

Issuance Date: June 13, 2022  
Effective Date: August 1, 2022  
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## National Pollutant Discharge Elimination System Waste Discharge Permit No. WA0093317

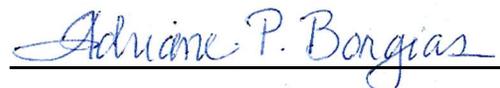
State of Washington  
DEPARTMENT OF ECOLOGY  
Eastern Regional Office  
4601 North Monroe Street  
Spokane, Washington 99205-1265

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.

**Spokane County Public Works Department**  
**1026 W Broadway Ave**  
**Spokane, Washington 99260-0050**

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

Plant Location: Spokane County Regional Water Reclamation Facility 1004 North Freya Street, Spokane, WA 99202	Receiving Water: Spokane River at River Mile 78.9 Latitude: 47.675833 Longitude: -117.34694
Treatment Type: Step-feed nitrification/denitrification membrane bioreactor with chlorine disinfection	SIC Codes 4952 Sewerage Systems 4953 Refuse Systems



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## Summary of Permit Report Submittals

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

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

Permit Section	Submittal	Frequency	First Submittal Date
S3.A.4.a	Monthly Discharge Monitoring Report (DMR)	1/month	September 15, 2022
S3.A.4.b	Quarterly Discharge Monitoring Report (DMR)	1/quarter	October 15, 2022
S3.A.4.c	Annual Discharge Monitoring Report (DMR)	1/year	January 15, 2023
S3.A.4.d	Permit Renewal Application Monitoring Data	Once	Submit data with the permit application; See S8.
S3.F.2.c	Reporting Permit Violations Five Day Written Report	As necessary	-
S4.B	Plans for Maintaining Adequate Capacity	As necessary	-
S4.D	Notification of New or Altered Sources	As necessary	-
S5.A.1	Operator Certification Renewal Card	1/year	May 15, 2023
S5.F	Bypass Notification	As necessary	-
S5.G.1	Operation & Maintenance Manual Update	Once	August 1, 2023
S6.A.2	Accidental Spill Prevention Program Update	1/permit cycle	August 1, 2024
S6.A.5	Pretreatment Report	1/year	May 1, 2023
S6.A.6	Request to make changes to approved local pretreatment program	As necessary	-
S8.	Application for Permit Renewal	1/permit cycle	July 31, 2026
S9.A.1	Spill Control Plan Update	1/permit cycle	August 1, 2024
S10.A.1	Effluent Mixing and Dye Tracer Plan of Study	Once	August 1, 2023
S10.A.3	Effluent Mixing and Dye Tracer Report	Once	August 1, 2026
S11.1	Quality Assurance Project Plan (QAPP) Update for Receiving Water and Effluent Study of Temperature	Once	August 1, 2023

Permit Section	Submittal	Frequency	First Submittal Date
S12.1	Quality Assurance Project Plan (QAPP) for Receiving Water Trace Metals, pH, DO, Hardness, and Alkalinity Study	Once	August 1, 2023
S12.4	Final Report for Receiving Water Trace Metals, pH, DO, Hardness, and Alkalinity Study	Once	August 1, 2026
S13.A	Sediment Sampling and Analysis Plan	Once	August 1, 2023
S13.B	Sediment Data Report	Once	August 1, 2025
S14.C.3	Acute Toxicity Compliance Monitoring Report	1/quarter	October 15, 2022
S14.D	Acute Toxicity: Response to noncompliance reporting	As necessary	-
S14.D	Acute Toxicity: TI/RE Plan	As necessary	-
S15.C.3	Chronic Toxicity Compliance Monitoring Report	1/quarter	October 15, 2022
S15.D.	Chronic Toxicity: Response to noncompliance reporting	As necessary	-
	Chronic Toxicity: TI/RE Plan	As necessary	-
	Toxics Reduction Best Management Practices Plan (BMPs Plan)	1/year	August 1, 2023
	Quality Assurance Project Plan (QAPP) Update for BMPs Plan	1/permit cycle	August 1, 2023
G1.	Notice of Change in Authorization	As necessary	-
G4.	Reporting Planned Changes	180 days prior to discharge	-
G5.	Engineering Report for Construction or Modification Activities	180 days prior to start of construction	-
G7.	Notice of Permit Transfer	As necessary	-
G10.	Duty to Provide Information	As necessary	-
G20.	Compliance Schedules	As necessary	-
G21.	Proposed Service Agreements, revisions, and updates	As necessary	-

## Special Conditions

### S1. Discharge limits

#### S1.A. Effluent limits

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

Beginning on the effective date of this permit, the Permittee may discharge treated domestic wastewater to the Spokane River at the permitted location subject to compliance with the following limits:

**Table 2: Effluent Limits: Outfall 001**

Parameter	Average Monthly <sup>a</sup>	Average Weekly <sup>b</sup>
Carbonaceous Biochemical Oxygen Demand (5-day) (CBOD <sub>5</sub> ) (November 1-February 29)	2.0 mg/L 142 lbs/day 85% removal of influent CBOD <sub>5</sub>	3.0 mg/L 213 lbs/day
Total Suspended Solids (TSS)	5.0 mg/L 354 lbs/day 85% removal of influent TSS	7.5 mg/L 532 lbs/day

Parameter	Minimum <sup>h</sup>	Maximum <sup>h</sup>
pH	6.5 standard units	8.5 standard units

Parameter	Monthly Geometric Mean	Weekly Geometric Mean
Fecal Coliform Bacteria <sup>c</sup> (Effective until E.coli limit is implemented)	100 CFU/100 mL	150 CFU/100 mL
E.coli <sup>c</sup> (Implement by 8/1/2024)	100 CFU/100 mL	150 CFU/100 mL

Parameter	Average Monthly	Maximum Daily <sup>d</sup>
Cadmium (Total as µg/L)	0.057 µg/L	0.126 µg/L
Lead (Total as µg/L)	0.202 µg/L	0.409 µg/L
Zinc (Total as µg/L)	38.5 µg/L	61.3 µg/L
Total Residual Chlorine <sup>e</sup>	16.8 µg/L	33.6 µg/L
PCBs (Total) <sup>f</sup>	170 pg/L	414 pg/L

Parameter	Average Monthly	Maximum Daily <sup>d</sup>
Total Ammonia (As NH <sub>3</sub> -N)	1.83 mg/L	8.64 mg/L

Parameter	Effluent Limit
Acute Toxicity	<p><b>No acute toxicity detected in a test concentration representing the acute critical effluent concentration (ACEC).</b></p> <p>The ACEC means the maximum concentration of effluent during critical conditions at the boundary of the acute mixing zone, defined in Section S1.B of this permit. The ACEC equals 50% effluent. See Section S14.</p>
Chronic Toxicity	<p><b>No toxicity detected in a test concentration representing the chronic critical effluent concentration (CCEC).</b></p> <p>The CCEC means the maximum concentration of effluent during critical conditions at the boundary of the mixing zone, defined in Section S1.B of this permit. The CCEC equals 6.4% effluent. See Section S15.</p>

**Table 3: Effluent Limits: Outfall 001 DO TMDL WLA (March-October)**

Parameter	Seasonal Average <sup>g</sup>
Total Ammonia (as NH <sub>3</sub> -N)	March 1 – March 31: 129.7 lbs/day April 1 – May 31: 66.7 lbs/day June 1 – September 30: 16.7 lbs/day October 1 – 31: 66.7 lbs/day
Total Phosphorus	3.34 lbs/day
CBOD <sub>5</sub>	133.4 lbs/day

Table 2 & 3 Footnotes:

<sup>a</sup> **Average monthly effluent limit** means the highest allowable average of daily discharges over a calendar month. To calculate the discharge value to compare to the limit, you add the value of each daily discharge measured during a calendar month and divide this sum by the total number of daily discharges measured. See footnote c for fecal coliform calculations.

<sup>b</sup> **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.

- <sup>c</sup> Ecology provides directions to calculate the monthly and the weekly geometric mean in Ecology [Publication No. 04-10-020](https://apps.ecology.wa.gov/publications/SummaryPages/0410020.html), **Information Manual for Treatment Plant Operators** available online at <https://apps.ecology.wa.gov/publications/SummaryPages/0410020.html>.
- <sup>d</sup> **Maximum daily effluent limit** is the highest allowable daily discharge. The daily discharge is the average discharge of a pollutant measured during a calendar day. For pollutants with limits expressed in units of mass, calculate the daily discharge as the total mass of the pollutant discharged over the day. This does not apply to pH or temperature.
- <sup>e</sup> **Chlorine limits** apply only during periods when chlorine is used for partial or full disinfection of the effluent. When UV disinfection is the only disinfection method used, chlorine limits do not apply. When not using chlorine for disinfection during the monitoring period, leave the cell blank.
- <sup>f</sup> **40 CFR Part 136 Method 608** monitoring will be used to evaluate compliance. Any detection using this method is a violation of the permit limit.
- <sup>g</sup> Compliance with the effluent limitation for CBOD<sub>5</sub>, NH<sub>3</sub>-N, and TP will be based on a seasonal average, reported on a monthly basis.
- <sup>h</sup> pH between 5.5 and 6.5, or 8.5 and 9.5 will not be considered violations provided no single excursion exceeds 60 minutes in length and total excursions do not exceed 7 hours and 26 minutes per month. Any excursions below 5.5 and above 9.5 are violations. The instantaneous maximum and minimum pH shall be reported daily.

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

### **Mixing zone for Outfall 001**

The following paragraphs define flow-volume restriction of the mixing zones:

#### **Chronic mixing zone**

The mixing zone must not use more than 25 percent of the flow in the receiving water. The width of the chronic mixing zone is limited to a distance of 40 feet (12.2 meters). The length of the chronic mixing zone extends 100 feet (30.5 meters) upstream and 300 feet (91.4 meters) downstream of the outfall. The mixing zone extends from the bottom to the top of the water column. The concentration of pollutants at the edge of the chronic zone must meet chronic aquatic life criteria and human health criteria.

#### **Acute mixing zone**

The mixing zone must not use more than 2.5 percent of the flow in the receiving water. The width of the acute mixing zone is limited to a distance of 4 feet (1.2 meters) in any horizontal direction from the outfall. The length of the acute mixing zone extends 10 feet (3.0 meters) upstream and 30 feet (9.1 meters) downstream of the outfall. The mixing zone extends from the bottom to the top of the water column. The concentration of pollutants at the edge of the acute zone must meet acute aquatic life criteria.

**Table 4: Available Dilution (dilution factor)**

Criteria	Factor
Acute Aquatic Life Criteria	2.0
Chronic Aquatic Life Criteria	15.7
Human Health Criteria - Carcinogen	47.8
Human Health Criteria - Non-carcinogen	21.6

### S1.C. Land Treatment

Wastewater used for irrigation must not exceed the agronomic capacity of the vegetation.

## S2. Monitoring requirements

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

**Table 5: Wastewater influent**

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

Parameter	Units & Speciation	Minimum Sampling Frequency	Sample Type
Flow at County Facility (Daily Total)	Million gallons per day (mgd)	Continuous <sup>b</sup>	Measurement
Flow sent from the County to the City of Spokane (Daily Total) <sup>a</sup>	Million gallons per day (mgd)	Continuous <sup>b</sup>	Measurement
pH <sup>c</sup> (Daily Min. & Daily Max.)	Standard units (s.u.)	Continuous <sup>b</sup>	Measurement
Temperature <sup>d</sup> (Daily Max.)	Degrees C	Continuous <sup>b</sup>	Measurement
Carbonaceous Biochemical Oxygen Demand (CBOD <sub>5</sub> )	mg/L	5/week <sup>g</sup>	24-Hour Composite <sup>e</sup>
CBOD <sub>5</sub>	lbs/day <sup>f</sup>	5/week <sup>g</sup>	Calculated
Total Suspended Solids (TSS)	mg/L	5/week <sup>g</sup>	24-Hour Composite <sup>e</sup>
TSS	lbs/day <sup>f</sup>	5/week <sup>g</sup>	Calculated

Parameter	Units & Speciation	Minimum Sampling Frequency	Sample Type
Biochemical Oxygen Demand (BOD <sub>5</sub> )	mg/L	1/month	24-Hour Composite <sup>e</sup>
BOD <sub>5</sub>	lbs/day <sup>f</sup>	1/month	Calculated
Cadmium	µg/L	1/quarter <sup>h</sup>	24-Hour Composite <sup>e</sup>
Lead	µg/L	1/quarter <sup>h</sup>	24-Hour Composite <sup>e</sup>
Zinc	µg/L	1/quarter <sup>h</sup>	24-Hour Composite <sup>e</sup>
PCBs <sup>i</sup>	pg/L	1/quarter <sup>j</sup>	24-Hour Composite <sup>e</sup>
PBDEs <sup>i</sup>	pg/L	1/quarter <sup>j</sup>	24-Hour Composite <sup>e</sup>

Table 5 Footnotes:

<sup>a</sup> Spokane County must report the flows sent to the City from the County. This includes flows sent as a result of SCRWRF bypass during maintenance, flows that are sent due to exceeding flow capacity of the SCRWRF, and flows from areas of the County that are added to the City's collection system. The SCRWRF has an agreement of 10 mgd of capacity with the City. This must be monitored and reported. When total flow to the City exceeds 85% of the agreement capacity three months in a row, the County must submit a plan for maintaining adequate capacity

<sup>b</sup> **Continuous** means uninterrupted except for brief lengths of time for calibration, power failure, or unanticipated equipment repair or maintenance. The time interval for the associated data logger must be no greater than 30 minutes. The Permittee must sample every two hours when continuous monitoring is not possible.

<sup>c</sup> The Permittee must report the instantaneous maximum and minimum pH daily. Do not average pH values.

<sup>d</sup> If measuring temperature continuously, the Permittee must determine and report a daily maximum from half-hour measurements in a 24-hour period. Continuous monitoring instruments must achieve an accuracy of 0.2 degrees C and the Permittee must verify accuracy annually.

<sup>e</sup> **24-Hour Composite** means a series of individual samples collected over a 24-hour period into a single container, and analyzed as one sample.

<sup>f</sup> **lbs/day** = Concentration (mg/L) x Flow (in MGD) x 8.34

<sup>g</sup> **5/week** means sampling five times in every week except those weeks with Washington State recognized holidays. Weeks with recognized holidays will have 5/week minus the number of recognized holidays in the given week.

<sup>h</sup> **Quarterly sampling** periods are January through March, April through June, July through September, and October through December. The Permittee must begin quarterly monitoring for the quarter beginning on 7/1/2022 and submit results by 10/15/2022.

<sup>i</sup> Use high-resolution methods for evaluation and characterization of PCBs (Method 1668) and PBDEs (Method 1614).

<sup>j</sup> PCB and PBDE samples will be submitted annually with BMP plan assessment.

**Table 6: Final wastewater effluent**

Final Wastewater Effluent means wastewater exiting the last treatment process or operation. Typically, this is after or at the exit from the chlorine contact chamber or other disinfection process. The Permittee may take effluent samples for the BOD<sub>5</sub> 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	Million gallons per day (mgd)	Continuous <sup>a</sup>	Measurement
pH <sup>c</sup> (Daily Min. & Daily Max.)	Standard Units	Continuous <sup>a</sup>	Measurement
Dissolved Oxygen <sup>b</sup> (Daily Min.)	mg/L	5/week <sup>h</sup> (Until Continuous instrument is installed)	Measurement
Dissolved Oxygen <sup>b</sup> (Daily Min.)	mg/L	Continuous <sup>a</sup> (begins 1 year from effective date)	Measurement
Temperature <sup>d</sup> (Daily Max.)	°C	Continuous <sup>a</sup>	Measurement
7-DAD Max Temperature <sup>e</sup> (Daily Max)	°C	1/day	Calculated
Chlorine (Total Residual)	µg/L	1/day	Grab <sup>f</sup>
CBOD <sub>5</sub> <sup>g</sup>	mg/L	5/week <sup>h</sup>	24-Hour Composite <sup>i</sup>
CBOD <sub>5</sub>	lbs/day <sup>j</sup>	5/week <sup>h</sup>	Calculated
CBOD <sub>5</sub>	% removal <sup>k</sup>	5/week <sup>h</sup>	Calculated
TSS	mg/L	5/week <sup>h</sup>	24-Hour Composite <sup>i</sup>
TSS	lbs/day <sup>j</sup>	5/week <sup>h</sup>	Calculated
TSS	% removal <sup>k</sup>	5/week <sup>h</sup>	Calculated
Total Ammonia	mg/L as N	5/week <sup>h</sup>	24-Hour Composite <sup>i</sup>
Fecal Coliform <sup>l,m,t</sup>	Organisms/100 mL	5/week <sup>h</sup> (first two years of the permit cycle)	Grab <sup>g</sup>
E.coli <sup>l,n</sup>	Organisms/100 mL	5/week <sup>h</sup>	Grab <sup>g</sup>
Total Phosphorus	µg/L as P	5/week <sup>h</sup>	24-Hour Composite <sup>i</sup>

Parameter	Units & Speciation	Minimum Sampling Frequency	Sample Type
BOD <sub>5</sub> <sup>g</sup>	mg/L	1/month <sup>o</sup>	24-Hour Composite <sup>i</sup>
BOD <sub>5</sub>	lbs/day <sup>j</sup>	1/month <sup>o</sup>	Calculated
Nitrate plus Nitrite Nitrogen	mg/L as N	1/month <sup>o</sup>	24-Hour Composite <sup>i</sup>
Total Kjeldahl Nitrogen (TKN)	mg/L as N	1/month <sup>o</sup>	24-Hour Composite <sup>i</sup>
PCBs <sup>r</sup>	ng/L	1/month <sup>o</sup>	24-Hour Composite <sup>i</sup>
Cadmium	µg/L	1/month <sup>o</sup>	24-Hour Composite <sup>i</sup>
Lead	µg/L	1/month <sup>o</sup>	24-Hour Composite <sup>i</sup>
Zinc	µg/L	1/month <sup>o</sup>	24-Hour Composite <sup>i</sup>
Hardness	mg/L as CaCO <sub>3</sub>	1/month <sup>o</sup>	24-Hour Composite <sup>i</sup>
Alkalinity	mg/L as CaCO <sub>3</sub>	1/month <sup>o</sup>	24-Hour Composite <sup>i</sup>
Mercury	ng/L	1/month <sup>o</sup>	Grab <sup>g</sup>
PBDEs <sup>q</sup>	pg/L	1/quarter <sup>p,s</sup>	24-Hour Composite <sup>i</sup>
PCB <sup>q</sup>	pg/L	1/quarter <sup>p,s</sup>	24-Hour Composite <sup>i</sup>

Table 6 Footnotes:

<sup>a</sup> **Continuous** means uninterrupted except for brief lengths of time for calibration, power failure, or unanticipated equipment repair or maintenance. The time interval for the associated data logger must be no greater than 30 minutes. The Permittee must sample every two hours when continuous monitoring is not possible.

<sup>b</sup> Report the daily minimum dissolved oxygen concentration and the minimum for the reporting period.

<sup>c</sup> **pH** - The Permittee must report the instantaneous maximum and minimum pH daily. Do not average pH values.

<sup>d</sup> The Permittee must determine and report a daily maximum from half-hour measurements in a 24-hour period. Continuous monitoring instruments must achieve an accuracy of 0.2 degrees C and the Permittee must verify accuracy annually.

<sup>e</sup> **7DAD Max** - Calculate a 7-DAD Max for each day by averaging each days' maximum temperature value with the daily maximum temperatures of the three days prior and the three days after that specific date.

<sup>f</sup> **Grab** means an individual sample collected over a 15-minute, or less, period.

<sup>g</sup> Take effluent samples for the CBOD<sub>5</sub> and BOD<sub>5</sub> analysis before or after the disinfection process. If taken after, dechlorinate and reseed the sample.

<sup>h</sup> **5/week** means sampling five times in every week except those weeks with Washington State recognized holidays. Weeks with recognized holidays will have 5/week minus the number of recognized holidays in the given week.

<sup>i</sup> **24-Hour Composite** means a series of individual samples collected over a 24-hour period into a single container, and analyzed as one sample.

<sup>j</sup> **lbs/day** = Concentration (mg/L) x Flow (in MGD) x 8.34

<sup>k</sup> % Calculate the percent (%) removal of BOD<sub>5</sub> and TSS using equation below.

$$\text{removal} = \% \text{ removal} = \frac{[(\text{Influent concentration (mg/L)} - \text{Effluent concentration (mg/L)}) / \text{Influent concentration (mg/L)}] \times 100}$$

<sup>l</sup> Report a numerical value for fecal coliforms and E.coli following the procedures in Ecology's [Publication Number 04-10-020, Information Manual for Wastewater Treatment Plant Operators](https://apps.ecology.wa.gov/ecy/publications/SummaryPages/0410020.html), available online at

<https://apps.ecology.wa.gov/ecy/publications/SummaryPages/0410020.html>. Do not report a result as too numerous to count (TNTC)

<sup>m</sup> **Sample fecal coliforms** by using the following method: MPN SM 9221 E

<sup>n</sup> **Sample E.coli** by using the following method: SM 9223 B Colilert® 24 QTray®

<sup>o</sup> **Monthly** means once every calendar month during alternating weeks.

<sup>p</sup> **Quarterly sampling** periods are January through March, April through June, July through September, and October through December. The Permittee must begin quarterly monitoring for the quarter beginning on 7/1/2022 and submit results by 10/15/2022.

<sup>q</sup> Use high-resolution methods for evaluation and characterization of PCBs (Method 1668) and PBDEs (Method 1614).

<sup>r</sup> **PCB compliance sampling** uses Method 608 as identified in Appendix A.

<sup>s</sup> PCB and PBDE samples will be submitted annually with BMP plan update and assessment.

<sup>t</sup> Dual testing is only needed for the first two years of the permit cycle.

**Table 7: Whole effluent toxicity testing – final wastewater effluent**

Additional requirements specified in Special Condition S14 and S15.

Parameter	Minimum Sampling Frequency	Sample Type
Acute Toxicity Testing	1/quarter <sup>a</sup>	24-Hour Composite <sup>b</sup>
Chronic Toxicity Testing	1/quarter <sup>a</sup>	24-Hour Composite <sup>b</sup>

Table 7 Footnotes:

<sup>a</sup> **1/quarter** sampling periods are January through March, April through June, July through September, and October through December. The Permittee must take samples in a different month for each sampling period beginning after the permit is issued. The Permittee must begin quarterly monitoring for the quarter beginning on 7/1/2022 and submit results when the specific quarter is due. Quarters are due by April 15, July 15, October 15, and January 15.

<sup>b</sup> **24-Hour Composite** means a series of individual samples collected over a 24-hour period into a single container, and analyzed as one sample.

### Pretreatment Monitoring Requirements

The Permittee must monitor the following parameters in the influent at the headworks, and biosolids in accordance with the Pretreatment requirements in Special Condition S6.B.

The schedule for pH below applies only to influent and biosolids since the effluent monitoring schedule above requires more frequent effluent monitoring for that parameter. Oil and grease monitoring applies only to the influent and effluent.

**Table 8: Influent Pretreatment Monitoring Requirements**

Parameter	Units & Speciation	Minimum Sampling Frequency	Sample Type
pH	Standard Units	1/quarter <sup>a</sup>	Grab <sup>b</sup>
Total Dissolved Solids	mg/L	1/quarter <sup>a</sup>	Grab <sup>b</sup>
Oil and Grease	mg/L	1/quarter <sup>a</sup>	Grab <sup>b</sup>
Cyanide	µg/L	1/quarter <sup>a</sup>	Grab <sup>b</sup>
Total Phenolic Compounds	µg/L	1/quarter <sup>a</sup>	Grab <sup>b</sup>
Priority Pollutants (PP) – Total Metals <sup>c</sup>	µg/L; ng/L for mercury	1/year <sup>e</sup>	24-Hour Composite <sup>d</sup> Grab for mercury
PP – Volatile Organic Compounds	µg/L	1/year <sup>e</sup>	Grab <sup>b</sup>
PP – Acid-extractable Compounds	µg/L	1/year <sup>e</sup>	24-Hour Composite <sup>d</sup>
PP – Base-neutral Compounds	µg/L	1/year <sup>e</sup>	24-Hour Composite <sup>d</sup>
PP – Pesticides/PCBs	µg/L or ng/L	1/year <sup>e</sup>	24-Hour Composite <sup>d</sup>

**Table 9: Effluent Pretreatment Monitoring Requirements**

Parameter	Units & Speciation	Minimum Sampling Frequency	Sample Type
Total Dissolved Solids	mg/L	1/quarter <sup>a</sup>	Grab <sup>b</sup>
Oil and Grease	mg/L	1/quarter <sup>a</sup>	Grab <sup>b</sup>
Cyanide	µg/L	1/quarter <sup>a</sup>	Grab <sup>b</sup>
Total Phenolic Compounds	µg/L	1/quarter <sup>a</sup>	Grab <sup>b</sup>

Parameter	Units & Speciation	Minimum Sampling Frequency	Sample Type
Priority Pollutants (PP) – Total Metals <sup>c</sup>	µg/L; ng/L for mercury	1/year <sup>e</sup>	24-Hour Composite <sup>d</sup> Grab for mercury
PP – Volatile Organic Compounds	µg/L	1/year <sup>e</sup>	Grab <sup>b</sup>
PP – Acid-extractable Compounds	µg/L	1/year <sup>e</sup>	24-Hour Composite <sup>d</sup>
PP – Base-neutral Compounds	µg/L	1/year <sup>e</sup>	24-Hour Composite <sup>d</sup>
PP – Pesticides/PCBs	µg/L or ng/L	1/year <sup>e</sup>	24-Hour Composite <sup>d</sup>

**Table 10: Biosolids Pretreatment Monitoring Requirements**

Parameter	Units & Speciation	Minimum Sampling Frequency	Sample Type
Cyanide	µg/L	1/quarter <sup>a</sup>	Grab <sup>b</sup>
Total Phenolic Compounds	µg/L	1/quarter <sup>a</sup>	Grab <sup>b</sup>
Priority Pollutants (PP) – Total Metals <sup>c</sup>	µg/L; ng/L for mercury	1/year <sup>e</sup>	24-Hour Composite <sup>d</sup> Grab for mercury
PP – Volatile Organic Compounds	µg/L	1/year <sup>e</sup>	Grab <sup>b</sup>
PP – Acid-extractable Compounds	µg/L	1/year <sup>e</sup>	24-Hour Composite <sup>d</sup>
PP – Base-neutral Compounds	µg/L	1/year <sup>e</sup>	24-Hour Composite <sup>d</sup>
PP – Pesticides/PCBs	µg/L or ng/L	1/year <sup>e</sup>	24-Hour Composite <sup>d</sup>

Table 8 - 10 Footnotes:

<sup>a</sup> **1/quarter sampling periods** are January through March, April through June, July through September, and October through December. The Permittee must begin quarterly monitoring for the quarter beginning on 7/1/2022 and submit results by 10/15/2022.

<sup>b</sup> **Grab** means an individual sample collected over a 15-minute, or less, period.

<sup>c</sup> **Priority Pollutant Scans for Total Metals** must use total recoverable metal laboratory methods for all parameters except for hexavalent chromium. The 40 CFR 136 method for hexavalent chromium measures only its dissolved form.

<sup>d</sup> **24-Hour Composite** means a series of individual samples collected over a 24-hour period into a single container, and analyzed as one sample.

<sup>e</sup> **1/year sampling** must be taken in a different quarter each year with data submitted when the specific quarter is due. See quarter monitoring period footnote for due dates.

**Table 11: Receiving water temperature study**

As specified in Section S11.

Submit a sampling Quality Assurance Plan for Ecology review and approval.	Submit updated QAPP by 8/1/2023.
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**Table 12: Receiving water Trace Metals, DO, pH, Alkalinity, and Hardness study**

As specified in Section S12.

Submit a sampling Quality Assurance Plan (QAPP) for Ecology review and approval.	Submit QAPP by 8/1/2023.
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**Table 13: Sediment study**

As specified in Section S13.

Submit a Sediment and Analysis Plan (SAP) for Ecology review and approval.	Submit SAP by 8/1/2023.
Sampling Period	August 15 through September 30
Final Study Report	August 1, 2025

**Table 14: Permit renewal application requirements – final wastewater effluent**

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

**Submit data with the permit application as specified in Special Condition S8.**

Parameter	Units & Speciation	Minimum Sampling Frequency	Sample Type
Temperature	°C	Once/July Once/December	Measurement
BOD <sub>5</sub> <sup>a</sup>	mg/L	1/year	24-Hour Composite <sup>b</sup>
Fecal Coliform <sup>c</sup>	Organisms/100 mL	1/year	Grab <sup>d</sup>
<i>E.coli</i>	Organisms (OR MPN)/100 mL	1/year	Grab <sup>d</sup>
Total Residual Chlorine	mg/L	1/year	Grab <sup>d</sup>
Dissolved Oxygen	mg/L	1/year	24-Hour Composite <sup>b</sup>

Parameter	Units & Speciation	Minimum Sampling Frequency	Sample Type
Total Kjeldahl Nitrogen	mg/L as N	1/year	24-Hour Composite <sup>b</sup>
Total Ammonia	mg/L as N	1/year	24-Hour Composite <sup>b</sup>
Nitrate plus Nitrite	mg/L as N	1/year	24-Hour Composite <sup>b</sup>
Oil and Grease	mg/L	1/year	Grab <sup>d</sup>
Phosphorus (Total)	mg/L as P	1/year	24-Hour Composite <sup>b</sup>
Total Dissolved Solids	mg/L	1/year	24-Hour Composite <sup>b</sup>
Total Hardness	mg/L	1/year	24-Hour Composite <sup>b</sup>
Cyanide	µg/L	1/year	Grab <sup>d</sup>
Total Phenolic Compounds	µg/L	1/year	Grab <sup>d</sup>
Priority Pollutants (PP) – Total Metals	µg/L; ng/L for mercury	1/year	24-Hour Composite <sup>b</sup> Grab <sup>d</sup> for mercury
PP – Volatile Organic Compounds	µg/L	1/year	Grab <sup>d</sup>
PP – Acid-extractable Compounds	µg/L	1/year	24-Hour Composite <sup>b</sup>
PP – Base-neutral Compounds	µg/L	1/year	24-Hour Composite <sup>b</sup>
PP – Pesticides	µg/L or ng/L	1/year	24-Hour Composite <sup>b</sup>

Table 14 Footnotes:

<sup>a</sup> Take effluent samples for the CBOD<sub>5</sub> and BOD<sub>5</sub> analysis before or after the disinfection process. If taken after, dechlorinate and reseed the sample.

<sup>b</sup> **24-Hour Composite** means a series of individual samples collected over a 24-hour period into a single container, and analyzed as one sample.

<sup>c</sup> Report a numerical value for fecal coliforms and E.coli following the procedures in Ecology's [Publication Number 04-10-020, Information Manual for Wastewater Treatment Plant Operators](https://apps.ecology.wa.gov/ecy/publications/SummaryPages/0410020.html), available online at <https://apps.ecology.wa.gov/ecy/publications/SummaryPages/0410020.html>. Do not report a result as too numerous to count (TNTC).

<sup>d</sup> **Grab** means an individual sample collected over a 15-minute, or less, period.

**Table 15: Land Treatment reporting**

Parameter	Units & Speciation	Minimum Sampling Frequency	Sample Type
Wastewater applied	Gallons per day	Daily when irrigating with wastewater	Measurement
BOD <sub>5</sub>	lbs/acre/day	Weekly when irrigating with wastewater	Calculation <sup>a</sup>
Total Nitrogen	lbs/acre/day	Weekly when irrigating with wastewater	Calculation <sup>a</sup>

Table 15 footnote:

<sup>a</sup> Calculate using the method identified in the O&M Section S5.G.b.10.

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

The Permittee must:

1. Select and use appropriate flow measurement, field measurement, and continuous monitoring devices and methods consistent with accepted scientific practices.
2. Install, calibrate, and maintain these devices to ensure the accuracy of the measurements is consistent with the accepted industry standard, the manufacturer's recommendation, and approved O&M manual procedures for the device and the 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 calibrate continuous chlorine measurement instruments using a grab sample analyzed in the laboratory within 15 minutes of sampling.
4. Calibrate micro-recording temperature devices, known as thermistors, using protocols from [Ecology's Quality Assurance Project Plan Development Tool](https://apps.ecology.wa.gov/publications/SummaryPages/1803205.html), **Standard Operating Procedures for Continuous Temperature Monitoring of Fresh Water Rivers and Streams**, Version 2.1, April 2018, available online at <https://apps.ecology.wa.gov/publications/SummaryPages/1803205.html>.

Calibration as specified in this document is not required if the Permittee uses recording devices certified by the manufacturer.

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

### **S2.B. Laboratory accreditation**

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

### **S2.C. 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 or deny the request when it reissues the permit or by a permit modification.

The Permittee must:

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

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

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

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

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

The Permittee must:

1. Summarize, report, and submit monitoring data obtained during each monitoring period on the electronic discharge monitoring report (DMR) form provided by Ecology within the Water Quality Permitting Portal.

Include data for each of the parameters tabulated in Special Condition S2 and as required by the form. Report a value for each day sampling occurred (unless specifically exempted in the permit) and for the summary values (when applicable) included on the electronic form. To find out more information and to [sign up](https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Water-quality-permits-guidance/WQWebPortal-guidance) for the **Water Quality Permitting Portal** go to <https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Water-quality-permits-guidance/WQWebPortal-guidance>.

2. Electronically submit DMRs no later than the dates specified below, unless otherwise specified in this permit.
3. Upon request, the Permittee must also submit an electronic copy of the laboratory report that includes QA/QC results and chain of custody if using a contract laboratory.
4. Submit DMRs for parameters with the monitoring frequencies specified in S2 (monthly, quarterly, annual, etc.) at the reporting schedule identified below.

The Permittee must:

- a. **Submit monthly DMRs** by the 15th day of the following month.
  - b. **Submit quarterly DMRs** by the 15th day of the month following the monitoring period. Quarterly sampling periods are January through March, April through June, July through September, and October through December with data due April 15, July 15, October 15, and January 15. The Permittee must submit the first quarterly DMR on 10/15/2022 for the quarter beginning on 7/1/2022.
  - c. **Submit annual DMRs** by January 15 for the previous calendar year. The annual sampling period is the calendar year.
  - d. **Submit permit renewal application monitoring data** with the permit renewal application by 7/31/2026, as specified in Section S8.
5. Enter the “No Discharge” reporting code for an entire DMR, for a specific monitoring point, or for a specific parameter as appropriate, if the Permittee did not discharge wastewater or a specific pollutant during a given monitoring period.
  6. Report single analytical values below detection as “less than the detection level (DL)” by entering < followed by the numeric value of the detection level (e.g. < 2.0) on the DMR.

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

7. Report single analytical values between the detection level (DL) and the quantitation level (QL) by entering the estimated value, the code for estimated value/below quantitation limit (j) and any additional information in the comments. Submit a copy of the laboratory report as an attachment using WQWebDMR.

8. Not report zero for bacteria monitoring. Report as required by the laboratory method.
9. Calculate and report an arithmetic average value for each day for bacteria if multiple samples were taken in one day.
10. Calculate the geometric mean values for bacteria (unless otherwise specified in the permit) using:
11. The reported numeric value for all bacteria samples measured above the detection value except when it took multiple samples in one day. If the Permittee takes multiple samples in one day it must use the arithmetic average for the day in the geometric mean calculation.
12. The detection value for those samples measured below detection.
13. Report the test method used for analysis in the comments if the laboratory used an alternative method not specified in the permit and as allowed in Appendix A and S2.
14. Calculate average values and calculated total values (unless otherwise specified in the permit) using:
  - a. The reported numeric value for all parameters measured between the detection value and the quantitation value for the sample analysis.
  - b. One-half the detection value (for values reported below detection) if the lab detected the parameter in another sample from the same monitoring point for the reporting period.
  - c. Zero (for values reported below detection) if the lab did not detect the parameter in another sample for the reporting period.
15. Report single-sample grouped parameters (for example; priority pollutants, PAHs, pulp and paper chlorophenolics, TTOs) on the WQWebDMR form and include; sample date, concentration detected, detection limit (DL) (as necessary), and laboratory quantitation level (QL) (as necessary).

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

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

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

Send these paper reports to Ecology at:

Water Quality Program  
Department of Ecology  
Eastern Regional Office  
4601 North Monroe Street  
Spokane, WA 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 the course of any unresolved litigation regarding the discharge of pollutants by the Permittee or when requested by Ecology.

### **S3.D. Recording of results**

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

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

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

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

### **S3.F. Reporting permit violations**

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

1. Immediately take action to stop, contain, and cleanup unauthorized discharges or otherwise stop the noncompliance and correct the problem.
2. If applicable, immediately repeat sampling and analysis. Submit the results of any repeat sampling to Ecology within 30-days of sampling.

**a. Immediate reporting**

The Permittee must **immediately** report to Ecology and Spokane County Regional Health District (at the numbers listed below), all:

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

**Ecology Eastern Regional Office (509) 329-3400**

**Spokane County Regional Health District (509) 324-1500**

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

The Permittee must report the following occurrences of noncompliance by telephone, to Ecology at the telephone numbers listed above, within 24 hours from the time the Permittee becomes aware of any of the following circumstances:

1. Any noncompliance that may endanger health or the environment, unless previously reported under immediate reporting requirements.
2. Any unanticipated bypass that causes an exceedance of an effluent limit in the permit (See Part S5.F, "Bypass Procedures").
3. Any upset that causes an exceedance of an effluent limit in the permit (See G.15, "Upset").
4. Any violation of a maximum daily or instantaneous maximum discharge limit for any of the pollutants in Section S1.A of this permit.
5. Any overflow prior to the treatment works, whether or not such overflow endangers health or the environment or exceeds any effluent limit in the permit.

**c. Report within five days**

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

The report must contain:

1. A description of the noncompliance and its cause.
2. The period of noncompliance, including exact dates and times.

3. The estimated time the Permittee expects the noncompliance to continue if not yet corrected.
4. Steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.
5. If the noncompliance involves an overflow prior to the treatment works, an estimate of the quantity (in gallons) of untreated overflow.

**d. Waiver of written reports**

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

**e. All other permit violation reporting**

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

**S3.G. Other reporting**

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

The Permittee must [Report a Spill](#) of oil or hazardous materials in accordance with the requirements of RCW 90.56.280 and chapter 173-303-145 WAC.

Instructions on how to report a spill are available on Ecology's website at <https://ecology.wa.gov/About-us/Get-involved/Report-an-environmental-issue/Report-a-spill>.

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

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

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

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

## S4. Facility loading

### S4.A. Design criteria

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

**Table 16: Design criteria**

Parameter	Unit
Maximum Month Design Flow (MMDF) Plus 10 MGD at City of Spokane	8.5 MGD
Maximum Flow to City of Spokane	10 MGD
BOD <sub>5</sub> Influent Loading for Maximum Month	18,200 lbs/day
TSS Influent Loading for Maximum Month	20,000 lbs/day

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

#### a. Conditions triggering plan submittal

The Permittee must submit a plan and a schedule for continuing to maintain capacity to Ecology when both of the following are met three months in a row:

1. The maximum month design flow of 8.5 MGD at the Permittee's treatment facility is exceeded, and
2. The Permittee's wastewater flow treated at the City of Spokane exceeds 8.5 MGD.

#### b. Plan and schedule content

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

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

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

#### **S4.C. Duty to mitigate**

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

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

1. The Permittee must submit written notice to Ecology whenever any new discharge or a substantial change in volume or character of an existing discharge into the wastewater treatment plant is proposed which:
  - a. Would interfere with the operation of, or exceed the design capacity of, any portion of the wastewater treatment plant.
  - b. Is not part of an approved general sewer plan or approved plans and specifications.
  - c. Is subject to pretreatment standards under 40 CFR Part 403 and Section 307(b) of the Clean Water Act.
2. This notice must include an evaluation of the wastewater treatment plant's ability to adequately transport and treat the added flow and/or waste load, the quality and volume of effluent to be discharged to the treatment plant, and the anticipated impact on the Permittee's effluent [40 CFR 122.42 (b)].

### **S5. Operation and maintenance**

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

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

This permitted facility must be operated by an operator certified by the State of Washington for at least a Class IV 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 IV 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 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.

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

The Permittee must:

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

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

The Permittee must schedule any facility maintenance, which might require interruption of wastewater treatment and degrade effluent quality, during non-critical water quality periods, and carry this maintenance out according to the approved O&M manual or as otherwise approved by Ecology.

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

1. Give written notification to Ecology, if possible, 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 I (EPA 430-99-74-001) at the wastewater treatment plant. Reliability Class I requires a backup power source sufficient to operate all vital components, critical lighting and ventilation during peak wastewater flow conditions.

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

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

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

The Permittee must:

1. **Update the Operations and Maintenance (O&M) Manual** that meets the requirements of 173-240-080 WAC and submit it to Ecology for review and approval **by August 1, 2023**.
2. Review the O&M Manual at least annually.

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

**b. O&M manual components**

In addition to the requirements of WAC 173-240-080(1) through (5), the O&M Manual must be consistent with the guidance in Table G1-3 in the [Criteria for Sewage Works Design \(Orange Book\) 2008](#) (<https://apps.ecology.wa.gov/publications/documents/9837.pdf>).

The O&M Manual must include:

1. Emergency procedures for cleanup in the event of wastewater system upset or failure.
2. A review of system components which if failed could pollute surface water or could impact human health. Provide a procedure for a routine schedule of checking the function of these components.
3. Wastewater system maintenance procedures that contribute to the generation of process wastewater.
4. Reporting protocols for submitting reports to Ecology to comply with the reporting requirements in the discharge permit.
5. Any directions to maintenance staff when cleaning or maintaining other equipment or performing other tasks which are necessary to protect the operation of the wastewater system (for example, defining maximum allowable discharge rate for draining a tank, blocking all floor drains before beginning the overhaul of a stationary engine).
6. The treatment plant process control monitoring schedule.
7. Minimum staffing adequate to operate and maintain the treatment processes and carry out compliance monitoring required by the permit.
8. O&M for collection systems and pump stations.
9. Irrigation plan that prevents exceedance of the agronomic capacity of the irrigated area.
10. Method for calculating the loading applied when irrigating wastewater.
11. Safety requirements to protect the public from wastewater used to irrigate the vegetation in the publicly accessible areas around the facility.

## S6. Pretreatment

### S6.A. General requirements

1. The Permittee must implement the Industrial Pretreatment Program in accordance with the legal authorities, policies, procedures, and financial provisions described in the Permittee's approved pretreatment program submittal entitled "Industrial Pretreatment Program", any approved revisions thereto, and the General Pretreatment Regulations (40 CFR Part 403). At a minimum, the Permittee must undertake the following pretreatment implementation activities:
  - a. Enforce categorical pretreatment standards under Section 307(b) and (c) of the Federal Clean Water Act (hereinafter, the Act), prohibited discharge standards as set forth in 40 CFR 403.5, local limits specified in Section 8.03A.0204 of Spokane County Code of Ordinances, or state standards, whichever are most stringent or apply at the time of issuance or modification of a local industrial waste discharge permit.

Locally-derived limits are defined as pretreatment standards under Section 307(d) of the Act and are not limited to categorical industrial facilities.

- b. Issue industrial waste discharge permits to all significant industrial users [SIUs, as defined in 40 CFR 403.3(v)(i)(ii)] contributing to the treatment system, including those from other jurisdictions. Industrial waste discharge permits must contain, as a minimum, all the requirements of 40 CFR 403.8 (f)(l)(iii). The Permittee must coordinate the permitting process with Ecology regarding any industrial facility that may possess a State Waste Discharge Permit issued by Ecology. Once issued, an industrial waste discharge permit takes precedence over a state-issued waste discharge permit.
    - c. Maintain and update, as necessary, records identifying the nature, character, and volume of pollutants contributed by industrial users to the POTW. The Permittee must maintain records for at least a three-year period.
    - d. Perform inspections, surveillance, and monitoring activities on industrial users to determine or confirm compliance with pretreatment standards and requirements. The Permittee must conduct a thorough inspection of SIUs annually. The Permittee must conduct regular local monitoring of SIU wastewaters commensurate with the character and volume of the wastewater but not less than once per year. The Permittee must collect and analyze samples in accordance with 40 CFR Part 403.12(b)(5)(ii)-(v) and 40 CFR Part 136.
    - e. Enforce and obtain remedies for noncompliance by any industrial users with applicable pretreatment standards and requirements. Once it identifies violations, the Permittee must take timely and appropriate enforcement action to address the noncompliance. The Permittee's action must follow its enforcement response procedures and any amendments, thereof.

- f. Publish, at least annually in the largest daily newspaper in the Permittee's service area, a list of all non-domestic users which, at any time in the previous 12 months, were in significant noncompliance as defined in 40 CFR 403.8(f)(2)(viii).
- g. If the Permittee elects to conduct sampling of an SIU's discharge in lieu of requiring user self-monitoring, it must satisfy all requirements of 40 CFR Part 403.12. This includes monitoring and record keeping requirements of 40 CFR 403.12(g) and (o). For SIUs subject to categorical standards (CIUs), the Permittee may either complete baseline and initial compliance reports for the CIU (when required by 40 CFR 403.12(b) and (d)) or require these of the CIU. The Permittee must ensure that it provides SIUs the results of sampling in a timely manner, inform SIUs of their right to sample, their obligations to report any sampling they do, to respond to non-compliance, and to submit other notifications.

These include a slug load report (403.12(f)), notice of changed discharge (403.12(j)), and hazardous waste notifications (403.12(p)). If sampling for the SIU, the Permittee must not sample less than once in every six-month period unless the Permittee's approved program includes procedures for reduction of monitoring for Middle-Tier or Non-Significant Categorical Users per 403.12(e)(2) and (3) and those procedures have been followed.

- h. Develop and maintain a data management system designed to track the status of the Permittee's industrial user inventory, industrial user discharge characteristics, and compliance status.
- i. Maintain adequate staff, funds, and equipment to implement its pretreatment program.
- j. Establish, where necessary, contracts or legally binding agreements with contributing jurisdictions to ensure compliance with applicable pretreatment requirements by commercial or industrial users within these jurisdictions.

These contracts or agreements must identify the agency responsible to perform the various implementation and enforcement activities in the contributing jurisdiction. In addition, the Permittee must develop a Memorandum of Understanding (or Inter-local Agreement) that outlines the specific roles, responsibilities, and pretreatment activities of each jurisdiction.

2. The Permittee must **develop and submit to Ecology for approval, an updated Accidental Spill Prevention Program by August 1, 2024**. The program must include a schedule for implementation. The Ecology-approved program becomes an enforceable part of these permit conditions.
3. The Permittee must evaluate, at least once every two years, whether each Significant Industrial User needs a plan to control slug discharges. For purposes of this section, a slug discharge is any discharge of a non-routine, episodic nature, including but not limited to an accidental spill or non-customary batch discharge. The Permittee must make the results of this evaluation available to Ecology upon request. If the Permittee decides that a slug control plan is needed, the plan must contain, at a minimum, the following elements:
  - a. Description of discharge practices, including non-routine batch discharges.

- b. Description of stored chemicals.
  - c. Procedures for immediately notifying the Permittee of slug discharges, including any discharge that would violate a prohibition under 40 CFR 403.5(b), with procedures for follow-up written notification within five days.
  - d. If necessary, procedures to prevent adverse impact from accidental spills, including inspection and maintenance of storage areas, handling and transfer of materials, loading and unloading operations, control of plant site run-off, worker training, building of containment structures or equipment, measures for containing toxic organic pollutants (including solvents), and/or measures and equipment necessary for emergency response.
4. Whenever Ecology determines that any waste source contributes pollutants to the Permittee's treatment works in violation of Section (b), (c), or (d) of Section 307 of the Act, and the Permittee has not taken adequate corrective action, Ecology will notify the Permittee of this determination. If the Permittee fails to take appropriate enforcement action within 30 days of this notification, Ecology may take appropriate enforcement action against the source or the Permittee.

5. Pretreatment Report

The Permittee must provide to Ecology an annual report that briefly describes its program activities during the previous calendar year.

The Permittee must **submit the annual report to Ecology by May 1 each year.**

The report must include the following information:

- a. An updated non-domestic inventory.
- b. Results of wastewater sampling at the treatment plant as specified in S6.B. The Permittee must calculate removal rates for each pollutant and evaluate the adequacy of the existing local limits in Section 8.03A.0204 of Spokane County Code of Ordinances in prevention of treatment plant interference, pass through of pollutants that could affect receiving water quality, and sludge contamination.
- c. Status of program implementation, including:
  - Any substantial modifications to the pretreatment program as originally approved by Ecology, including staffing and funding levels.
  - Any interference, upset, or permit violations experienced at the POTW that are directly attributable to wastes from industrial users.
  - Listing of industrial users inspected and/or monitored, and a summary of the results.
  - Listing of industrial users scheduled for inspection and/or monitoring for the next year, and expected frequencies.
  - Listing of industrial users notified of promulgated pretreatment standards and/or local standards as required in 40 CFR 403.8(f)(2)(iii). The list must indicate which industrial users are on compliance schedules and the final date of compliance for each.

- Listing of industrial users issued industrial waste discharge permits.
  - Planned changes in the approved local pretreatment program. (See Subsection A.6 below).
- d. Status of compliance activities, including:
- Listing of industrial users that failed to submit baseline monitoring reports or any other reports required under 40 CFR 403.12 and in Chapter 8.03A Article 4 of the Permittee's pretreatment program, dated November 1, 2020.
  - Listing of industrial users that were at any time during the reporting period not complying with federal, state, or local pretreatment standards or with applicable compliance schedules for achieving those standards, and the duration of such noncompliance.
  - Summary of enforcement activities and other corrective actions taken or planned against non-complying industrial users. The Permittee must supply to Ecology a copy of the public notice of facilities that were in significant noncompliance.
6. The Permittee must request and obtain approval from Ecology before making any significant changes to the approved local pretreatment program. The Permittee must follow the procedure in 40 CFR 403.18 (b) and (c).

## **S6.B. Monitoring requirements**

The Permittee must:

1. Monitor its influent, effluent, and sludge for the priority pollutants identified in Tables II and III of [Appendix D of 40 CFR Part 122](#) as amended, any compounds identified because of Special Condition S6.B.4, and any other pollutants expected from non-domestic sources using U.S. EPA-approved procedures for collection, preservation, storage, and analysis. Appendix D of 40 CFR Part 122 is available online at [https://www.ecfr.gov/current/title-40/chapter-I/subchapter-D/part-122#ap40.24.122\\_164.d](https://www.ecfr.gov/current/title-40/chapter-I/subchapter-D/part-122#ap40.24.122_164.d).
2. Test influent, effluent, and sludge samples for the priority pollutant metals (Table III, 40 CFR 122, Appendix D) on a quarterly basis throughout the term of this permit.
3. Test influent, effluent, and sludge samples for the organic priority pollutants (Table II, 40 CFR 122, Appendix D) on an annual basis. The Permittee may use the data collected for application purposes using Appendix A test methods to meet this requirement.
4. Sample POTW influent and effluent on a day when industrial discharges are occurring at normal-to-maximum levels.
5. Obtain 24-hour composite samples for the analysis of acid and base/neutral extractable compounds and metals.

6. Collect grab samples at equal intervals for a total of four grab samples per day for the analysis of volatile organic compounds. The laboratory may run a single analysis for volatile pollutants (EPA Method 624) for each monitoring day by compositing equal volumes of each grab sample directly in the GC purge and trap apparatus in the laboratory, with no less than 1 mL of each grab included in the composite.
7. Ensure that all reported test data for metals represents the total amount of the constituents present in all phases, whether solid, suspended, or dissolved elemental or combined, including all oxidation states unless otherwise indicated.
8. Handle, prepare, and analyze all wastewater samples taken for GC/MS analysis in accordance with the U.S. EPA Method 624 and EPA Method 625 (October 26, 1984).
9. Collect a sludge sample concurrently with a wastewater sample as a single grab of residual sludge. Sludge organic priority pollutant sampling and analysis must conform to U.S. EPA Method 624 and EPA Method 625 unless the Permittee requests an alternate method and Ecology has approved. Sludge metals priority pollutant sampling and analysis must conform to U.S. EPA SW 846 6000 Series Methods and EPA SW 846 7000 Series Methods unless the Permittee requests an alternate method and Ecology has approved.
10. Collect grab samples for cyanide, phenols, and oils. Measure hexane soluble oils (or equivalent) only in the influent and effluent.
11. Make a reasonable attempt to identify all other substances and quantify all pollutants shown to be present by gas chromatograph/mass spectrometer (GC/MS) analysis per 40 CFR 136, Appendix A, EPA Method 624 and EPA Method 625, in addition to quantifying pH, oil and grease, and all priority pollutants.  
  
The Permittee should attempt to make determinations of pollutants for each fraction, which produces identifiable spectra on total ion plots (reconstructed gas chromatograms). The Permittee should attempt to make determinations from all peaks with responses 5% or greater than the nearest internal standard. The 5% value is based on internal standard concentrations of 30 µg/L, and must be adjusted downward if higher internal standard concentrations are used or adjusted upward if lower internal standard concentrations are used. The Permittee may express results for non-substituted aliphatic compounds as total hydrocarbon content.
12. Use a laboratory whose computer data processing programs are capable of comparing sample mass spectra to a computerized library of mass spectra, with visual confirmation by an experienced analyst.
13. Conduct additional sampling and appropriate testing to determine concentration and variability, and to evaluate trends for all detected substances determined to be pollutants.

### **S6.C. Reporting of monitoring results**

The Permittee must submit data from each sampling event electronically on quarterly and annual DMRs through the WQWebDMR system, as outlined in Special Condition S3.A. The Permittee must also include a summary of monitoring results in the Annual Pretreatment Report.

### **S6.D. Local limit development**

As sufficient data becomes available, the Permittee, in consultation with Ecology, must reevaluate its local limits in order to prevent pass through or interference. If Ecology determines that any pollutant present causes pass through or interference, or exceeds established sludge standards, the Permittee must establish new local limits or revise existing local limits as required by 40 CFR 403.5.

Ecology may also require the Permittee to revise or establish local limits for any pollutant discharged from the POTW that has a reasonable potential to exceed the Water Quality Standards, Sediment Standards, or established effluent limits, or causes whole effluent toxicity. Ecology makes this determination in the form of an Administrative Order.

Ecology may modify this permit to incorporate additional requirements relating to the establishment and enforcement of local limits for pollutants of concern.

## **S7. Solid wastes**

### **S7.A. Solid waste handling**

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

### **S7.B. Leachate**

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

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

The Permittee must submit an application for renewal of this permit **by July 31, 2026**.

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 Permit Specialist at [stra461@ecy.wa.gov](mailto:stra461@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. Spill control plan**

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

The Permittee must:

1. **Submit an update to the existing spill control plan to Ecology by August 1, 2024.**
2. Review the plan at least annually and update the spill plan as needed.
3. Send changes to the plan to Ecology.
4. Follow the plan and any supplements throughout the term of the permit.

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

The spill control plan must include the following:

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

The Permittee may submit plans and manuals required by 40 CFR Part 112, contingency plans required by Chapter 173-303 WAC, or other plans required by other agencies, which meet the intent of this section.

## S10. Effluent mixing and dye tracer study

### S10.A. General requirements

The Permittee must:

1. **Submit a Plan of Study to Ecology for review by August 1, 2023.** Additionally, **MEET WITH ECOLOGY** at least 60 days prior to initiation of the effluent mixing study. The dye study should be the primary tool. The most appropriate model should be the one that best validates against the dye results.

In addition to information typically identify using a dye tracer and mixing study, the study must include:

- An evaluation of the possible overlap of mixing zone with the City of Spokane CSOs
  - An estimate of the low flow, including the estimated groundwater contribution to flow, at the point of discharge
  - An accurate evaluation of the physical features of the river bed upstream, downstream and at the location of the diffuser
  - Dye tracer results for the diffuser during typical low flow period for the river.
  - Identification any shoreline interactions and bottom attachments.
2. Use the Guidance for Conducting Mixing Zone Analyses (**Appendix C of Ecology's Permit Writer's Manual**; 2018) and the protocols identified in S10.C.
  3. Include the results of the effluent mixing study in the Effluent Mixing Report and submit it to Ecology for approval **by August 1, 2026.**
  4. If the results of the mixing study, toxicity tests, and chemical analysis indicate that the concentration of any pollutant(s) exceeds or has a reasonable potential to exceed the state water quality standards, chapter 173-201A WAC, Ecology may issue an administrative order to require a reduction of pollutants or modify this permit to impose effluent limits to meet the water quality standards.

### S10.B. Reporting requirements

The mixing zone study must include:

1. A statement confirming that AKART has been applied to the discharge.
2. A description of the size of the mixing zone allowed under chapter 173-201A WAC.
3. An analysis showing how bank outfall mixing zones have been minimized using the lowest dilution from hydraulic limitations, width limitations, distance limitations and those predicted by the model.
4. A clear description of the critical conditions used for dilution factors:

- i. For ambient freshwater (unidirectional flow) use 7Q10 flows for acute, chronic and non-carcinogenic pollutants, and harmonic flow for carcinogens.
  - ii. Use density profile that gives the lowest dilution. Evaluate both maximum and minimum stratification. For human health, use average density profiles to estimate dilution.
  - iii. For unidirectional flow use centerline dilution factor for acute and chronic conditions, while flux average for human health dilution factors.
5. Discharge information:
  - i. Location, orientation, description and dimensions of outfall.
  - ii. Plan view maps showing the mixing zone size and dimensions in relation to the bank outfall.
  - iii. Schematic of waterbody cross-section, showing channel width, depth, and bank outfall.
6. Discharge characteristics:
  - i. Existing and projected maximum daily, maximum monthly average, and annual average flows.
  - ii. Discharge density (temperature and salinity).
7. Ambient water characteristics:
  - i. Critical stream flow statistics (7Q10, 30Q5, harmonic flow).
  - ii. Velocity profile upstream, at the outfall, and downstream of the outfall.
  - iii. Temporal density (temperature and salinity) profiles near the outfall. Include seasonal variability.
  - iv. Manning's roughness coefficient, if used.
  - v. Available information regarding background concentrations of chemical substances in the receiving water for which there are criteria in chapter 173-201A WAC.
8. Model selection and results:
  - i. Model selection and application discussion. Consider model applicability to bank discharge and potential plume attachment to boundaries.
  - ii. Description of mixing and plume dynamics (near-field, far-field).
  - iii. Sensitivity analysis.
  - iv. Calibration to empirical data (tracer studies), if applicable.
  - v. Provide model output and summary table of results.

## S10.C. Protocols

The Permittee must determine the dilution ratio using protocols outlined in the following references, approved modifications thereof, or by another method approved by Ecology:

Doneker, R.L. and G.H. Jirka, [CORMIX User Manual: A Hydrodynamic Mixing Zone Model and Decision Support System for Pollutant Discharges into Surface Waters, EPA-823-K-07-001](http://www.mixzon.com/downloads/), Dec. 2007. (<http://www.mixzon.com/downloads/>).

[A complete list of general reference for CORMIX](http://www.cormix.info/references.php)  
(<http://www.cormix.info/references.php>).

Frick, W.E., Roberts, P.J.W., Davis, L.R., Keyes, D.J., Baumgartner, George, K.P. 2003. [Dilution Models for Effluent Discharges, 4th Edition \(Visual Plumes\)](https://www.epa.gov/sites/default/files/documents/VP-Manual.pdf). Ecosystems Research Div., USEPA, Athens, GA, USA.  
(<https://www.epa.gov/sites/default/files/documents/VP-Manual.pdf>)

Ecology, [Water Quality Program, Permit Writer's Manual.2018](https://apps.ecology.wa.gov/publications/documents/92109.pdf). Washington State Department of Ecology. Publication No. 92-109, Revised July 2018.  
(<https://apps.ecology.wa.gov/publications/documents/92109.pdf>).

Ecology, Guidance for conducting mixing zone analysis [Appendix C, Water Quality Program, Permit Writer's Manual. 2015](https://apps.ecology.wa.gov/ecy/publications/parts/92109part1.pdf)  
(<https://apps.ecology.wa.gov/ecy/publications/parts/92109part1.pdf>).

Kilpatrick, F.A., and E.D. Cobb, [Measurement of Discharge Using Tracers, Chapter A16, Techniques of Water-Resources Investigations of the USGS, Book 3, Application of Hydraulics](https://pubs.usgs.gov/twri/twri3-a16/pdf/TWRI_3-A16.pdf), USGS, U.S. Department of the Interior, Reston, VA, 1985.  
([https://pubs.usgs.gov/twri/twri3-a16/pdf/TWRI\\_3-A16.pdf](https://pubs.usgs.gov/twri/twri3-a16/pdf/TWRI_3-A16.pdf)).

Wilson, J.F., E.D. Cobb, and F.A. Kilpatrick, [Fluorometric Procedures for Dye Tracing, Chapter A12. Techniques of Water-Resources Investigations of the USGS, Book 3, Application of Hydraulics](https://pubs.usgs.gov/twri/twri3-a12/pdf/TWRI_3-A12.pdf), USGS, U.S. Department of the Interior, Reston, VA, 1986.  
[https://pubs.usgs.gov/twri/twri3-a12/pdf/TWRI\\_3-A12.pdf](https://pubs.usgs.gov/twri/twri3-a12/pdf/TWRI_3-A12.pdf)).

## S11. Receiving water and effluent study of temperature

The Permittee must collect information on the effluent and receiving water to determine if the effluent has a reasonable potential to cause or contribute to a violation of the water quality standards. If reasonable potential exists, Ecology will use this information to calculate effluent limits.

The Permittee must:

1. **Submit an updated Sampling Quality Assurance Project Plan (QAPP)** for Ecology review and approval **by August 1, 2023**.
2. Conduct all sampling and analysis in accordance with the guidelines given in Ecology [Publication Number 04-03-030, Guidelines for Preparing Quality Assurance Project Plans for Environmental Studies](https://apps.ecology.wa.gov/ecy/publications/summarypages/0403030.html) available online at <https://apps.ecology.wa.gov/ecy/publications/summarypages/0403030.html>.

- A [model Quality Assurance Plan specific for temperature](https://ecology.wa.gov/Asset-Collections/Doc-Assets/Water-quality/Water-Quality-Permits/Guidance/QAPPMunicipaltemplate) is available at <https://ecology.wa.gov/Asset-Collections/Doc-Assets/Water-quality/Water-Quality-Permits/Guidance/QAPPMunicipaltemplate>.
3. Measure temperature in the ambient water upstream of the outfall, specify a location outside the effluent mixing zone for the discharge. Permittee must sample the receiving water year round beginning the month after the updated QAPP is approved and continuing temperature sampling for three years.
  4. Use micro-recording temperature devices known as thermistors to measure temperature. Ecology's Quality Assurance Project Plan Development Tool, [Publication Number 18-03-205](#), **Standard Operating Procedures for Continuous Temperature Monitoring of Fresh Water Rivers and Streams**, contains protocols for continuous temperature sampling and is available online at <https://apps.ecology.wa.gov/ecy/publications/documents/1803205.pdf>.  
  
Calibrate the devices as specified in this document unless using recording devices certified by the manufacturer. Ecology does not require manufacture-specific equipment as given in this document; however, if the Permittee wishes to use measuring devices from another company, it must demonstrate the accuracy is equivalent.
  5. Set the recording devices to record at one-half-hour intervals.
  6. Report temperature monitoring data as daily maximum, seven-day running average of the daily maximums (three days prior to and three days after sampled day), the monthly maximum of the seven-day running average and monthly maximum day. The model Quality Assurance Project Plan shows an example of these calculations.
  7. Submit **the daily maximum temperature data for each month at the time of submittal of the discharge monitoring report**. Data collection starts upon Ecology approval of the Quality Assurance Project Plan collection proceeds through permit expiration.

## **S12. Receiving water trace metals, pH, DO, hardness, and alkalinity 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 for, metals, pH, and DO at the edge of the chronic mixing zone. If reasonable potential exists, Ecology will use the study information to calculate effluent limits.

The Permittee must:

1. **Submit a Sampling and Quality Assurance Project Plan** for Ecology review and approval **by August 1, 2023**.

Prepare all quality assurance plans in accordance with the guidelines given in Ecology [Publication Number 04-03-030](#), **Guidelines for Preparing Quality Assurance Project Plans for Environmental Studies** available online at <https://fortress.wa.gov/ecy/publications/documents/0403030.pdf>.

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.
  - b. Use sampling station accuracy requirements of  $\pm 20$  meters.
  - c. Time the sampling to reflect seasonal variations.
  - d. Follow the clean sampling techniques, [Method 1669: Sampling Ambient Water for Trace Metals at EPA Water Quality Criteria Levels](https://www.epa.gov/sites/default/files/2015-10/documents/method_1669_1996.pdf), EPA Publication No. 821-R-95-034, April 1995 available online [https://www.epa.gov/sites/default/files/2015-10/documents/method\\_1669\\_1996.pdf](https://www.epa.gov/sites/default/files/2015-10/documents/method_1669_1996.pdf).
  - e. Collect at least ten receiving water samples that reflect seasonal variation in concentration and analyze the samples for dissolved oxygen, total suspended solids, hardness, temperature, pH, salinity, mercury, and arsenic, and for both the total and dissolved fractions for the following metals: zinc, copper, lead, silver, cadmium, nickel, and chromium.
  - f. Conduct all chemical analysis using the methods and the detection levels identified in Appendix A or method appropriate to identify the concentration in the water (highly sensitive methods).
3. Submit sediment, chemical, and biological data to Ecology's Environmental Information Management System (EIM) (linked below). Submit data to EIM according to the instructions on the EIM website. The data submittal portion of the EIM website (linked below) provides information and help on formats and requirements for submitting tabular data. Submit specific questions about data submittal to the EIM Data Coordinator.
  - [Environmental Information Management System \(EIM\)](https://apps.ecology.wa.gov/ecy/eimreporting/default.aspx)  
<https://apps.ecology.wa.gov/ecy/eimreporting/default.aspx>
  - [Data submittal portion of EIM website](https://ecology.wa.gov/Research-Data/Data-resources/Environmental-Information-Management-database/EIM-submit-data)  
<https://ecology.wa.gov/Research-Data/Data-resources/Environmental-Information-Management-database/EIM-submit-data>
4. **Submit the final report**, summarizing the results of the study to Ecology **by August 1, 2026**. **The final report must document when the data was successfully loaded into EIM.**

Any subsequent sampling and analysis must also meet these requirements. The Permittee may conduct a cooperative receiving water study with other NPDES Permittees discharging in the same vicinity.

## **S13. Sediment monitoring**

### **S13.A. Sediment sampling and analysis plan**

The Permittee must **submit a sediment sampling and analysis plan** to Ecology for review and approval that includes a pre-sampling plan to identify sediments depositional areas downstream of the discharge **by August 1, 2023**. The purpose of the plan is to characterize sediment (the nature and extent of chemical contamination and biological toxicity) quality near the Permittee's discharge locations.

The Permittee must follow the guidance provided in Ecology [Publication 12-09-057](#), the **Sediment Cleanup User's Manual, Appendix A: Sampling Guidance for NPDES Permits under the Sediment Management Standards** (Ecology, 2019) or the latest edition.

Note: Sediment sampling must be between August 15 and September 30. The approval of the plan takes up to six months, plan sampling appropriately.

### **S13.B. Sediment data report**

Following Ecology approval of the sediment sampling and analysis plan, the Permittee must collect sediments between August 15 and September 30. The Permittee must **submit to Ecology a sediment data report or pre-sampling findings report** containing the results of the sediment sampling and analysis or findings regarding the lack of sediment deposition downstream of the outfall **by August 1, 2025**.

The sediment data report must conform to the approved sediment sampling and analysis plan. The Permittee must follow the guidance provided in Ecology [Publication 12-09-057](#), the **Sediment Cleanup User's Manual, Appendix A: Sampling Guidance for NPDES Permits under the Sediment Management Standards** (Ecology, 2019) or the latest edition.

The report must document when the data was successfully loaded into EIM as required below.

In addition to a sediment data report, submit the sediment chemical and biological data to **Ecology's EIM database** (linked below). Submit data to EIM according to the instructions on the EIM website.

**The data submittal portion of the EIM website** (linked below) provides information and help on formats and requirements for submitting tabular data.

- [Environmental Information Management System \(EIM\)](#)  
<https://apps.ecology.wa.gov/eim/search/default.aspx>
- [Data submittal portion of EIM website](#)  
<https://ecology.wa.gov/Research-Data/Data-resources/Environmental-Information-Management-database/EIM-submit-data>
- [MyEIM tools](#)  
<https://ecology.wa.gov/Research-Data/Data-resources/Environmental-Information-Management-database/Using-MyEIM>

In addition to the EIM data submittal, Ecology's [MyEIM tools](#) must be used to confirm that the submitted data was accurately entered into EIM. Any differences between the MyEIM analytical results and sediment data report must be identified and explained.

## **S14. Acute toxicity**

### **S14.A. Effluent limit for acute toxicity**

The effluent limit for acute toxicity is:

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

The ACEC means the maximum concentration of effluent during critical conditions at the boundary of the acute mixing zone, defined in Section S1.B of this permit. The ACEC equals 50 % effluent.

### **S14.B. Compliance with the effluent limit for acute toxicity**

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

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

The Permittee must determine the statistical significance by conducting a hypothesis test at the 0.05 level of significance (Appendix H, EPA/600/4-90/001). If the difference in survival between the control and the ACEC is less than 10%, the Permittee must conduct the hypothesis test at the 0.01 level of significance.

### **S14.C. Compliance testing for acute toxicity**

The Permittee must:

1. Perform the acute toxicity tests with 100% effluent, the ACEC, and a control, or with a full dilution series.
2. **Conduct acute toxicity testing on the final effluent once per quarter.** The Permittee must take samples in a different month for each sampling period beginning after the permit is issued. The Permittee must begin quarterly monitoring for the quarter beginning on 7/1/2022.
3. **After each quarter's testing is conducted, submit a written report to Ecology.** The report is due when the specific quarter is due. Quarters are due by April 15, July 15, October 15, and January 15. Further instructions on testing conditions and test report content are in Section F below.
4. The Permittee must perform compliance tests using each of the species and protocols listed below on a rotating basis.

**Table 17: Acute Toxicity Tests**

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

**S14.D. Response to noncompliance with the effluent limit for acute toxicity**

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

The Permittee must:

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

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

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

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

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

If all of the additional testing in S14.E.1 complies with the permit limit, the Permittee must submit a report to Ecology on possible causes and preventive measures for the transient toxicity event, which triggered the additional compliance monitoring.

This report must include a search of all pertinent and recent facility records, including:

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

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

#### **S14.E. Sampling and reporting requirements**

1. The Permittee must submit all reports for toxicity testing in accordance with the most recent version of [Ecology Publication No. WQ-R-95-80](https://apps.ecology.wa.gov/publications/documents/9580.pdf), **Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria** (<https://apps.ecology.wa.gov/publications/documents/9580.pdf>). Reports must contain toxicity data, bench sheets, and reference toxicant results for test methods. In addition, the Permittee must submit toxicity test data in electronic format (CETIS export file preferred) for entry into Ecology's database.
2. The Permittee must collect 24-hour composite effluent samples for toxicity testing. The Permittee must cool the samples to 0 - 6 degrees Celsius during collection and send them to the lab immediately upon completion. The lab must begin the toxicity testing as soon as possible but no later than 36 hours after sampling was completed.
3. The laboratory must conduct water quality measurements on all samples and test solutions for toxicity testing, as specified in the most recent version of [Ecology Publication No. WQ-R-95-80](https://apps.ecology.wa.gov/publications/documents/9580.pdf), **Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria** (<https://apps.ecology.wa.gov/publications/documents/9580.pdf>).
4. All toxicity tests must meet quality assurance criteria and test conditions specified in the most recent versions of the EPA methods listed in Subsection C and the [Ecology Publication No. WQ-R-95-80](https://apps.ecology.wa.gov/publications/documents/9580.pdf), **Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria** (<https://apps.ecology.wa.gov/publications/documents/9580.pdf>). If Ecology determines any test results to be invalid or anomalous, the Permittee must repeat the testing with freshly collected effluent.
5. The laboratory must use control water and dilution water meeting the requirements of the EPA methods listed in Section A or pristine natural water of sufficient quality for good control performance.

6. The Permittee must conduct whole effluent toxicity tests on an unmodified sample of final effluent.
7. The Permittee may choose to conduct a full dilution series test during compliance testing in order to determine dose response. In this case, the series must have a minimum of five effluent concentrations and a control. The series of concentrations must include the acute critical effluent concentration (ACEC). The ACEC equals 50% effluent.
8. All whole effluent toxicity tests, effluent screening tests, and rapid screening tests that involve hypothesis testing must comply with the acute statistical power standard of 29% as defined in WAC 173-205-020. If the test does not meet the power standard, the Permittee must repeat the test on a fresh sample with an increased number of replicates to increase the power.

## **S15. Chronic toxicity**

### **S15.A. Effluent limit for chronic toxicity**

The effluent limit for chronic toxicity is:

**No toxicity detected in a test concentration representing the chronic critical effluent concentration (CCEC).**

The CCEC means the maximum concentration of effluent during critical conditions at the boundary of the mixing zone, defined in Section S1.B of this permit. The CCEC equals 6.4% effluent.

### **S15.B. Compliance with the effluent limit for chronic toxicity**

Compliance with the effluent limit for chronic toxicity means the results of the testing specified in Subsection D. show no statistically significant difference in response between the control and the CCEC.

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

The Permittee must determine the statistical significance by conducting a hypothesis test at the 0.05 level of significance (Appendix H, EPA/600/4-90/001). If the difference in response between the control and the CCEC is less than 20%, the Permittee must conduct the hypothesis test at the 0.01 level of significance.

Ecology will reevaluate the need for the chronic toxicity limit in future permits. Therefore, the Permittee must also conduct this same hypothesis test (Appendix H, EPA/600/4-90/001) to determine whether a statistically significant difference in response exists between the acute critical effluent concentration (ACEC) and the control.

### S15.C. Compliance testing for chronic toxicity

The Permittee must:

9. Perform the chronic toxicity tests using the CCEC, the ACEC, and a control, or with a full dilution series.
10. **Conduct chronic toxicity testing on the final effluent once per quarter.** The Permittee must take samples in a different month for each sampling period beginning after the permit is issued. The Permittee must begin quarterly monitoring for the quarter beginning on 7/1/2022.
11. **After each quarter's testing is conducted, submit a written report to Ecology.** The report is due when the specific quarter is due. Quarters are due by April 15, July 15, October 15, and January 15. Further instructions on testing conditions and test report content are in Section F below.
12. Perform compliance tests using the following species on a rotating basis and the most recent version of the following protocols:

**Table 18: Freshwater Chronic Test**

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

### S15.D. Response to noncompliance with the effluent limit for chronic toxicity

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

The Permittee must:

Conduct additional testing each month for three consecutive months using the same test and species as the failed compliance test.

1. Use a series of at least five effluent concentrations and a control to determine appropriate point estimates. One of these effluent concentrations must equal the CCEC. The results of the test at the CCEC will determine compliance with the effluent limit for chronic toxicity as described in Subsection B.
2. Return to the original monitoring frequency in Subsection D after completion of the additional compliance monitoring.

**Anomalous test results:** If a toxicity test conducted under Subsection D indicates noncompliance with the chronic toxicity limit and the Permittee believes that the test result is anomalous, the Permittee may notify Ecology that the compliance test result may be anomalous.

The Permittee may take one additional sample for toxicity testing and wait for notification from Ecology before completing the additional testing. The Permittee must submit the notification with the report of the compliance test result and identify the reason for considering the compliance test result to be anomalous.

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

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

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

If all of the additional testing required in S15.C.1 complies with the permit limit, the Permittee must submit a report to Ecology on possible causes and preventive measures for the transient toxicity event, which triggered the additional compliance monitoring. This report must include a search of all pertinent and recent facility records, including:

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

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

### **S15.E. Sampling and reporting requirements**

1. The Permittee must submit all reports for toxicity testing in accordance with the most recent version of [Ecology Publication No. WQ-R-95-80, Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria](https://apps.ecology.wa.gov/publications/documents/9580.pdf) (https://apps.ecology.wa.gov/publications/documents/9580.pdf). Reports must contain toxicity data, bench sheets, and reference toxicant results for test methods. In addition, the Permittee must submit toxicity test data in electronic format (CETIS export file preferred) for entry into Ecology's database.
2. The Permittee must collect 24-hour composite effluent samples for toxicity testing. The Permittee must cool the samples to 0 - 6 degrees Celsius during collection and send them to the lab immediately upon completion. The lab must begin the toxicity testing as soon as possible but no later than 36 hours after sampling was completed.

3. The laboratory must conduct water quality measurements on all samples and test solutions for toxicity testing, as specified in the most recent version of [Ecology Publication No. WQ-R-95-80](https://apps.ecology.wa.gov/publications/documents/9580.pdf), **Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria** (<https://apps.ecology.wa.gov/publications/documents/9580.pdf>).
4. All toxicity tests must meet quality assurance criteria and test conditions specified in the most recent versions of the EPA methods listed in Section C. and the [Ecology Publication no. WQ-R-95-80](https://apps.ecology.wa.gov/publications/documents/9580.pdf), **Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria** (<https://apps.ecology.wa.gov/publications/documents/9580.pdf>). If Ecology determines any test results to be invalid or anomalous, the Permittee must repeat the testing with freshly collected effluent.
5. The laboratory must use control water and dilution water meeting the requirements of the EPA methods listed in Subsection C or pristine natural water of sufficient quality for good control performance.
6. The Permittee must conduct whole effluent toxicity tests on an unmodified sample of final effluent.
7. The Permittee may choose to conduct a full dilution series test during compliance testing in order to determine dose response. In this case, the series must have a minimum of five effluent concentrations and a control. The series of concentrations must include the CCEC and the ACEC. The CCEC and the ACEC may either substitute for the effluent concentrations that are closest to them in the dilution series or be extra effluent concentrations. The CCEC equals 6.4% effluent. The ACEC equals 50% effluent.
8. All whole effluent toxicity tests that involve hypothesis testing must comply with the chronic statistical power standard of 39% as defined in WAC 173-205-020. If the test does not meet the power standard, the Permittee must repeat the test on a fresh sample with an increased number of replicates to increase the power.

## **S16. Spokane River Watershed Toxics Reduction Strategy**

### **S16.A. Best Management Practices and Implementation Plan**

The Permittee must **submit a Toxics Reduction Best Management Practices Plan (BMP Plan)** to Ecology for review and approval **by August 1, 2023** and annually thereafter).

The BMPs must be implemented throughout the Spokane County sewer shed to reduce toxicant (PCBs and PBDEs) loading to both the treatment plant and the Spokane River.

The Permittee must use information generated from the most recent Toxics Management Plan developed during the previous permit cycle to continue the reduction strategy.

The BMP Plan must:

- Identify actions to be taken
- Include a method for assessing efficacy of the identified action(s)
- Quantify toxic reductions as a result of the actions

The Plan must detail specific implementation actions used and refine their application annually based upon monitoring results. The Plan should include figures, maps, and other illustrations depicting BMP placement, use, and implementation.

The Permittee must **submit an updated Quality Assurance Project Plan (QAPP) by August 1, 2023**. All monitoring for BMP effectiveness must use appropriately sensitive test methods. All sampling and analysis for the BMP plan must be in accordance with the approved QAPP. All lab sheets and a spreadsheet of raw data should accompany submission of the annual BMP plan. Spokane County must upload data to the Environmental Information Management System (or other) database as it becomes available.

Prepare all quality assurance plans in accordance with the guidelines given in Ecology [Publication Number 04-03-030](https://apps.ecology.wa.gov/publications/SummaryPages/0403030.html), **Guidelines for Preparing Quality Assurance Project Plans for Environmental Studies** available online at <https://apps.ecology.wa.gov/publications/SummaryPages/0403030.html>.

In addition to Permittee identified appropriate BMPs for the sewer shed, the Permittee must implement the following:

The continued source identification and removal actions for PCBs and PBDEs remaining within the Permittee's municipal wastewater sewer system. Continuation of the public outreach and education effort.

#### **S16.B. Community Based Toxics Reduction**

The Permittee must continue to work with the Spokane River Regional Toxics Task Force to identify strategies for reducing toxics in the Spokane River Watershed. Participation in an equivalent citizen advisory organization or committee may substitute for the requirement to participate in the Spokane River Regional Toxics Task Force.

## General Conditions

### G1. Signatory requirements

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

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

2. All reports required by this permit and other information requested by Ecology must be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:
  - a. The authorization is made in writing by a person described above and submitted to Ecology.
  - b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility, such as the position of plant manager, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.)
3. Changes to authorization. If an authorization under paragraph G1.2, above, is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of paragraph G1.2, above, must be submitted to Ecology prior to or together with any reports, information, or applications to be signed by an authorized representative.

4. Certification. Any person signing a document under this section must make the following certification:

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

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

The Permittee must allow an authorized representative of Ecology, upon the presentation of credentials:

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.

Under condition 2.d below, Ecology will reopen the permit should the Human Health Criteria for PCBs be revised.

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 emanate, the Permittee must notify the succeeding owner or controller of the existence of this permit by letter, a copy of which must be forwarded to Ecology.

### **1. Transfers by Modification**

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

### **2. Automatic Transfers**

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

- a. The Permittee notifies Ecology at least thirty (30) days in advance of the proposed transfer date.
- b. The notice includes a written agreement between the existing and new Permittees containing a specific date for 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 a 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 and every such violation is a separate and distinct offense, and in case of a continuing violation, every day's continuance is deemed to be a separate and distinct violation.

## **G15. Upset**

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

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

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

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

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

### **G16. Property rights**

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

### **G17. Duty to comply**

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

### **G18. Toxic pollutants**

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

### **G19. Penalties for tampering**

The Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than two 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 30-day period, the Permittee may assume consistency and proceed with the service agreement or the revised/updated service agreement.

## APPENDIX A

### List of Pollutants with Analytical Methods, Detection Limits and Quantitation Levels

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

- Another permit condition specifies other methods, detection levels, or quantitation levels.
- The method used produces measurable results in the sample and EPA has listed it as an EPA-approved method in 40 CFR Part 136. If the Permittee uses an alternative method, not specified in the permit and as allowed above, it must report the test method, DL, and QL on the discharge monitoring report or in the required report.

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

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

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

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

**Conventional Pollutants**

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

**Nonconventional Pollutants**

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

<b>Pollutant</b>	<b>CAS Number (if available)</b>	<b>Recommended Analytical Protocol</b>	<b>Detection (DL)<sup>1</sup> µg/L Unless specified</b>	<b>Quantitation Level (QL)<sup>2</sup> µg/L Unless specified</b>
Chloride		SM4500-Cl B/C/D/E and SM4110 B		Sample and limit dependent
Chlorine, Total Residual		SM4500 Cl G		50.0
Cobalt, Total	7440-48-4	200.8	0.05	0.25
Color		SM2120 B/C/E		10 color units
Dissolved oxygen		SM4500-OC/OG		0.2 mg/L
E.coli		SM 9221B, 9221F, 9223B	N/A	Specified in method - sample aliquot dependent
Enterococci		SM 9230B, 9230C, 9230D	N/A	Specified in method - sample aliquot dependent
Flow		Calibrated device		
Fluoride	16984-48-8	SM4500-F E	25	100
Hardness, Total		SM2340B		200 as CaCO <sub>3</sub>
Iron, Total	7439-89-6	200.7	12.5	50
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 <sub>3</sub> - E/F/H		100
Nitrogen, Total Kjeldahl (as N)		SM4500-N <sub>org</sub> B/C and SM4500NH <sub>3</sub> - B/C/D/EF/G/H		300
NWTPH Dx <sup>4</sup>		Ecology NWTPH Dx	250	250
NWTPH Gx <sup>5</sup>		Ecology NWTPH Gx	250	250

<b>Pollutant</b>	<b>CAS Number (if available)</b>	<b>Recommended Analytical Protocol</b>	<b>Detection (DL)<sup>1</sup> µg/L Unless specified</b>	<b>Quantitation Level (QL)<sup>2</sup> µg/L Unless specified</b>
Phosphorus, Total (as P)		SM 4500 PB followed by SM4500-PE/PF	3	10
Salinity		SM2520-B		3 practical salinity units or scale (PSU or PSS)
Settleable Solids		SM2540 -F		Sample and limit dependent
Soluble Reactive Phosphorus (as P)		SM4500-P E/F/G	3	10
Sulfate (as mg/L SO <sub>4</sub> )		SM4110-B		0.2 mg/L
Sulfide (as mg/L S)		SM4500- S <sup>2</sup> F/D/E/G		0.2 mg/L
Sulfite (as mg/L SO <sub>3</sub> )		SM4500-SO3B		2 mg/L
Temperature (max. 7-day avg.)		Analog recorder or Use micro- recording devices known as thermistors		0.2° C
Tin, Total	7440-31-5	200.8	0.3	1.5
Titanium, Total	7440-32-6	200.8	0.5	2.5
Total Coliform		SM 9221B, 9222B, 9223B	N/A	Specified in method - sample aliquot dependent
Total Organic Carbon		SM5310-B/C/D		1 mg/L
Total dissolved solids		SM2540 C		20 mg/L

**Priority Pollutants  
 Metals, Cyanide & Total Phenols**

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

Priority Pollutants	PP #	CAS Number (if available)	Recommended Analytical Protocol	Detection (DL) <sup>1</sup> µg/L Unless specified	Quantitation Level (QL) <sup>2</sup> µg/L Unless specified
Phenols, Total	65		EPA 420.1		50

#### Acid Compounds

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

**Volatile Compounds**

<b>Priority Pollutants</b>	<b>PP #</b>	<b>CAS Number (if available)</b>	<b>Recommended Analytical Protocol</b>	<b>Detection (DL)<sup>1</sup> µg/L Unless specified</b>	<b>Quantitation Level (QL)<sup>2</sup> µg/L Unless specified</b>
Acrolein	2	107-02-8	624.1	5	10
Acrylonitrile	3	107-13-1	624.1	1.0	2.0
Benzene	4	71-43-2	624.1	4.4	13.2
Bromoform	47	75-25-2	624.1	4.7	14.1
Carbon tetrachloride	6	56-23-5	624.1/601 or SM6230B	2.8	8.4
Chlorobenzene	7	108-90-7	624.1	6.0	18.0
Chloroethane	16	75-00-3	624/601	1.0	2.0
2-Chloroethylvinyl Ether	19	110-75-8	624.1	1.0	2.0
Chloroform	23	67-66-3	624.1 or SM6210B	1.6	4.8
Dibromochloromethane (chlorodibromomethane)	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

Priority Pollutants	PP #	CAS Number (if available)	Recommended Analytical Protocol	Detection (DL) <sup>1</sup> µg/L Unless specified	Quantitation Level (QL) <sup>2</sup> µg/L Unless specified
1,3-dichloropropene (mixed isomers) (1,2-dichloropropylene) <sup>6</sup>	33	542-75-6	624.1	5.0	15.0
Ethylbenzene	38	100-41-4	624.1	7.2	21.6
Methyl bromide (Bromomethane)	46	74-83-9	624/601	5.0	10.0
Methyl chloride (Chloromethane)	45	74-87-3	624.1	1.0	2.0
Methylene chloride	44	75-09-2	624.1	2.8	8.4
1,1,2,2-Tetrachloroethane	15	79-34-5	624.1	6.9	20.7
Tetrachloroethylene	85	127-18-4	624.1	4.1	12.3
Toluene	86	108-88-3	624.1	6.0	18.0
1,2-Trans-Dichloroethylene (Ethylene dichloride)	30	156-60-5	624.1	1.6	4.8
1,1,1-Trichloroethane	11	71-55-6	624.1	3.8	11.4
1,1,2-Trichloroethane	14	79-00-5	624.1	5.0	15.0
Trichloroethylene	87	79-01-6	624.1	1.9	5.7
Vinyl chloride	88	75-01-4	624/SM6200 B	1.0	2.0

**Base/Neutral Compounds** (Compounds in **Bold** are Ecology PBTs)

Priority Pollutants	PP #	CAS Number (if available)	Recommended Analytical Protocol	Detection (DL) <sup>1</sup> µg/L Unless specified	Quantitation Level (QL) <sup>2</sup> 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) <sup>7</sup>	74	205-99-2	610/625.1	4.8	14.4
<b>Benzo(j)fluoranthene<sup>7</sup></b>		205-82-3	625	0.5	1.0
Benzo(k)fluoranthene (11,12-benzofluoranthene) <sup>7</sup>	75	207-08-9	610/625.1	2.5	7.5
<b>Benzo(r,s,t)pentaphene</b>		189-55-9	625	1.3	5.0
Benzo(a)pyrene	73	50-32-8	610/625.1	2.5	7.5
Benzo(ghi)Perylene	79	191-24-2	610/625.1	4.1	12.3
Bis(2-chloroethoxy)methane	43	111-91-1	625.1	5.3	15.9
Bis(2-chloroethyl)ether	18	111-44-4	611/625.1	5.7	17.1
Bis(2-chloro-1-methylethyl)Ether (Bis(2-chloroisopropyl)ether) <sup>10</sup>	42	108-60-1	625.1	5.7	17.1
Bis(2-ethylhexyl)phthalate	66	117-81-7	625.1	2.5	7.5

Priority Pollutants	PP #	CAS Number (if available)	Recommended Analytical Protocol	Detection (DL) <sup>1</sup> µg/L Unless specified	Quantitation Level (QL) <sup>2</sup> µg/L Unless specified
4-Bromophenyl phenyl ether	41	101-55-3	625.1	1.9	5.7
2-Chloronaphthalene	20	91-58-7	625.1	1.9	5.7
4-Chlorophenyl phenyl ether	40	7005-72-3	625.1	4.2	12.6
Chrysene	76	218-01-9	610/625.1	2.5	7.5
<b>Dibenzo (a,h)acridine</b>		226-36-8	610M/625M	2.5	10.0
<b>Dibenzo (a,j)acridine</b>		224-42-0	610M/625M	2.5	10.0
Dibenzo(a-h)anthracene (1,2,5,6-dibenzanthracene)	82	53-70-3	625.1	2.5	7.5
<b>Dibenzo(a,e)pyrene</b>		192-65-4	610M/625M	2.5	10.0
<b>Dibenzo(a,h)pyrene</b>		189-64-0	625M	2.5	10.0
3,3-Dichlorobenzidine	28	91-94-1	605/625.1	16.5	49.5
Diethyl phthalate	70	84-66-2	625.1	1.9	5.7
Dimethyl phthalate	71	131-11-3	625.1	1.6	4.8
Di-n-butyl phthalate	68	84-74-2	625.1	2.5	7.5
2,4-dinitrotoluene	35	121-14-2	609/625.1	5.7	17.1
2,6-dinitrotoluene	36	606-20-2	609/625.1	1.9	5.7
Di-n-octyl phthalate	69	117-84-0	625.1	2.5	7.5
1,2-Diphenylhydrazine (as Azobenzene)	37	122-66-7	1625B	5.0	20

Priority Pollutants	PP #	CAS Number (if available)	Recommended Analytical Protocol	Detection (DL) <sup>1</sup> µg/L Unless specified	Quantitation Level (QL) <sup>2</sup> µg/L Unless specified
Fluoranthene	39	206-44-0	625.1	2.2	6.6
Fluorene	80	86-73-7	625.1	1.9	5.7
Hexachlorobenzene	9	118-74-1	612/625.1	1.9	5.7
Hexachlorobutadiene	52	87-68-3	625.1	0.9	2.7
Hexachlorocyclopentadiene	53	77-47-4	1625B/625	2.0	4.0
Hexachloroethane	12	67-72-1	625.1	1.6	4.8
Indeno(1,2,3-cd)Pyrene	83	193-39-5	610/625.1	3.7	11.1
Isophorone	54	78-59-1	625.1	2.2	6.6
<b>3-Methylcholanthrene</b>		56-49-5	625	2.0	8.0
Naphthalene	55	91-20-3	625.1	1.6	4.8
Nitrobenzene	56	98-95-3	625.1	1.9	5.7
N-Nitrosodimethylamine	61	62-75-9	607/625	2.0	4.0
N-Nitrosodi-n-propylamine	63	621-64-7	607/625	0.5	1.0
N-Nitrosodiphenylamine	62	86-30-6	625	1.0	2.0
<b>Perylene</b>		198-55-0	625	1.9	7.6
Phenanthrene	81	85-01-8	625.1	5.4	16.2
Pyrene	84	129-00-0	625.1	1.9	5.7
1,2,4-Trichlorobenzene	8	120-82-1	625.1	1.9	5.7

**Dioxin**

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

**Pesticides/PCBS**

Priority Pollutants	PP #	CAS Number (if available)	Recommended Analytical Protocol	Detection (DL) <sup>1</sup> µg/L Unless specified	Quantitation Level (QL) <sup>2</sup> 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 <sup>8</sup>	91	57-74-9	608.3	14 ng/L	42 ng/L
4,4'-DDT	92	50-29-3	608.3	12 ng/L	36 ng/L
4,4'-DDE	93	72-55-9	608.3	4.0 ng/L	12 ng/L
4,4' DDD	94	72-54-8	608.3	11ng/L	33 ng/L
Dieldrin	90	60-57-1	608.3	2.0 ng/L	6.0 ng/L
alpha-Endosulfan	95	959-98-8	608.3	14 ng/L	42 ng/L
beta-Endosulfan	96	33213-65-9	608.3	4.0 ng/L	12 ng/L
Endosulfan Sulfate	97	1031-07-8	608.3	66 ng/L	198 ng/L
Endrin	98	72-20-8	608.3	6.0 ng/L	18 ng/L
Endrin Aldehyde	99	7421-93-4	608.3	23 ng/L	70 ng/L
Heptachlor	100	76-44-8	608.3	3.0 ng/L	9.0 ng/L
Heptachlor Epoxide	101	1024-57-3	608.3	83 ng/L	249 ng/L
PCB-1242 <sup>9</sup>	106	53469-21-9	608.3	0.065	0.195

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

### Analytical Methods

1. **Detection level (DL)** – or detection limit means the minimum concentration of an analyte (substance) that can be measured and reported with a 99% confidence that the analyte concentration is greater than zero as determined by the procedure given in 40 CFR part 136, Appendix B.
2. **Quantitation Level (QL)** – also known as Minimum Level of Quantitation (ML) – The lowest level at which the entire analytical system must give a recognizable signal and acceptable calibration point for the analyte. It is equivalent to the concentration of the lowest calibration standard, assuming that the lab has used all method-specified sample weights, volumes, and cleanup procedures. The QL is calculated by multiplying the MDL by 3.18 and rounding the result to the number nearest to  $(1, 2, \text{ or } 5) \times 10^n$ , where n is an integer. (64 FR 30417). **Also Given As:** The smallest detectable concentration of analyte greater than the Detection Limit (DL) where the accuracy (precision & bias) achieves the objectives of the intended purpose. (Report of the Federal Advisory Committee on Detection and Quantitation Approaches and Uses in Clean Water Act Programs Submitted to the US Environmental Protection Agency December 2007).
3. **Soluble Biochemical Oxygen Demand** – method note: First, filter the sample through a Millipore Nylon filter (or equivalent) - pore size of 0.45-0.50 um (prep all filters by filtering 250 ml of laboratory grade deionized water through the filter and discard). Then, analyze sample as per method 5210-B.
4. **Northwest Total Petroleum Hydrocarbons Diesel Extended Range OR NWTPH Dx** – [Analytical Methods for Petroleum Hydrocarbons](https://fortress.wa.gov/ecy/publications/documents/97602.pdf)  
<https://fortress.wa.gov/ecy/publications/documents/97602.pdf>.
5. **Northwest Total Petroleum Hydrocarbons Gasoline Extended Range OR NWTPH Gx** – [Analytical Methods for Petroleum Hydrocarbons](https://fortress.wa.gov/ecy/publications/documents/97602.pdf)  
<https://fortress.wa.gov/ecy/publications/documents/97602.pdf>.
6. **1, 3-dichloroproylene (mixed isomers)** – You may report this parameter as two separate parameters: cis-1, 3-dichloropropene (10061-01-5) and trans-1, 3-dichloropropene (10061-02-6).
7. **Total Benzofluoranthenes** – Because Benzo(b)fluoranthene, Benzo(j)fluoranthene and Benzo(k)fluoranthene co-elute you may report these three isomers as total benzofluoranthenes.
8. **Chlordane** – You may report alpha-chlordane (5103-71-9) and gamma-chlordane (5103-74-2) in place of chlordane (57-74-9). If you report alpha and gamma-chlordane, the DL/PQLs that apply are 14/42 ng/L.
9. **PCB 1016 & PCB 1242** – You may report these two PCB compounds as one parameter called PCB 1016/1242.
10. **Bis(2-Chloro-1-Methylethyl) Ether** – This compound was previously listed as Bis(2-Chloroisopropyl) Ether (39638-32-9)