation Level (QL) ² µg/L Unless specified
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(k)fluoranthene (11,12-benzofluoranthene) ⁷	75	207-08-9	610/625.1	2.5	7.5
Benzo(a)pyrene	73	50-32-8	610/625.1	2.5	7.5
Benzo(ghi)Perylene	79	191-24-2	610/625.1	4.1	12.3
Bis(2-chloroethoxy)methane	43	111-91-1	625.1	5.3	15.9
Bis(2-chloroethyl)ether	18	111-44-4	611/625.1	5.7	17.1
Bis(2-chloro-1-methylethyl)Ether (Bis(2-chloroisopropyl) ether) ⁸	42	108-60-1	625.1	5.7	17.1
Bis(2-ethylhexyl)phthalate	66	117-81-7	625.1	2.5	7.5
4-Bromophenyl phenyl ether	41	101-55-3	625.1	1.9	5.7

Priority Pollutants	PP #	CAS Number (if available)	Recommend ed Analytical Protocol	Detection Level (DL) ¹ µg/L Unless specified	Quantitation Level (QL) ² µg/L Unless specified
2-Chloronaphthal ene	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)anthracene (1,2,5,6-dibenzanthracene)	82	53-70-3	625.1	2.5	7.5
3,3-Dichlorobenzidi ne	28	91-94-1	605/625.1	16.5	49.5
Diethyl phthalate	70	84-66-2	625.1	1.9	5.7
Dimethyl phthalate	71	131-11-3	625.1	1.6	4.8
Di-n-butyl phthalate	68	84-74-2	625.1	2.5	7.5
2,4-dinitrotoluene	35	121-14-2	609/625.1	5.7	17.1
2,6-dinitrotoluene	36	606-20-2	609/625.1	1.9	5.7
Di-n-octyl phthalate	69	117-84-0	625.1	2.5	7.5
1,2-Diphenylhydraz ine (as Azobenzene)	37	122-66-7	1625B/625.1	5.0	20
Fluoranthene	39	206-44-0	625.1	2.2	6.6
Fluorene	80	86-73-7	625.1	1.9	5.7
Hexachloroben zene	9	118-74-1	612/625.1	1.9	5.7
Hexachlorobuta diene	52	87-68-3	625.1	0.9	2.7
Hexachlorocycl opentadiene	53	77-47-4	1625B/625.1	2.0	4.0

Priority Pollutants	PP #	CAS Number (if available)	Recommended Analytical Protocol	Detection Level (DL) ¹ µg/L Unless specified	Quantitation Level (QL) ² µg/L Unless specified
Hexachloroethane	12	67-72-1	625.1	1.6	4.8
Indeno(1,2,3-cd)Pyrene	83	193-39-5	610/625.1	3.7	11.1
Isophorone	54	78-59-1	625.1	2.2	6.6
Naphthalene	55	91-20-3	625.1	1.6	4.8
Nitrobenzene	56	98-95-3	625.1	1.9	5.7
N-Nitrosodimethylamine	61	62-75-9	607/625.1	2.0	4.0
N-Nitrosodi-n-propylamine	63	621-64-7	607/625.1	0.5	1.0
N-Nitrosodiphenylamine	62	86-30-6	625.1	1.0	2.0
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

Appendix A Table 7 - Dioxin

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
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

Appendix A Table 8 - Pesticides and PCBs

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
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 ⁹	91	57-74-9	608.3	14 ng/L	42 ng/L
4,4'-DDT	92	50-29-3	608.3	12 ng/L	36 ng/L
4,4'-DDE	93	72-55-9	608.3	4.0 ng/L	12 ng/L
4,4' DDD	94	72-54-8	608.3	11ng/L	33 ng/L
Dieldrin	90	60-57-1	608.3	2.0 ng/L	6.0 ng/L
alpha-Endosulfan	95	959-98-8	608.3	14 ng/L	42 ng/L
beta-Endosulfan	96	33213-65-9	608.3	4.0 ng/L	12 ng/L
Endosulfan Sulfate	97	1031-07-8	608.3	66 ng/L	198 ng/L
Endrin	98	72-20-8	608.3	6.0 ng/L	18 ng/L
Endrin Aldehyde	99	7421-93-4	608.3	23 ng/L	70 ng/L
Heptachlor	100	76-44-8	608.3	3.0 ng/L	9.0 ng/L
Heptachlor Epoxide	101	1024-57-3	608.3	83 ng/L	249 ng/L
PCB-1242 ¹⁰	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 ¹⁰	112	12674-11-2	608.3	0.065	0.195

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
Toxaphene	113	8001-35-2	608.3	240 ng/L	720 ng/L

Footnotes

¹ Detection level (DL) – or method detection limit means the minimum concentration of an analyte (substance) that can be reported with 99% confidence that the measured concentration is distinguishable from method blank results as determined by the procedure given in 40 CFR part 136, Appendix B.

² Quantitation Level (QL) – also known as Minimum Level (ML) – The term “minimum level” refers to either the sample concentration equivalent to the lowest calibration point in a method or a multiple of the method detection limit (DL), whichever is higher.

Minimum levels may be obtained in several ways: They may be published in a method; they may be based on the lowest acceptable calibration point used by a laboratory; or they may be calculated by multiplying the DL in a method, or the DL determined by a laboratory, by a factor of 3. For the purposes of NPDES compliance monitoring, EPA considers the following terms to be synonymous: “quantitation limit,” “reporting limit,” and “minimum level”.

³ Soluble Biochemical Oxygen Demand – method note: First, filter the sample through a Millipore Nylon filter (or equivalent) - pore size of 0.45-0.50 um (prep all filters by filtering 250 ml of laboratory grade deionized water through the filter and discard). Then, analyze sample as per method 5210-B.

⁴ Northwest Total Petroleum Hydrocarbons Diesel Extended Range OR NWTPH Dx – [Analytical Methods for Petroleum Hydrocarbons](https://apps.ecology.wa.gov/publications/documents/97602.pdf) (https://apps.ecology.wa.gov/publications/documents/97602.pdf)

⁵ Northwest Total Petroleum Hydrocarbons Gasoline Extended Range OR NWTPH Gx – [Analytical Methods for Petroleum Hydrocarbons](https://apps.ecology.wa.gov/publications/documents/97602.pdf) (https://apps.ecology.wa.gov/publications/documents/97602.pdf).

⁶ 1, 3-dichloropropylene (mixed isomers) – You may report this parameter as two separate parameters: cis-1, 3-dichloropropene (10061-01-5) and trans-1, 3-dichloropropene (10061-02-6).

⁷ Total Benzofluoranthenes – Because Benzo(b)fluoranthene, Benzo(j)fluoranthene and Benzo(k)fluoranthene co-elute you may report these three isomers as total benzofluoranthenes.

⁸ Bis(2-Chloro-1-Methylethyl) Ether – This compound was previously listed as Bis(2-Chloroisopropyl) Ether (39638-32-9).

⁹ 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.

¹⁰ PCB 1016 & PCB 1242 – You may report these two PCB compounds as one parameter called PCB 1016/1242.