DEPARTMENT OF ECOLOGY
State of Washington

DRAFT

Issuance Date: _____
Effective Date: _____
Expiration Date: _____

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM WASTE DISCHARGE PERMIT NO. WA0037061

State of Washington
DEPARTMENT OF ECOLOGY
Southwest Regional Office
P.O. Box 47775
Olympia, WA 98504-7775

In compliance with the provisions of the State of Washington Water Pollution Control Law, Chapter 90.48 Revised Code of Washington, and the

State of Washington Reclaimed Water Act, Chapter 90.46 Revised Code of Washington, and

The Federal Water Pollution Control Act (The Clean Water Act)

Title 33 United States Code, Section 1342 et seq.

LOTT Clean Water Alliance
500 Adams Street Northeast
Olympia, Washington 98501-6911

And the Contributing Jurisdictions [a]

City of Lacey	City of Olympia	City of Tumwater	Thurston County
420 College St SE	PO Box 1967	555 Israel Road SW	2000 Lakeridge Dr SW
Lacey, WA 98503	Olympia, WA 98507	Tumwater, WA 98501	Olympia, WA 98502

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

Plant Location: 500 Adams Street Northeast Olympia, WA 98501	Receiving Water: Budd Inlet/South Puget Sound
Treatment Type: Activated Sludge/Advanced Treatment and Class A Reclaimed Water	

Richard Doenges
Southwest Region Manager
Water Quality Program
Washington State Department of Ecology

[a] While the LOTT Clean Water Alliance is the primary Permittee and has day-to-day responsibility for the treatment plant and all permit conditions, except as otherwise noted, the cities of Lacey, Olympia, and Tumwater and Thurston County as contributing jurisdictions collectively share responsibility for permit issues involving the treatment plant and discharge, as well as being responsible for their respective collection systems and lift stations, and the discharge of waste from their systems to the LOTT system.

TABLE OF CONTENTS

SUMMARY OF PERMIT REPORT SUBMITTALS

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

Permit Section	Submittal	Frequency	First Submittal Date
S3.A.	Discharge Monitoring Report (DMR)	Monthly	*Reserved for Issuance*
S3.A.	Permit Renewal Application Monitoring Data	Annually	*Reserved for Issuance*
S3.A.	DMR - Priority Pollutant Data - Single Sample Data	Annually	*Reserved for Issuance*
S3.F.	Reporting Permit Violations	As necessary	
S4.B.	Plans for Maintaining Adequate Capacity	Annually	May 15, 2018
S4.D.	Notification of New or Altered Sources	As necessary	
S4.E.	Infiltration and Inflow Evaluation	Annually	May 15, 2018
S5.F.	Bypass Notification	As necessary	
S6.A.5.	Pretreatment Report	1/year	March 1, 2018
S6.A.6.	Request to make changes to pretreatment program	As necessary	
S8.	Application for Permit Renewal	1/permit cycle	*Reserved for Issuance*
S9.A.	Sediment Baseline Sampling and Analysis Plan	1/permit cycle	March 31, 2018
S9.B.	Sediment Chemistry Analyses	1/permit cycle	December 31, 2019
S10.C.	Combined Sewer Overflow Report	Annually	May 15, 2018
S11.	Outfall Evaluation	1/permit cycle	March 31, 2020
S12.	Chronic Toxicity Effluent Test Results	Annually	December 31, 2018
R4.A.	Water Reuse Summary Plan	Annually	January 31, 2018
R4.H.	Service and Use Area Contract	As necessary	
G1.	Notice of Change in Authorization	As necessary	
G4.	Reporting Planned Changes	As necessary	
G5.	Engineering Report for Construction or Modification Activities	As necessary	
G7.	Notice of Permit Transfer	As necessary	
G10.	Duty to Provide Information	As necessary	
G20.	Compliance Schedules	As necessary	
G21.	Contract Submittal	As necessary	

SPECIAL CONDITIONS

S1. DISCHARGE LIMITS

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 Budd Inlet at the permitted location subject to compliance with the following limits:

Effluent Limits: Outfall 001 (North Outfall) & 002 (Fiddlehead Outfall) [a] **001: Latitude 47.05941 N Longitude -122.9064 W** **002: Latitude 47.05103 N Longitude -122.9057 W**		
Parameter	**Average Monthly [b]**	**Average Weekly [c]**
Winter Season Biochemical Oxygen Demand (5-day) (BOD_5) (November – March)	30 milligrams/liter (mg/L) 5640 pounds/day (lbs/day) 85% removal of influent BOD_5	45 mg/L 8460 lbs/day
Spring/Fall Season BOD_5 (April, May, & October)	8 mg/L 900 lbs/day 85% removal of influent BOD_5	12 mg/L 1350 lbs/day
Summer Season BOD_5 (June- September)	7 mg/L 671 lbs/day 85% removal of influent BOD_5	10.5 mg/L 1006 lbs/day
Total Suspended Solids (TSS)	30 mg/L 5265 lbs/day 85% removal of influent TSS	45 mg/L 7898 lbs/day
Spring/Fall Season Total Inorganic Nitrogen [d] (TIN) (April, May, & October)	3 mg/L, 338 lbs/day	
Summer Season Total Inorganic Nitrogen [d] (TIN) (June - September)	3 mg/L, 288 lbs/day	
Parameter	**Minimum**	**Maximum**
pH	6.0 Standard Units	9.0 Standard Units
Parameter	**Monthly Geometric Mean**	**Weekly Geometric Mean**
Fecal Coliform Bacteria [e]	200/100 milliliter (mL)	400/100 mL

Effluent Limits: Outfall 001 Only		
Parameter	**Average Monthly**	**Maximum Daily [f]**
Winter Season Total Ammonia (as N) (November – March)	26 mg/L	36 mg/L
Effluent Limits: Outfall 002 Only		
Parameter	**Average Monthly**	**Maximum Daily [f]**
Winter Season Total Ammonia (as N) (November – March)	22 mg/L	31 mg/L
Total Recoverable Copper	6 µg/L	7.5 µg/L

Effluent Limitations for Class A Reclaimed Water: See Condition R1	
a	Outfall 002 (Fiddlehead) is to be used in emergency situations only, except as described in S10.D.3.
b	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 e for fecal coliform calculations.
c	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 e for fecal coliform calculations.
d	Total Inorganic Nitrogen (TIN) is the sum of the inorganic forms of Nitrogen (Nitrate, Nitrite, and Ammonia) each reported as Nitrogen.
e	The Department of Ecology (Ecology) provides directions to calculate the monthly and the weekly geometric mean in publication No. 04-10-020, Information Manual for Treatment Plant Operators available at: http://www.ecy.wa.gov/pubs/0410020.pdf
f	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.

B. Mixing Zone Authorization

Mixing Zone for Outfall 001

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

Chronic Mixing Zone

The mixing zone is a series of overlapping circles with radius of 213 feet (64.9 meters) measured from the center of each discharge port. 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 acute mixing zone is a series of overlapping circles with radius of 21.3 feet (6.5 meters) measured from the center of each discharge port. The mixing zone extends from the bottom to the top of the water column. The concentration of pollutants at the edge of the acute zone must meet acute aquatic life criteria.

Available Dilution (dilution factor)	
Acute Aquatic Life Criteria	35.3
Chronic Aquatic Life Criteria	48.9
Human Health Criteria - Carcinogen	48.9
Human Health Criteria - Non-carcinogen	48.9

Mixing Zone for Outfall 002

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

Chronic Mixing Zone

The mixing zone is that portion of a circle with radius of 201 feet (61.3 meters) centered over the discharge point that does not impinge upon the shoreline. 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. The chronic dilution factor is 100.

Acute Mixing Zone

The acute mixing zone is a circle with radius of 20.1 feet (6.1 meters) measured from the center of each discharge port. 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. The acute dilution factor is 3.

S2. MONITORING REQUIREMENTS

A. Monitoring Schedule

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

Parameter	Units & Speciation	Minimum Sampling Frequency	Sample Type
(1) Wastewater Influent			
Wastewater Influent means the raw sewage flow from the collection system into the treatment facility. Sample the wastewater entering the headworks of the treatment plant excluding any side-stream returns from inside the plant.			
Flow	MGD	Continuous [a]	Metered/Recorded
BOD_5	mg/L	3/week [b]	24-Hour Composite [c]
BOD_5	lbs/day	3/week [b]	Calculated [d]
TSS	mg/L	3/week [b]	24-Hour Composite [c]
TSS	lbs/day	3/week [b]	Calculated [d]
Total Ammonia	mg/L as N	3/week [b]	24-Hour Composite [c]
Total Ammonia	lbs/day as N	3/week [b]	Calculated [d]
(2) Final Wastewater Effluent			
Final Wastewater Effluent means wastewater exiting the last treatment process or operation. Typically, this is after or at the exit from the chlorine contact chamber or other disinfection process. The Permittee may take effluent samples for the BOD_5 analysis before or after the disinfection process. If taken after, the Permittee must dechlorinate and reseed the sample.			
Flow	MGD	Continuous [a]	Metered/Recorded
BOD_5	mg/L	3/week [b]	24-Hour Composite [c]
BOD_5	lbs/day	3/week [b]	Calculated [d]
BOD_5	% removal	3/week [b]	Calculated [e]
TSS	mg/L	Daily	24-Hour Composite [c]
TSS	lbs/day	Daily	Calculated [d]
TSS	% removal	Daily	Calculated [e]
Fecal Coliform [f]	# /100 ml	Daily	Grab [g]
pH [h]	Standard Units	Daily	Grab [g]
Temperature [i]	Degrees centigrade (°C)	Daily	Measurement
Dissolved Oxygen	mg/L	Daily	Grab [g]

Parameter	Units & Speciation	Minimum Sampling Frequency	Sample Type
Total Ammonia	mg/L as N	3/week [b]	24-Hour Composite [c]
Total Nitrate & Nitrite	mg/L as N	3/week [b]	24-Hour Composite [c]
Total Inorganic Nitrogen (TIN)	mg/L	3/week [b]	Calculation
TIN	lbs/day	3/week [b]	Calculation
Total Kjeldahl Nitrogen (TKN)	mg/L as N	3/week [b]	24-Hour Composite [c]
Total Recoverable Metals: Copper, Lead, Nickel, Silver, & Zinc	micrograms/liter (µg/L)	Monthly [j]	24-Hour Composite [c]
(3) Whole Effluent Toxicity Testing – Final Wastewater Effluent			
Chronic Toxicity Testing		Annually	24-Hour Composite [c]
Additional requirements specified in Special Condition S12.			
(4) Pretreatment			
As specified in Special Condition S6.			
(5) Effluent Characterization – Final Wastewater Effluent			
Total Phosphorus	mg/L as P	Monthly [j]	24-Hour Composite [c]
Soluble Reactive Phosphorus	mg/L as P	Monthly [j]	24-Hour Composite [c]
(6) 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.			
Oil and Grease	mg/L	Quarterly [k]	Grab [g]
Total Dissolved Solids	mg/L	Once per year	24-Hour Composite [c]
Total Hardness	mg/L	Once per year	24-Hour Composite [c]
Cyanide	µg/L	Quarterly [k]	Grab [g]
Total Phenolic Compounds	µg/L	Quarterly [k]	Grab [g]

Parameter	Units & Speciation	Minimum Sampling Frequency	Sample Type
Priority Pollutants (PP) – Total Metals	µg/L; nanograms (ng/L) for mercury	Quarterly [k]	24-Hour Composite [c] Grab for Mercury
PP – Volatile Organic Compounds	µg/L	Once per year [l]	Grab [g]
PP – Acid-extractable Compounds	µg/L	Once per year [l]	24-Hour Composite [c]
PP – Base-neutral Compounds	µg/L	Once per year [l]	24-Hour Composite [c]
(7) Sediment Study			
As specified in Special Condition S9.			
(8) Reclaimed Water			
As specified in Permit Condition R2.			

a	Continuous means uninterrupted except for brief lengths of time for calibration, power failure, or unanticipated equipment repair or maintenance. The time interval for the associated data logger must be no greater than 30 minutes.
b	Three (3)/week means three times during each calendar week
c	Twenty-four (24)-hour composite means a series of individual samples collected over a 24-hour period into a single container, and analyzed as one sample.
d	Calculated means figured concurrently with the respective sample, using the following formula: Concentration (in mg/L) X Flow (in MGD) X Conversion Factor (8.34) = lbs/day
e	% removal = Influent concentration (mg/L) – Effluent concentration (mg/L) x 100 Influent concentration (mg/L) Calculate the percent (%) removal of BOD_5 and TSS using the above equation.
f	Report a numerical value for fecal coliforms following the procedures in Ecology's *Information Manual for Wastewater Treatment Plant Operators*, Publication Number 04-10-020 available at: http://www.ecy.wa.gov/programs/wq/permits/guidance.html. Do not report a result as too numerous to count (TNTC).
g	Grab means an individual sample collected over a 15 minute, or less, period.
h	Report the daily pH and the minimum and maximum for the monitoring period.
i	Temperature grab sampling must occur when the effluent is at or near its daily maximum temperature, which usually occurs in the late afternoon. If measuring temperature continuously, the Permittee must determine and report a daily maximum from half-hour measurements in a 24-hour period. Continuous monitoring instruments must achieve an accuracy of 0.2 degrees C and the Permittee must verify accuracy annually.

Parameter	Units & Speciation	Minimum Sampling Frequency	Sample Type
j	Monthly means once every calendar month.		
k	Quarterly sampling periods are January through March, April through June, July through September, and October through December. The Permittee must begin quarterly monitoring s**tarting _____,** and submit results annually by **March 1st** of the following year.		
l	Once per year is defined as once per calendar year (January through December), **starting _____**.		

B. Combined Sewer Overflow (CSO) Monitoring Schedule

The Permittee must monitor all discharges from CSO outfalls listed in Special Condition S10 using the following monitoring schedule. Permittees must use automatic flow monitoring equipment to collect the information required below. Permittee must calibrate flow monitoring equipment according to requirements in Condition S2.C.

Parameter	Units	Minimum Sampling Frequency	Sample Type
CSO discharge is defined as any untreated CSO which will exit or has exited the CSO outfall.			
Volume Discharged	Gallons	Per Event [c]	Measurement/ Calculation [a, b]
Discharge Duration	Hours	Per Event [c]	Measurement
Storm Duration	Hours	Per Event [d]	Measurement
Precipitation	Inches	Per Event [c]	Measurement/ Calculation [b]
Total Ammonia	mg/L as N	Per Event [c]	Grab
Total Recoverable Copper	µg/L	Per Event [c]	Grab
Footnotes for CSO Monitoring:			
a	Flow measurement must be continuous, except for brief lengths of time for calibration, for power failure, or for unanticipated equipment repair or maintenance. During periods of interrupted service, a calculation may be used to estimate the discharge volume. An explanation must be provided in the monthly DMR for all disruptions in flow measurement.		
b	"Measurement/Calculation" means the total volume of the discharge or amount of precipitation event as estimated by direct measurement or indirectly by calculation (i.e. flow weirs, pressure transducers, tipping bucket). Precipitation must be measured by the nearest possible precipitation-measuring device and actively monitored during the period of interest.		

Parameter		Units	Minimum Sampling Frequency	Sample Type
c	"Per Event" means a unique flow event as defined in the Permit Writer's Manual. Ecology defines the minimum inter-event period (MIET) as 24 hours. A CSO event is considered to have ended only after at least 24 hours has elapsed since the last measured occurrence of an overflow.			
d	Storm duration is the amount of total time when precipitation occurred that contributed to a discharge event. It is determined on a case-by-case basis.			

C. Sampling and Analytical Procedures

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

Sampling and analytical methods used to meet the monitoring requirements specified in this permit must conform to the latest revision of the *Guidelines Establishing Test Procedures for the Analysis of Pollutants* contained in 40 Code of Federal Regulation (CRF) Part 136 [or as applicable in 40 CFR subchapters N (Parts 400–471) or O (Parts 501-503)] unless otherwise specified in this permit. The Department of Ecology (Ecology) may only specify alternative methods for parameters without permit limits and for those parameters without an Environmental Protection Agency (EPA) approved test method in 40 CFR Part 136.

D. 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 Operation and Maintenance (O&M) Manual procedures for the device and the wastestream.

3. Calibrate continuous monitoring instruments weekly unless it can demonstrate a longer period is sufficient based on monitoring records. The Permittee:

    a. May calibrate apparatus for continuous monitoring of dissolved oxygen by air calibration.

    b. Must calibrate continuous pH measurement instruments using a grab sample analyzed in the lab with a pH meter calibrated with standard buffers and analyzed within 15 minutes of sampling.

    c. Must calibrate continuous chlorine measurement instruments using a grab sample analyzed in the laboratory within 15 minutes of sampling.

4. Calibrate micro-recording temperature devices, known as thermistors, using protocols from Ecology's Quality Assurance Project Plan Development Tool (*Standard Operating Procedures for Continuous Temperature Monitoring of Fresh Water Rivers and Streams Version 1.0 10/26/2011*). This document is available online at: http://www.ecy.wa.gov/programs/eap/qa/docs/ECY_EAP_SOP_Cont_Temp_Mon_Ambient_v1_0EAP080.pdf. Calibration as specified in this document is not required if the Permittee uses recording devices certified by the manufacturer.

5. Use field measurement devices as directed by the manufacturer and do not use reagents beyond their expiration dates.

6. Establish a calibration frequency for each device or instrument in the O&M Manual that conforms to the frequency recommended by the manufacturer.

7. Calibrate flow-monitoring devices at a minimum frequency of at least one calibration per year.

8. Maintain calibration records for at least three years.

E. Laboratory Accreditation

The Permittee must ensure that all monitoring data required by Ecology for permit specified parameters is prepared by a laboratory registered or accredited under the provisions of chapter 173-50 Washington Administrative Code (WAC), *Accreditation of Environmental Laboratories*. Flow, Temperature, Settleable Solids, Conductivity, pH, and internal process control parameters are exempt from this requirement. The Permittee must obtain accreditation for conductivity and pH if it must receive accreditation or registration for other parameters.

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.

A. Discharge Monitoring Reports

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

1. Summarize, report, and submit monitoring data obtained during each monitoring period on the electronic Discharge Monitoring Report (DMR) form provided by Ecology within the Water Quality Permitting Portal. Include data for each of the parameters tabulated in Special Condition S2 and as required by the form. Report a value for each day sampling occurred (unless specifically exempted in the permit) and for the summary values (when applicable) included on the electronic form.

   To find out more information and to sign up for the Water Quality Permitting Portal go to: http://www.ecy.wa.gov/programs/wq/permits/paris/webdmr.html

2. 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.

3. 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.

4. **Do Not** report zero for bacteria monitoring. Report as required by the laboratory method.

5. Calculate and report an arithmetic average value for each day for bacteria if multiple samples were taken in one day.

6. Calculate the geometric mean values for bacteria (unless otherwise specified in the permit) using:

    a. The reported numeric value for all bacteria samples measured above the detection value except when it took multiple samples in one day. If the Permittee takes multiple samples in one day it must use the arithmetic average for the day in the geometric mean calculation.

    b. The detection value for those samples measured below detection.

7. Report the test method used for analysis in the comments if the laboratory used an alternative method not specified in the permit and as allowed in Appendix A.

8. Calculate average values and calculated total values (unless otherwise specified in the permit) using:

    a. The reported numeric value for all parameters measured between the agency-required detection value and the agency-required quantitation value.

    b. One-half the detection value (for values reported below detection) if the lab detected the parameter in another sample from the same monitoring point for the reporting period.

    c. Zero (for values reported below detection) if the lab did not detect the parameter in another sample for the reporting period.

9. Report single-sample grouped parameters (for example: priority pollutants, PAHs, pulp and paper chlorophenolics, TTOs) on the WQWebDMR form and include: sample date, concentration detected, DL (as necessary), and laboratory QL (as necessary).

    The Permittee must also submit an electronic copy of the laboratory report as an attachment using WQWebDMR. The contract laboratory reports must also include

information on the chain of custody, QA/QC results, and documentation of accreditation for the parameter.

10. Ensure that DMRs are electronically submitted no later than the dates specified below, unless otherwise specified in this permit.

11. 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. Permit Submittals and Schedules

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

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

Water Quality Permit Coordinator
Department of Ecology
Southwest Regional Office
P.O. Box 47775
Olympia, WA 98504-7775

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.

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.

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.

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

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

Southwest Regional Office	360-407-6300
Department of Health, Shellfish Program	360-236-3330 (business hours) 360-789-8962 (after business hours)

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.

G. Other Reporting

1. Spills of Oil or Hazardous Materials

The Permittee must report a spill of oil or hazardous materials in accordance with the requirements of Revised Code of Washington (RCW) 90.56.280 and chapter 173-303-145. You can obtain further instructions at the following website: http://www.ecy.wa.gov/programs/spills/other/reportaspill.htm .

2. Failure to Submit Relevant or Correct Facts

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

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

A. Design Criteria

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

Maximum Month Design Flow (MMDF)	28 MGD
Maximum Day Design Flow	55 MGD
Peak Hourly Design Flow	64 MGD
BOD_5 Influent Loading for Maximum Month	37,600 lbs/day
TSS Influent Loading for Maximum Month	35,100 lbs/day

B. Plans for Maintaining Adequate Capacity

The Permittee must continue following the Highly Managed Plan as described in the 1998 LOTT Wastewater Resource Management Plan. The Permittee shall submit to Ecology an annual capacity assessment report and the latest Capital Improvements Plan (CIP), in accordance with the 1998 LOTT Wastewater Resource Management Plan, by **May 15, 2018,** and **annually** thereafter. The plan shall include a schedule for continuing to maintain system capacity at the facilities sufficient to achieve the effluent limitations, reclaimed water standards, and other conditions of this permit. The schedule shall also include achieving wasteload allocations once the Budd Inlet Total Maximum Daily Load (TMDL) is approved by EPA.

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. A description of compliance or noncompliance with the permit effluent limits.

2. A comparison between the existing and design:

   a. Monthly average dry weather and wet weather flows

   b. Peak flows

   c. BOD_5 loading

   d. Total Suspended Solids loadings

3. The percent change in the above parameters since the previous report.

4. The present and design population or population equivalent.

5. The projected population growth rate.

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

7. Proposed process modifications

8. Reduction or elimination of excessive infiltration and inflow of uncontaminated ground and surface water into the sewer system

9. Limits on future sewer extensions or connections or additional wasteloads

10. Modification or expansion of facilities

11. Reduction of industrial or commercial flows or wasteloads

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.

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.

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 wasteload, 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)].

E. Infiltration and Inflow Evaluation

1. The Permittee must annually conduct an infiltration and inflow evaluation for sub-basins of the collection system so that the entire system is evaluated at least once every seven years. Refer to the U.S. EPA publication, I/I Analysis and Project Certification, available as Publication No. 97-03 at: http://www.ecy.wa.gov/programs/wq/permits/guidance.html

2. The Permittee may use monitoring records to assess measurable infiltration and inflow.

3. The Permittee must prepare a report summarizing any measurable infiltration and inflow. If infiltration and inflow have increased by more than 15 percent from that found in the sub-basin previously, based on equivalent rainfall, the report must contain a plan and a schedule to locate the sources of infiltration and inflow and to correct the problem.

4. The Permittee must submit a report summarizing the results of the evaluation and any recommendations for corrective actions by **May 15, 2017**, and **annually** thereafter.

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.

A. Certified Operator

This permitted facility must be operated by an operator certified by the state of Washington for at least a Class 4 plant. This operator must be in responsible charge of the day-to-day operation of the LOTT system of treatment and reclamation plants. An operator certified for at least a Class 3 plant must be in charge during all regularly scheduled shifts when

process changes are made. The Permittee must notify Ecology when the operator in charge at the facility changes. It must provide the new operator's name and certification level and provide the name of the operator leaving the facility.

B. Operation and Maintenance (O&M) 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.

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.

D. Electrical Power Failure

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

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

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.

F. Bypass Procedures

This permit prohibits a bypass, which is the intentional diversion of waste streams from any portion of a treatment facility. Ecology may take enforcement action against a Permittee for a bypass unless one of the following circumstances (1, 2, or 3) applies.

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

   This permit authorizes a bypass if it allows for essential maintenance and does not have the potential to cause violations of limits or other conditions of this permit, or adversely impact public health as determined by Ecology prior to the bypass. The Permittee must submit prior notice, if possible, at least ten days before the date of the bypass.

2. Bypass which is unavoidable, unanticipated, and results in noncompliance of this permit.

   This permit authorizes such a bypass only if:

   a. 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.

   b. No feasible alternatives to the bypass exist, such as:

      - The use of auxiliary treatment facilities.
      - Retention of untreated wastes.
      - 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.
      - Transport of untreated wastes to another treatment facility.

   c. Ecology is properly notified of the bypass as required in Special Condition S3.F of this permit.

3. If bypass is anticipated and has the potential to result in noncompliance of this permit.

a. The Permittee must notify Ecology at least 30 days before the planned date of bypass. The notice must contain:

- A description of the bypass and its cause.
- An analysis of all known alternatives which would eliminate, reduce, or mitigate the need for bypassing.
- A cost-effectiveness analysis of alternatives including comparative resource damage assessment.
- 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 State Environmental Policy Act (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 reoccurrence 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 or facilities plan 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 consider the following prior to issuing an administrative order for this type of bypass:

- If the bypass is necessary to perform construction or maintenance-related activities essential to meet the requirements of this permit.
- If feasible alternatives to bypass exist, such as the use of auxiliary treatment facilities, retention of untreated wastes, stopping production, maintenance during normal periods of equipment down time, or transport of untreated wastes to another treatment facility.

- If the Permittee planned and scheduled the bypass to minimize adverse effects on the public and the environment.

After consideration of the above and the adverse effects of the proposed bypass and any other relevant factors, Ecology will approve or deny the request. Ecology will give the public an opportunity to comment on bypass incidents of significant duration, to the extent feasible. Ecology will approve a request to bypass by issuing an administrative order under RCW 90.48.120.

G. Operations and Maintenance (O&M) Manual

1. O&M Manual Requirements

The Permittee must:

a. Maintain an O&M Manual that meets the requirements of 173-240-080 WAC.

b. Review the O&M Manual at least annually.

c. Submit to Ecology for review substantial changes or updates to the O&M Manual whenever it incorporates them into the Manual.

d. Keep the approved O&M Manual available at the permitted facility.

e. Follow the instructions and procedures of this manual.

2. O&M Manual Components

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

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

b. A review of system components which if failed could pollute surface water or could impact human health. Provide a procedure for a routine schedule of checking the function of these components.

c. Wastewater system maintenance procedures that contribute to the generation of process wastewater.

d. Reporting protocols for submitting reports to Ecology to comply with the reporting requirements in the discharge permit.

e. Any directions to maintenance staff when cleaning or maintaining other equipment or performing other tasks which are necessary to protect the operation of the wastewater system (for example, defining maximum allowable discharge rate for draining a tank, blocking all floor drains before beginning the overhaul of a stationary engine).

f. The treatment plant process control monitoring schedule.

g. Minimum staffing adequate to operate and maintain the treatment processes and carry out compliance monitoring required by the permit.

S6. PRETREATMENT

A. General Requirements

1. The Permittee must implement the Industrial Pretreatment Program in accordance with the legal authorities, policies, procedures, and financial provisions described in the Permittee's approved pretreatment program submittal entitled "Industrial Pretreatment Program" and dated November 1999; 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 2 of the LOTT Discharge and Industrial Pretreatment Regulations, and as codified in the following enabling ordinances: Lacey Ordinance 994, Olympia Ordinance 5462, Tumwater Ordinance 094-032, and Thurston County Ordinance 10750, 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)(vii).

g. If the Permittee elects to conduct sampling of an SIU's discharge in lieu of requiring user self-monitoring, it must satisfy all requirements of 40 CFR Part 403.12. This includes monitoring and record keeping requirements of Sections 403.12(g) and (o). For SIUs subject to categorical standards (CIUs), the Permittee may either complete baseline and initial compliance reports for the CIU [when required by 403.12(b) and (d)] or require these of the CIU. The Permittee must ensure that it provides SIUs the results of sampling in a timely manner, inform SIUs of their right to sample, their obligations to report any sampling they do, to respond to 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 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 implement the Accidental Spill Prevention Program described in the approved Industrial Pretreatment Program dated November 1999, or any approved revisions thereto.

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.

6. 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 **March 1st**. The Report must include the following information:

   a. An updated non-domestic inventory.

   b. Results of wastewater sampling at the treatment plant as specified in S6.B. The Permittee must calculate removal rates for each pollutant and evaluate the adequacy of the existing local limits in Section 2 of the LOTT Discharge and Industrial Pretreatment Regulations 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 Publically Owned Treatment Works (POTW) that are directly attributable to wastes from industrial users.

- Listing of industrial users inspected and/or monitored, and a summary of the results.

- Listing of industrial users scheduled for inspection and/or monitoring for the next year, and expected frequencies.

- Listing of industrial users notified of promulgated pretreatment standards and/or local standards as required in 40 CFR 403.8(f)(2)(iii). The list must indicate which industrial users are on compliance schedules and the final date of compliance for each.

- Listing of industrial users issued industrial waste discharge permits.

- Planned changes in the approved local pretreatment program. (See Subsection A.7. below)

d. Status of compliance activities, including:

- Listing of industrial users that failed to submit baseline monitoring reports or any other reports required under 40 CFR 403.12 and in Section 6 of the Permittee's pretreatment program, dated February 13, 2008.

- 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.

7. 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).

B. Monitoring Requirements

The Permittee must:

1. Monitor its influent, effluent, and sludge for the priority pollutants identified in Tables II and III of Appendix D of 40 CFR Part 122 as amended, any compounds identified because of Special Condition S6.B.4, and any other pollutants expected from non-domestic sources using U.S. EPA-approved procedures for collection, preservation, storage, and analysis.

2. Test Influent, Effluent, and Sludge samples for the Priority Pollutant Metals, Cyanide, and Phenols (Table III, 40 CFR 122, Appendix D) on a quarterly basis throughout the term of this permit.

3. Test Influent, Effluent, and Sludge samples for the Organic Priority Pollutants (Table II, 40 CFR 122, Appendix D) on an annual basis. The Permittee may use the data collected for application purposes using Appendix A test methods to meet this requirement.

4. Sample POTW influent and effluent on a day when industrial discharges are occurring at normal-to-maximum levels.

5. Obtain 24-hour composite samples for the analysis of acid and base/neutral extractable compounds and metals.

6. Collect grab samples at equal intervals for a total of four grab samples per day for the analysis of volatile organic compounds. The laboratory may run a single analysis for volatile pollutants (Method 624) for each monitoring day by compositing equal volumes of each grab sample directly in the GC purge and trap apparatus in the laboratory, with no less than 1 mL of each grab included in the composite.

7. Ensure that all reported test data for metals represents the total amount of the constituents present in all phases, whether solid, suspended, or dissolved elemental or combined, including all oxidation states unless otherwise indicated.

8. Handle, prepare, and analyze all wastewater samples taken for GC/MS analysis in accordance with the U.S. EPA Methods 624 and 625 (October 26, 1984).

9. Collect a sludge sample concurrently with a wastewater sample as a single grab of residual sludge. Sludge organic priority pollutant sampling and analysis must conform to U.S. EPA Methods 624 and 625 unless the Permittee requests an alternate method and Ecology has approved. Sludge Metals Priority Pollutant sampling and analysis must conform to U.S. EPA SW 846 6000/7000 Series Methods unless the Permittee requests an alternate method and Ecology has approved.

10. Collect grab samples for Cyanide, Phenols, and Oils. Measure Hexane Soluble Oils (or equivalent) only in the influent and effluent.

11. Make a reasonable attempt to identify all other substances and quantify all pollutants shown to be present by gas chromatograph/mass spectrometer (GC/MS) analysis per 40 CFR 136, Appendix A, Methods 624 and 625, in addition to quantifying pH, Oil and Grease, and all Priority Pollutants.

    The Permittee should attempt to make determinations of pollutants for each fraction, which produces identifiable spectra on total ion plots (reconstructed gas chromatograms). The Permittee should attempt to make determinations from all peaks with responses 5 percent or greater than the nearest internal standard. The 5 percent 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.

C. Reporting of Monitoring Results

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

D. Local Limit Development

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

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

S7. SOLID WASTES

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.

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 ***Reserved for Issuance***.

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. SEDIMENT MONITORING

A. Sediment Sampling and Analysis Plan

The Permittee must submit to Ecology for review and approval a sediment sampling and analysis plan for sediment monitoring by **March 31, 2018**. The purpose of the plan is to recharacterize sediment (the nature and extent of chemical contamination and biological toxicity) quality in the vicinity of the Permittee's discharge locations. The Permittee must follow the guidance provided in the *Sediment Source Control Standards User Manual*, Appendix B: sediment sampling and analysis plan (Ecology, 2008).

B. Sediment Data Report

Following Ecology approval of the Sediment Sampling and Analysis Plan, the Permittee must collect sediments between August 15th and September 15th. The Permittee must submit to Ecology a Sediment Data Report containing the results of the sediment sampling and analysis no later than **December 31, 2019**. The sediment data report must conform to the approved sediment sampling and analysis plan. 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 (http://www.ecy.wa.gov/eim/). Data must be submitted to EIM according to the instructions on the EIM website. The data submittal portion of the EIM website (http://www.ecy.wa.gov/eim/submitdata.htm) provides information and help on formats and requirements for submitting tabular data.

S10. COMBINED SEWER OVERFLOWS

A. Authorized Combined Sewer Overflow (CSO) Discharge Locations

Beginning on the effective date of this permit, the Permittee may discharge domestic wastewater from the following list of CSO outfalls which represent occasional point sources of pollutants as a result of overloading of the combined sewer system during

precipitation events. The permit prohibits discharges not caused by precipitation. This permit does not authorize a discharge from a CSO that causes adverse impacts that threaten characteristic uses of the receiving water as identified in the water quality standards, chapter 173-201A WAC.

Outfall Number	CSO Location	Receiving Water Body	Latitude	Longitude
002	Fiddlehead Outfall	Budd Inlet	47.05103 N	-122.90567 W

B. Nine Minimum Controls

In accordance with chapter 173-245 WAC and US EPA CSO control policy (59 FR 18688), the Permittee must implement and document the following nine minimum controls (NMC) for CSOs. The Permittee must document compliance with the NMC in the annual CSO report as required in Special Condition S10.B.

The Permittee must comply with the following technology-based requirements; the Permittee must:

1. Implement proper operation and maintenance programs for the sewer system and all CSO outfalls to reduce the magnitude, frequency, and duration of CSOs. The program must consider regular sewer inspections; sewer, catch basin, and regulator cleaning; equipment and sewer collection system repair or replacement, where necessary; and disconnection of illegal connections.

2. Implement procedures that will maximize use of the collection system for wastewater storage that can be accommodated by the storage capacity of the collection system in order to reduce the magnitude, frequency, and duration of CSOs.

3. Review and modify, as appropriate, its existing pretreatment program to minimize CSO impacts from the discharges from non-domestic users.

4. Operate the Permittee's wastewater treatment plant at maximum treatable flow during all wet weather flow conditions to reduce the magnitude, frequency, and duration of CSOs. The Permittee must deliver all flows to the treatment plant within the constraints of the treatment capacity of the POTW.

5. Not discharge (prohibited) overflows from CSO outfalls except as a result of precipitation events. The Permittee must report each dry weather overflow to the permitting authority immediately per Special Condition S3.E. When it detects a dry weather overflow, the Permittee must begin corrective action immediately and inspect the dry weather overflow each subsequent day until it has eliminated the overflow.

6. Implement measures to control solid and floatable materials in CSOs.

7. Implement a pollution prevention program focused on reducing the impact of CSOs on receiving waters.

8. Implement a public notification process to inform the citizens of when and where CSOs occur. The process must include (a) mechanism to alert persons of the occurrence of CSOs and (b) a system to determine the nature and duration of conditions that are potentially harmful for users of receiving waters due to CSOs.

9. Monitor CSO outfalls to characterize CSO impacts and the efficacy of CSO controls. This must include collection of data that it will use to document the existing baseline conditions, evaluate the efficacy of the technology-based controls, and determine the baseline conditions upon which it will base the long-term control plan. This data must include:

    a. Characteristics of the combined sewer system, including the population served by the combined portion of the system and locations of all CSO outfalls in the CSS.

    b. Total number of CSO events, and the frequency and duration of CSOs for a representative number of events.

    c. Locations and designated uses of receiving water bodies.

    d. Water quality data for receiving water bodies.

    e. Water quality impacts directly related to CSO (e.g., beach closing, floatables, wash-up episodes, fish kills).

C. Combined Sewer Overflow Annual Report

The Permittee must submit a CSO Annual Report to Ecology for review and approval by **May 15th** of each year. The CSO Annual Report must cover the previous calendar year. The report must comply with the requirements of WAC 173-245-090(1) and must include documentation of compliance with the Nine Minimum Controls for CSOs described in Special Condition S10.B. The CSO Annual report must include the following information:

1. A summary of the number and volume of untreated discharge events per outfall for that year.

2. A summary of the five-year moving average number of untreated discharge events per outfall, calculated once annually.

3. An event-based reporting form for all CSO discharges for the reporting period, summarizing all data collected according to the monitoring schedule in Special Condition S2.B.

4. An explanation of the previous year's CSO reduction accomplishments.

5. A list of CSO reduction projects planned for the next year.

D. Requirements for Controlled Combined Sewer Overflows

1. CSOs Identified as Controlled

Based on monitoring data, the CSO outfalls listed in S10.A meet the requirement of "greatest reasonable reduction" as defined in chapter WAC 173-245-020(22). Frequency of overflow events at these CSO outfalls, as a result of precipitation events, must continue to meet the performance standard.

2. Performance Standards for Controlled CSO Outfalls

The performance standard for each controlled CSO outfall is not more than one discharge event per outfall per year on average, due to precipitation. Ecology evaluates compliance with the performance standard annually based on a five-year moving average. The Permittee must report the running five-year average number of overflow events per year during this permit term from the CSO outfall in the CSO Annual Report required in Section S10.C.

3. Emergency bypass maintenance (Outfall 002)

The Permittee is allowed one four-hour period every six months to discharge fully treated and disinfected secondary effluent through Outfall 002 for the purpose of exercising the pumping equipment. The Permittee must notify Ecology at least ten days in advance of conducting this activity, as required by S5.F.1.

S11. OUTFALL EVALUATION

The Permittee must inspect, once during the permit cycle, the submerged portion of the outfall line and diffuser to document its integrity and continued function. If conditions allow for a photographic verification, the Permittee must include such verification in the report. By **March 31, 2020**, the Permittee must submit the inspection report to Ecology through the Water Quality Permitting Portal – Permit Submittals application. The Permittee must submit hard-copies of any video files to Ecology as required by Permit Condition S3.B. The Portal does not support submittal of video files.

The inspector must at minimum:

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

S12. CHRONIC TOXICITY

A. Effluent Characterization

The Permittee must:

1. Conduct chronic toxicity testing on the final effluent annually.

2. Submit a written report to Ecology within 45 days of sampling. Further instructions on testing conditions and test report content are in Section B below.

3. Conduct chronic toxicity testing during effluent characterization on a series of at least five concentrations of effluent and a control. This series of dilutions must include the acute critical effluent concentration (ACEC). The ACEC equals 2.8 percent effluent. The series of dilutions should also contain the CCEC of 2.0 percent effluent.

4. Compare the ACEC to the control using hypothesis testing at the 0.05 level of significance as described in Appendix H, EPA/600/4-89/001.

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

Saltwater Chronic Test	Species	Method
Topsmelt Survival and Growth	Atherinops affinis	EPA/600/R-95/136
Mysid Shrimp Survival and Growth	*Americamysis bahia* (formerly *Mysidopsis bahia*)	EPA-821-R-02-014

B. Sampling and Reporting Requirements

1. The Permittee must submit all reports for toxicity testing in accordance with the most recent version of Ecology Publication No. WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria*. Reports must contain toxicity data, bench sheets, and reference toxicant results for test methods. In addition, the Permittee must submit toxicity test data in electronic format (CETIS export file preferred) for entry into Ecology's database.

2. The Permittee must collect 24-hour composite effluent samples for toxicity testing. The Permittee must cool the samples to 0 - 6 degrees Celsius during collection and send them to the lab immediately upon completion. The lab must begin the toxicity testing as soon as possible but no later than 36 hours after sampling was completed.

3. The laboratory must conduct water quality measurements on all samples and test solutions for toxicity testing, as specified in the most recent version of Ecology Publication No. WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria*.

4. All toxicity tests must meet quality assurance criteria and test conditions specified in the most recent versions of the EPA methods listed in Section C. and the Ecology Publication no. WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria*. If Ecology determines any test results to be invalid or anomalous, the Permittee must repeat the testing with freshly collected effluent.

5. The laboratory must use control water and dilution water meeting the requirements of the EPA methods listed in Subsection C or pristine natural water of sufficient quality for good control performance.

6. The Permittee must conduct whole effluent toxicity tests on an unmodified sample of final effluent.

7. The Permittee may choose to conduct a full dilution series test during compliance testing in order to determine dose response. In this case, the series must have a minimum of five effluent concentrations and a control. The series of concentrations must include the CCEC and the ACEC. The CCEC and the ACEC may either substitute for the effluent concentrations that are closest to them in the dilution series or be extra effluent concentrations. The CCEC equals 2.0 percent effluent. The ACEC equals 2.8 percent effluent.

8. All whole effluent toxicity tests that involve hypothesis testing must comply with the chronic statistical power standard of 39 percent 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.

S13. CONTRIBUTING JURISDICTIONS

A. Pretreatment Requirements

1. Each contributing jurisdiction shall ensure that within their jurisdiction, non-domestic wastes shall not be discharged to the sewerage system except in accordance with the requirements of Special Condition S6 pretreatment, including the requirements for such sources to receive a discharge permit.

2. Contributing jurisdictions shall strictly enforce their sewer ordinances and not allow connection to the sanitary sewers of nonpolluted waters including, but not limited to: stormwater, ground water, rain water, condensate, deionized water, non-contact cooling water, and drainage from street, yards, and roofs, unless the Permittee can show that these wastes require and are provided treatment by the POTW.

3. Contributing jurisdictions shall submit to the LOTT Wastewater Facility, the necessary information from their collection system to comply with the pretreatment requirements of Special Condition S6 of this permit.

B. Reporting

1. Unauthorized discharges such as collection system overflows or treatment plant bypasses shall be reported to the LOTT Wastewater facility. LOTT is responsible for immediately notifying Ecology and Thurston County Health per S3.

2. Unauthorized discharges to the collection system including discharges which are unpermitted or otherwise do not comply with pretreatment requirements shall be immediately reported to the LOTT wastewater facility. LOTT is responsible for notifying Ecology. (See Condition S6 of this permit.)

3. If LOTT is unavailable then it is the responsibility of the contributing jurisdiction to notify Ecology's Southwest Regional Office, Water Quality Inspector at the 24-hour Emergency Spill Response Number, 360-407-6300.

C. Prevention of Facility Overloading

Contributing jurisdictions shall submit to the LOTT Wastewater Facility the necessary information from their collections system to comply with the reporting requirements of Special Condition S4.

D. Operation and Maintenance Program

1. Contributing jurisdictions shall institute an adequate operation and maintenance program for their entire sewerage system. This program shall, at a minimum, include:

   a. An analysis of the collection system identifying and prioritizing problem areas.

   b. A systematic method and schedule for resolving priority problems including, but not limited to, pump station upgrades and repair, line surcharges, existing or potential overflows and bypasses, illegal sewer connections, and leaking service laterals.

   c. A plan for preventative and routine maintenance.

2. Maintenance records shall be maintained on the collections system and pumping stations. Such records shall clearly show the frequency and type of maintenance performed. These maintenance records shall be available for inspection at all times.

E Electrical Power Failure

Contributing jurisdictions are responsible to maintain adequate safeguards to 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 lift stations either by means of alternate power sources, standby generator, or retention of inadequately treated wastes.

RECLAIMED WATER CONDITIONS

Beginning on the effective date of this permit, all Class A reclaimed water produced at the Budd Inlet Treatment Plant shall comply with the Special Conditions (S) and General Conditions (G) as well as the Reclaimed Water Conditions (R) of this permit.

R1. RECLAIMED WATER LIMITATIONS

All uses and activities authorized by this permit shall be consistent with the terms and conditions of this permit. The discharge of any of the following pollutants more frequently than, or at a concentration in excess of, that authorized by this permit shall constitute a violation of the terms and conditions of this permit.

The production and use of reclaimed water shall be in compliance with all specific conditions and requirements of the Washington State Water Reclamation and Reuse Standards, 1997, and is subject to the requirements listed below:

Beginning on the effective date of this permit, the Permittee is authorized to distribute Class A reclaimed water produced at the Budd Inlet Treatment Plant to public and private entities for commercial and industrial uses and/or to apply reclaimed water to land for irrigation at agronomic rates at locations listed in Condition R4. The distribution and use of reclaimed water is subject to the following treatment and water quality limitations:

Reclaimed Water Limitations: Outfall #005		
Parameter	**Average Monthly [a]**	
Flow	1.5 MGD	BITP Class A Effluent
Oxidized Wastewater – Secondary Effluent		
Parameter		
Dissolved Oxygen	Shall be measurably present in secondary effluent at all times	
Disinfected - Reclaimed Water		
Parameter	**Average Monthly [a]**	**Sample Maximum [b]**
Turbidity	2 NTU	5 NTU
Total Nitrate (as N) [c]	10 mg/L	
pH	Shall be between 6.0 and 9.0 Standard Units at all times	
Parameter	**7-day Median [d]**	**Sample Maximum [b]**
Total Coliform	2.2 MPN/100 mL	23 MPN/100 mL [e]

Distribution System		
Parameter	**Minimum Daily**	
Chlorine Residual	Detectable [f]	

Distribution System	
a	The average monthly effluent limitation is defined as the highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.
b	The sample maximum is defined as the value not to be exceeded by any single sample. When continuous monitoring is used, excursions of the sample maximum that last less than 5 minutes are not considered permit violations, as long as the excursions in not greater than 10 times the sample maximum and the excursions in any 24 hour period do not exceed 30 minutes total.
c	The total Nitrate limit only applies from April 1st through October 31st and any other time when the reclaimed water is used for irrigation or infiltration.
d	The median number of total coliform organisms in the reclaimed water after disinfection does not exceed 2.2 per 100 milliliters, as determined from the bacteriological results of the last seven days for which analyses have been completed.
e	The number of total coliform organisms shall not exceed 23 per 100 milliliters in any single sample.
f	A detectable amount of chlorine residual shall be maintained in the reclaimed water during conveyance to the use area, or the storage pond if reclaimed water is not directly piped to the use area.

R2. RECLAIMED WATER MONITORING REQUIREMENTS

A Class A Reclaimed Water Monitoring

During the production of Class A reclaimed water, the Permittee shall monitor the reclaimed water according to the following schedule (This is in addition to sampling listed in S2):

Parameter	Units	Minimum Sampling Frequency	Sample Type
(1) Reclaimed Water [a]			
Flow	MGD	Continuous [b]	Metered/Recorded
pH	Standard Units	Daily	Grab [c]
Dissolved Oxygen	mg/L	Daily	Grab [c]
Turbidity	NTU	Continuous [b]	Metered/Recorded [d]
Total Nitrate (as N) [e]	mg/L	Weekly	24-Hour Composite
Total Coliform [f]	# /100 ml	Daily	Grab [c]

Parameter	Units	Minimum Sampling Frequency	Sample Type
(2) Water Reuse Distribution Line			
Total Chlorine Residual	mg/L	Daily (when in use)	Grab [c]

a	Reclaimed water samples shall be taken before the distribution system.
b	Continuous means uninterrupted except for brief lengths of time for calibration, power failure, or unanticipated equipment repair or maintenance. The time interval for the associated data logger must be no greater than 30 minutes.
c	Grab samples shall be taken when wastewater characteristics are the most demanding on the treatment facilities and disinfection processes.
d	Reclaimed water turbidity analysis shall be performed by a continuous recording turbidity meter. Report the average and maximum reading each day. Reported values can be based on the continuous readings or by reading and recording values at least every four hours.
e	May be calculated from final wastewater effluent monitoring (Condition S2)
f	As an alternate method, total coliform bacteria may be monitored using the ONPUG-MUG test (also called Autoanalysis Colilert System) per latest edition of standard methods.

B Reuse Instrumentation Calibration

Monitoring devices shall be installed, calibrated and maintained to ensure that the accuracy of the measurements are consistent with the accepted industry standard for that type of device. Frequency of calibration shall be in conformance with the manufacturer's recommendations. Calibration records shall be maintained for at least three years.

The Permittee shall also verify the accuracy of on-line turbidity meters at a minimum frequency of at least once every two weeks.

R3. REPORTING AND RECORDKEEPING REQUIREMENTS

The Permittee shall maintain records and report to the Ecology in accordance with Special Condition S3, and the following conditions. All records shall be retained for a minimum of three years. The falsification of information submitted to Ecology shall constitute a violation of the terms of this permit.

A. Reclaimed Water Operational Records

1. Operating records for the reclamation facility shall be maintained at the treatment plant or within a central depository within the Permittee's operating agency. These records shall include: records of all analyses performed, records of operational problems, unit process and equipment breakdowns, and diversions to emergency storage or disposal; and all corrective or preventative action taken

2. Process or equipment failures triggering an alarm that is key to maintaining reliability of reclaimed water quality shall be recorded and maintained as a separate record file. The recorded information shall include the time and cause of failure and corrective action taken.

3. Cross Connection Control Report. An annual Cross-Connection Control Report shall be completed by a certified Cross-Control Specialist identifying all devices tested and any cross-connection incidents which occurred in the reuse system. Where end users of the reclaimed water are the utilities or their customers, cross-connection requirements under this permit shall be consistent with or integrated into, existing cross-connection control programs implemented by the utilities as required by the Department of Health under WAC 246-290.

R4. RECLAIMED WATER DISTRIBUTION AND USE

The Permittee shall monitor the reclamation facility loading and the following conditions.

A Water Reuse Summary Plan

The Permittee shall prepare a Water Reuse Summary Plan, which contains a summary description of the water reuse system. The plan shall be updated annually and submitted to Ecology **January 31st** of each year, and cover the previous calendar year. The plan shall contain, but not be limited to, the following:

1. Description any additions to the reuse distribution system;

2. Identification and current list of all water purveyors, uses, users, and location of reuse sites.

3. Estimated volume of reclaimed water use at reuse sites, means of application, and application rates.

4. Description of any additional treatment provided to the reclaimed water.

B. Authorized Uses and Locations

The Permittee is authorized to distribute reclaimed water in accordance with the terms and conditions of this permit for authorized uses.

The distribution by the Permittee of reclaimed water that does not meet the treatment, water quality and monitoring requirements established in this permit shall constitute a violation of the terms and conditions of this permit. The use of reclaimed water other than for authorized uses and locations that are listed or will be listed in the next update of a Water Reuse Summary Plan shall constitute a violation of the terms and conditions of this permit. No reclaimed water shall be used or discharged in a drainage basin or adjacent to that basin such that the reclaimed water would cause or significantly contribute to groundwater flooding in the basin.

The Permittee may produce and distribute Class A reclaimed water for the uses listed in the approved Engineering Report, at the locations listed in the Water Reuse Summary Plan, and for new locations as described in R4.C.

C. Authorization for New Direct Non-Potable Uses of Reclaimed Water

The Permittee may provide reclaimed water for direct beneficial uses at locations not listed in the Water Reuse Summary Plan required by this permit in accordance with the terms and conditions of this permit provided the following conditions are met:

1. Direct beneficial uses and requirements for use are as listed in the Washington State Water Reclamation and Reuse Standards. The class of reclaimed water provided meets or exceeds the minimum requirements for the proposed use. Irrigation uses do not exceed agronomic rates of application.

2. The use area is located within Thurston County or other nearby counties. The water reclamation facility and use areas shall comply with local permitting and land use requirements.

3. The reclaimed water meets all applicable requirements of this permit for the approved class of reclaimed water including source control, treatment, water quality limitations, monitoring, recordkeeping, operation and maintenance, distribution and use.

4. The Permittee lists the new uses in the next annual Water Reuse Summary Plan and a copy of the revised plan is submitted to Ecology. The plan is described in R4.A.

D. Revocation of Authorization

Ecology may revoke authorization to provide service if the Permittee fails to comply with any requirement in this permit. Determination to revoke authorization shall be based on the risk to public health and safety or threat to waters of the state. Ecology may revoke the authorization for any or all reclamation facilities and use areas located within a specific geographic area if, due to a geologic or hydrologic condition, the cumulative effect of the reclamation facilities and use areas causes the violation of state water quality standards. Before revoking the authorization, Ecology shall notify the Permittee in writing and provide a reasonable opportunity and time frame to correct the noncompliance.

E. Bypass Prohibited

There shall be no bypassing of untreated or partially treated wastewater from the reclamation plant or any intermediate unit processes to the distribution system or point of use at any time. Diverting flows from the reclaimed water system to the North Outfall does not constitute a bypass provided such diversion does not cause an exceedance of the effluent limitations of Special Condition S1. All reclaimed water being distributed for beneficial use must meet Class A requirements at all times. Water not meeting Class A must be retained for additional treatment by diversion to a bypass storage lagoon or discharged to an authorized wastewater outfall.

Ecology shall be notified by telephone within 24 hours of any diversion to a bypass storage lagoon or authorized outfall due to failure of the reclaimed water system.

F. Reliability

The Permittee shall maintain the highest reliability class as described in the Water Reclamation and Reuse Standards which require one of the following features for each of the critical reclamation treatment unit processes of oxidation, coagulation, filtration, and disinfection:

1. Alarms and standby power source

2. Alarms and automatically actuated short-term (24-hour) storage or disposal provisions.

3. Automatically actuated long-term storage or disposal provisions for treated wastewater.

G. Use Area Responsibilities

1. A standard notification sign shall be developed by the Permittee using colors and verbiage approved by Ecology. The signs shall be used in all reclaimed water use areas, consistent with the Water Reclamation and Reuse Standards.

2. Reclaimed water use, including runoff and spray shall be confined to the designated and approved use area.

3. The Permittee shall control industrial and toxic discharges to the sanitary sewer that may affect reclaimed water quality through the approved pretreatment program as listed in Special Condition S6.

4. Where the reclaimed water production, distribution and use areas are under direct control of the Permittee, the Permittee shall maintain control and be responsible for all facilities and activities inherent to the production, distribution and use of the reclaimed water. The Permittee shall ensure that the reuse system operates as approved by the Departments of Health and Ecology.

H. Service and Use Area Contract

Where the reclaimed water additional treatment, distribution system or use area is not under direct control of the Permittee:

1. No reclaimed water shall be distributed by the Permittee or water purveyor without a binding Service and Use Area Contract in place. The contract shall ensure that construction, operation, maintenance, use area responsibilities, and monitoring meet all requirements of the Departments of Health and Ecology. This Service and Use Area contract must be consistent with the requirements of the Water Reclamation and Reuse Standards, 1997.

2. If a standard contract has been approved by Ecology, the Permittee or the water purveyor may certify that the individual contract copies submitted comply with the terms and conditions of the approved standard contract. If no standard contract has been approved, a copy of each Service and Use Area contract must be submitted to and approved by Ecology prior to implementation.

3. The Permittee or the water purveyor shall maintain all contracts for reclaimed water use for the duration of the permit. The Permittee shall inform Ecology in writing in the annual update to the Water Reuse Summary Plan of any proposed changes to existing agreements.

4. Unless expressly stated otherwise in an approved contract, the Permittee is responsible for all reuse facilities and activities inherent to the production, distribution and use of the reclaimed water.

5. Each individual Service and Use Area contract shall provide the Permittee and the water purveyor with the authority to regulate distribution, enter and inspect the site and to terminate service of reclaimed water to any customer violating the Washington State Water Reclamation and Reuse Standards. In lieu of specific language in each contract, the Permittee working in conjunction with the contributing jurisdictions, may complete and adopt local ordinances, to include policies and procedures, regulating the distribution and delivery of reclaimed water.

I. Reclaimed Water Ordinance

The Permittee shall complete interlocal agreements with the four contributing jurisdictions, and the contributing jurisdictions shall complete local ordinances to include policies and procedures for the distribution and delivery of reclaimed water. The interlocal agreements and ordinances shall provide the Permittee and jurisdictions with the authority to terminate service of reclaimed water from any jurisdiction or customer violating the Washington State Water Reclamation and Reuse Standards and restrictions outlined in the service and use agreement.

J. Irrigation Use

1. For any irrigation use of reclaimed water, the hydraulic loading rate of reclaimed water shall be determined.

2. Irrigation uses shall conform to all requirements of the Washington State Water Reclamation and Reuse Standards. The Permittee in coordination with contributing jurisdictions shall assure that all customers or authorized personnel using reclaimed water have completed training in the requirements for appropriate use of the water. Users of reclaimed water must ensure that their irrigation systems are in good working order, maintained regularly and kept free of leaks. They must further ensure that their irrigation controllers are set so that reclaimed water is applied appropriately to the landscape, to avoid excessive puddling or runoff of water. Sprinkler heads should be adjusted regularly to avoid application of water to impervious surfaces.

The Permittee or the water purveyor shall maintain all irrigation agreements for lands not owned for the duration of irrigation use. The Permittee shall inform Ecology in writing in the annual update to the Water Reuse Summary Plan of any proposed changes to existing agreements.

K. Wetlands Use

The Permittee or the water purveyor may use reclaimed water for wetland enhancement, as long as the following conditions are met and Ecology has granted written approval for the specific wetland to be enhanced:

1. Augmentation of wetland hydrologic regime is not to exceed an additional (above background) average annual hydraulic loading rate of 2 cm/day to Category II wetlands and 3 cm/day to Category III and IV wetlands, unless monitoring can demonstrate that a net ecological benefit can be maintained at a higher rate.

2. Average monthly water level elevations shall not increase by more than 10 cm above the pre-augmentation water level.

3. In Accordance with the Water Reclamation and Reuse Standards, the Permittee shall monitor the vegetation cover, plant diversity, macroinvertebrate biomass, amphibian species, fish biomass and species, bird density and species, threatened/endangered density and species once per year during the 1st, 2nd, 4th, 6th, 8th, and 10th growing season. There shall be no more the 25 percent reduction in parameter measurements over the wetland or 50 percent reduction at any one location in the wetland. The Permittee shall submit a report to Ecology on the results of the biological monitoring.

L. Other Uses of Reclaimed Water

Effluent used for sewage treatment plant purposes within the bounds of the wastewater treatment facility is not required to meet these standards, except in areas where there is potential public exposure as determined by the Departments of Health and Ecology.

The following uses require modification and public notice of this permit.

1. Groundwater recharge via surface percolation or direct injection.

2. Discharge of reclaimed water to surface waters, unless the discharge is covered by the Special Conditions of this permit.

3. The use of reclaimed water subsequent to its discharge to waters of the state.

4. Any reclamation facilities or uses that are not specifically authorized by this permit.

5. Any facilities or uses if determined necessary by the Department of Ecology or Health for public health or environmental protection.

R5. OPERATION AND MAINTENANCE

The Permittee shall operate and maintain the Budd Inlet Treatment Plant in accordance with Special Condition S5 and the following conditions.

A. Reclaimed Water System Maintenance

The Permittee and the water purveyors shall institute an adequate Operation and Maintenance (O&M) program for the entire reclamation system including all facilities and appurtenances owned and controlled by the Permittee, utilities or end users. Maintenance records shall be maintained by the Permittee, utilities or end user on all major electrical and mechanical components of the reclaimed water system, distribution system, and use areas. Such records shall clearly specify the frequency and type of maintenance recommended by the manufacturer and shall show the frequency and type of maintenance performed. These maintenance records shall be available for inspection at all times.

1. At all times, the reclamation system, distribution and use areas shall be maintained to ensure that all equipment is kept in a reliable operating condition.

2. A detectable chlorine residual shall be maintained in the reclaimed water during conveyance from the reclamation system to the use area.

3. Maintenance of a chlorine residual is not required in reclaimed water impoundments and storage ponds. At the discretion of the Departments of Health and Ecology, chlorine residual may not be required in reclaimed water distributed from storage ponds.

B. Operation and Maintenance Manual

Besides the items listed in S5.G, the Operation and Maintenance Manual for the Budd Inlet Treatment Plant shall include the following reclaimed water information:

1. An alarm condition response plan to ensure that no untreated or inadequately treated wastewater will be delivered to the use areas.

2. A discussion of the cross-connection control and inspection program, including who will be responsible for compliance and testing of cross connection control devices.

3. Operational strategies for the reclaimed water use areas that are under direct control of the Permittee.

C. Electrical Power Failure

The Permittee is responsible for maintaining adequate safeguards to prevent the discharge of untreated wastes or wastes not treated in accordance with the requirements of this permit during electrical power failure at the water reclamation plant and/or sewage lift stations either by means of alternate power sources, standby generator, or retention of inadequately treated wastes. The power supply shall be provided with one of the following reliability features to assure that inadequately treated wastewater is not discharged to distribution or use areas:

1. An alarm and a standby power source

2. An alarm and automatically actuated short-term storage or alternative disposal provisions All equipment other than pump-back equipment shall be either independent of the normal power supply or provided with a standby power supply.

3. Automatically actuated long-term storage or disposal provisions. All equipment other than pump-back equipment shall be either independent of the normal power supply or provided with a standby power supply.

GENERAL CONDITIONS

G1. SIGNATORY REQUIREMENTS

A. All applications, reports, or information submitted to Ecology must be signed and certified.

1. 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.

2. In the case of a partnership, by a general partner.

3. In the case of sole proprietorship, by the proprietor.

4. 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.

B. 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:

1. The authorization is made in writing by a person described above and submitted to Ecology.

2. 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.)

C. Changes to Authorization. If an authorization under paragraph G1.B, 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.B, above, must be submitted to Ecology prior to or together with any reports, information, or applications to be signed by an authorized representative.

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

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

G2. RIGHT OF INSPECTION AND ENTRY

The Permittee must allow an authorized representative of Ecology, upon the presentation of credentials and such other documents as may be required by law:

A. 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.

B. 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.

C. To inspect, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, methods, or operations regulated or required under this permit.

D. 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.

A. The following are causes for terminating this permit during its term, or for denying a permit renewal application:

1. Violation of any permit term or condition.

2. Obtaining a permit by misrepresentation or failure to disclose all relevant facts.

3. A material change in quantity or type of waste disposal.

4. 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.

5. 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.

6. Nonpayment of fees assessed pursuant to RCW 90.48.465.

7. Failure or refusal of the Permittee to allow entry as required in RCW 90.48.090.

B. The following are causes for modification but not revocation and reissuance except when the Permittee requests or agrees:

1. A material change in the condition of the waters of the State.

2. New information not available at the time of permit issuance that would have justified the application of different permit conditions.

3. Material and substantial alterations or additions to the permitted facility or activities which occurred after this permit issuance.

4. Promulgation of new or amended standards or regulations having a direct bearing upon permit conditions, or requiring permit revision.

5. The Permittee has requested a modification based on other rationale meeting the criteria of 40 CFR Part 122.62.

6. Ecology has determined that good cause exists for modification of a compliance schedule, and the modification will not violate statutory deadlines.

7. Incorporation of an approved local pretreatment program into a municipality's permit.

C. The following are causes for modification or alternatively revocation and reissuance:

1. When cause exists for termination for reasons listed in A.1 through A.7 of this section, and Ecology determines that modification or revocation and reissuance is appropriate.

2. 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:

A. The permitted facility being determined to be a new source pursuant to 40 CFR 122.29(b).

B. A significant change in the nature or an increase in quantity of pollutants discharged.

C. 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.

A. 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.

B. Automatic Transfers

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

1. The Permittee notifies Ecology at least 30 days in advance of the proposed transfer date.

2. The notice includes a written agreement between the existing and new Permittees containing a specific date transfer of permit responsibility, coverage, and liability between them.

3. Ecology does not notify the existing Permittee and the proposed new Permittee of its intent to modify or revoke and reissue this permit. A modification under this

subparagraph may also be minor modification under 40 CFR 122.63. If this notice is not received, the transfer is effective on the date specified in the written agreement.

G8. REDUCED PRODUCTION FOR COMPLIANCE

The Permittee, in order to maintain compliance with its permit, must control production and/or all discharges upon reduction, loss, failure, or bypass of the treatment facility until the facility is restored or an alternative method of treatment is provided. This requirement applies in the situation where, among other things, the primary source of power of the treatment facility is reduced, lost, or fails.

G9. REMOVED SUBSTANCES

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

G10. DUTY TO PROVIDE INFORMATION

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

G11. OTHER REQUIREMENTS OF 40 CFR

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

G12. ADDITIONAL MONITORING

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

G13. PAYMENT OF FEES

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

G14. PENALTIES FOR VIOLATING PERMIT CONDITIONS

Any person who is found guilty of willfully violating the terms and conditions of this permit is deemed guilty of a crime, and upon conviction thereof shall be punished by a fine of up to $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:

A. An upset occurred and that the Permittee can identify the cause(s) of the upset.

B. The permitted facility was being properly operated at the time of the upset.

C. The Permittee submitted notice of the upset as required in Special Condition S3.F.

D. 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

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

NONCONVENTIONAL POLLUTANTS

Pollutant & CAS No. (if available)	CAS Number (if available)	Recommended Analytical Protocol	Detection (DL)[1] µg/L unless specified	Quantitation Level (QL)[2] µg/L unless specified
Alkalinity, Total		SM2320-B		5 mg/L as CaCO3
Aluminum, Total	7429-90-5	200.8	2.0	10
Ammonia, Total (as N)		SM4500-NH3-B and C/D/E/G/H		20
Barium Total	7440-39-3	200.8	0.5	2.0
BTEX (benzene +toluene + ethylbenzene + m,o,p xylenes)		EPA SW 846 8021/8260	1	2
Boron, Total	7440-42-8	200.8	2.0	10.0
Chemical Oxygen Demand		SM5220-D		10 mg/L
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

NONCONVENTIONAL POLLUTANTS

Pollutant & CAS No. (if available)	CAS Number (if available)	Recommended Analytical Protocol	Detection (DL)[1] µg/L unless specified	Quantitation Level (QL)[2] µg/L unless specified
Color		SM2120 B/C/E		10 color units
Dissolved oxygen		SM4500-OC/OG		0.2 mg/L
Flow		Calibrated device		
Fluoride	16984-48-8	SM4500-F E	25	100
Hardness, Total		SM2340B		200 as CaCO3
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-NO3- E/F/H		100
Nitrogen, Total Kjeldahl (as N)		SM4500-N_{org}B/C and SM4500NH_3-B/C/D/EF/G/H		300
NWTPH Dx [4]		Ecology NWTPH Dx	250	250
NWTPH Gx [5]		Ecology NWTPH Gx	250	250
Phosphorus, Total (as P)		SM 4500 PB followed by SM4500-PE/PF	3	10
Salinity		SM2520-B		3 practical salinity units or scale (PSU or PSS)
Settleable Solids		SM2540 -F		Sample and limit dependent
Soluble Reactive Phosphorus (as P)		SM4500-P E/F/G	3	10
Sulfate (as mg/L SO_4)		SM4110-B		0.2 mg/L
Sulfide (as mg/L S)		SM4500-S^2F/D/E/G		0.2 mg/L
Sulfite (as mg/L SO_3)		SM4500-SO3B		2 mg/L
Temperature (max. 7-day avg.)		Analog recorder or Use micro-recording devices known as thermistors		0.2º C
Tin, Total	7440-31-5	200.8	0.3	1.5

NONCONVENTIONAL POLLUTANTS

Pollutant & CAS No. (if available)	CAS Number (if available)	Recommended Analytical Protocol	Detection (DL)[1] µg/L unless specified	Quantitation Level (QL)[2] µg/L unless specified
Titanium, Total	7440-32-6	200.8	0.5	2.5
Total Coliform		SM 9221B, 9222B, 9223B	N/A	Specified in method - sample aliquot dependent
Total Organic Carbon		SM5310-B/C/D		1 mg/L
Total dissolved solids		SM2540 C		20 mg/L

PRIORITY POLLUTANTS	PP #	CAS Number (if available)	Recommended Analytical Protocol	Detection (DL)[1] *µg/L unless specified*	Quantitation Level (QL) [2] *µg/L unless specified*
METALS, CYANIDE & TOTAL PHENOLS					
Antimony, Total	114	7440-36-0	200.8	0.3	1.0
Arsenic, Total	115	7440-38-2	200.8	0.1	0.5
Beryllium, Total	117	7440-41-7	200.8	0.1	0.5
Cadmium, Total	118	7440-43-9	200.8	0.05	0.25
Chromium (hex) dissolved	119	18540-29-9	SM3500-Cr C	0.3	1.2
Chromium, Total	119	7440-47-3	200.8	0.2	1.0
Copper, Total	120	7440-50-8	200.8	0.4	2.0
Lead, Total	122	7439-92-1	200.8	0.1	0.5
Mercury, Total	123	7439-97-6	1631E	0.0002	0.0005
Nickel, Total	124	7440-02-0	200.8	0.1	0.5
Selenium, Total	125	7782-49-2	200.8	1.0	1.0
Silver, Total	126	7440-22-4	200.8	0.04	0.2
Thallium, Total	127	7440-28-0	200.8	0.09	0.36
Zinc, Total	128	7440-66-6	200.8	0.5	2.5
Cyanide, Total	121	57-12-5	335.4	5	10
Cyanide, Weak Acid Dissociable	121		SM4500-CN I	5	10

PRIORITY POLLUTANTS	PP #	CAS Number (if available)	Recommended Analytical Protocol	Detection (DL)[1] *µg/L unless specified*	Quantitation Level (QL) [2] *µg/L unless specified*
METALS, CYANIDE & TOTAL PHENOLS					
Cyanide, Free Amenable to Chlorination (Available Cyanide)	121		SM4500-CN G	5	10
Phenols, Total	65		EPA 420.1		50

PRIORITY POLLUTANTS	PP #	CAS Number (if available)	Recommended Analytical Protocol	Detection (DL)[1] *µg/L unless specified*	Quantitation Level (QL) [2] *µg/L unless specified*
ACID COMPOUNDS					
2-Chlorophenol	24	95-57-8	625	1.0	2.0
2,4-Dichlorophenol	31	120-83-2	625	0.5	1.0
2,4-Dimethylphenol	34	105-67-9	625	0.5	1.0
4,6-dinitro-o-cresol (2-methyl-4,6,-dinitrophenol)	60	534-52-1	625/1625B	2.0	4.0
2,4 dinitrophenol	59	51-28-5	625	1.5	3.0
2-Nitrophenol	57	88-75-5	625	0.5	1.0
4-Nitrophenol	58	100-02-7	625	1.0	2.0
Parachlorometa cresol (4-chloro-3-methylphenol)	22	59-50-7	625	1.0	2.0
Pentachlorophenol	64	87-86-5	625	0.5	1.0
Phenol	65	108-95-2	625	2.0	4.0
2,4,6-Trichlorophenol	21	88-06-2	625	2.0	4.0

PRIORITY POLLUTANTS	**PP #**	**CAS Number (if available)**	**Recommended Analytical Protocol**	**Detection (DL)[1] *µg/L unless specified***	**Quantitation Level (QL) [2] *µg/L unless specified***
VOLATILE COMPOUNDS					
Acrolein	2	107-02-8	624	5	10
Acrylonitrile	3	107-13-1	624	1.0	2.0
Benzene	4	71-43-2	624	1.0	2.0
Bromoform	47	75-25-2	624	1.0	2.0
Carbon tetrachloride	6	56-23-5	624/601 or SM6230B	1.0	2.0
Chlorobenzene	7	108-90-7	624	1.0	2.0
Chloroethane	16	75-00-3	624/601	1.0	2.0
2-Chloroethylvinyl Ether	19	110-75-8	624	1.0	2.0
Chloroform	23	67-66-3	624 or SM6210B	1.0	2.0
Dibromochloromethane (chlordibromomethane)	51	124-48-1	624	1.0	2.0
1,2-Dichlorobenzene	25	95-50-1	624	1.9	7.6
1,3-Dichlorobenzene	26	541-73-1	624	1.9	7.6
1,4-Dichlorobenzene	27	106-46-7	624	4.4	17.6
Dichlorobromomethane	48	75-27-4	624	1.0	2.0
1,1-Dichloroethane	13	75-34-3	624	1.0	2.0
1,2-Dichloroethane	10	107-06-2	624	1.0	2.0
1,1-Dichloroethylene	29	75-35-4	624	1.0	2.0
1,2-Dichloropropane	32	78-87-5	624	1.0	2.0
1,3-dichloropropene (mixed isomers) (1,2-dichloropropylene) [6]	33	542-75-6	624	1.0	2.0
Ethylbenzene	38	100-41-4	624	1.0	2.0
Methyl bromide (Bromomethane)	46	74-83-9	624/601	5.0	10.0
Methyl chloride (Chloromethane)	45	74-87-3	624	1.0	2.0
Methylene chloride	44	75-09-2	624	5.0	10.0
1,1,2,2-Tetrachloroethane	15	79-34-5	624	1.9	2.0
Tetrachloroethylene	85	127-18-4	624	1.0	2.0
Toluene	86	108-88-3	624	1.0	2.0
1,2-Trans-Dichloroethylene (Ethylene dichloride)	30	156-60-5	624	1.0	2.0

PRIORITY POLLUTANTS	**PP #**	**CAS Number (if available)**	**Recommended Analytical Protocol**	**Detection (DL)[1]** ***µg/L unless specified***	**Quantitation Level (QL) [2]** ***µg/L unless specified***
VOLATILE COMPOUNDS					
1,1,1-Trichloroethane	11	71-55-6	624	1.0	2.0
1,1,2-Trichloroethane	14	79-00-5	624	1.0	2.0
Trichloroethylene	87	79-01-6	624	1.0	2.0
Vinyl chloride	88	75-01-4	624/SM6200B	1.0	2.0

PRIORITY POLLUTANTS	**PP #**	**CAS Number (if available)**	**Recommended Analytical Protocol**	**Detection (DL)[1]** ***µg/L unless specified***	**Quantitation Level (QL) [2]** ***µg/L unless specified***
BASE/NEUTRAL COMPOUNDS (compounds in bold are Ecology PBTs)					
Acenaphthene	1	83-32-9	625	0.2	0.4
Acenaphthylene	77	208-96-8	625	0.3	0.6
Anthracene	78	120-12-7	625	0.3	0.6
Benzidine	5	92-87-5	625	20	40
Benzyl butyl phthalate	67	85-68-7	625	0.3	0.6
Benzo(*a*)anthracene	72	56-55-3	625	0.3	0.6
Benzo(b)fluoranthene (3,4-benzofluoranthene) [7]	74	205-99-2	610/625	0.8	1.6
Benzo(j)fluoranthene [7]		**205-82-3**	625	0.5	1.0
Benzo(k)fluoranthene (11,12-benzofluoranthene) [7]	75	207-08-9	610/625	0.8	1.6
Benzo(r,s,t)pentaphene		**189-55-9**	625	1.3	5.0
Benzo(*a*)pyrene	73	50-32-8	610/625	0.5	1.0
Benzo(*ghi*)Perylene	79	191-24-2	610/625	0.5	1.0
Bis(*2-chloroethoxy)*methane	43	111-91-1	625	5.3	21.2
Bis(*2-chloroethyl*)ether	18	111-44-4	611/625	0.3	1.0
Bis(*2-chloroisopropyl*)ether	42	39638-32-9	625	0.5	1.0
Bis(*2-ethylhexyl*)phthalate	66	117-81-7	625	0.3	1.0
4-Bromophenyl phenyl ether	41	101-55-3	625	0.3	0.5

PRIORITY POLLUTANTS	**PP #**	**CAS Number (if available)**	**Recommended Analytical Protocol**	**Detection (DL)[1] *µg/L unless specified***	**Quantitation Level (QL) [2] *µg/L unless specified***
BASE/NEUTRAL COMPOUNDS (compounds in bold are Ecology PBTs)					
2-Chloronaphthalene	20	91-58-7	625	0.3	0.6
4-Chlorophenyl phenyl ether	40	7005-72-3	625	0.3	0.5
Chrysene	76	218-01-9	610/625	0.3	0.6
Dibenzo (a,h)acridine		**226-36-8**	610M/625M	2.5	10.0
Dibenzo (a,j)acridine		**224-42-0**	610M/625M	2.5	10.0
Dibenzo(a-*h*)anthracene (1,2,5,6-dibenzanthracene)	82	53-70-3	625	0.8	1.6
Dibenzo(a,e)pyrene		192-65-4	610M/625M	2.5	10.0
Dibenzo(a,h)pyrene		189-64-0	625M	2.5	10.0
3,3-Dichlorobenzidine	28	91-94-1	605/625	2.0	14.0
Diethyl phthalate	70	84-66-2	625	1.9	7.6
Dimethyl phthalate	71	131-11-3	625	1.6	6.4
Di-n-butyl phthalate	68	84-74-2	625	0.5	1.0
2,4-dinitrotoluene	35	121-14-2	609/625	1.0	2.0
2,6-dinitrotoluene	36	606-20-2	609/625	1.0	2.0
Di-n-octyl phthalate	69	117-84-0	625	0.3	0.6
1,2-Diphenylhydrazine (*as Azobenzene*)	37	122-66-7	1625B	5.0	20
Fluoranthene	39	206-44-0	625	0.3	0.6
Fluorene	80	86-73-7	625	0.3	0.6
Hexachlorobenzene	9	118-74-1	612/625	0.3	0.6
Hexachlorobutadiene	52	87-68-3	625	0.5	1.0
Hexachlorocyclopentadiene	53	77-47-4	1625B/625	2.0	4.0
Hexachloroethane	12	67-72-1	625	0.5	1.0
Indeno(*1,2,3-cd*)Pyrene	83	193-39-5	610/625	0.5	1.0
Isophorone	54	78-59-1	625	0.5	1.0
3-Methyl cholanthrene		**56-49-5**	625	2.0	8.0
Naphthalene	55	91-20-3	625	0.4	0.75
Nitrobenzene	56	98-95-3	625	0.5	1.0
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

PRIORITY POLLUTANTS	PP #	CAS Number (if available)	Recommended Analytical Protocol	Detection (DL)[1] *µg/L unless specified*	Quantitation Level (QL)[2] *µg/L unless specified*
BASE/NEUTRAL COMPOUNDS (compounds in bold are Ecology PBTs)					
N-Nitrosodiphenylamine	62	86-30-6	625	1.0	2.0
Perylene		**198-55-0**	625	1.9	7.6
Phenanthrene	81	85-01-8	625	0.3	0.6
Pyrene	84	129-00-0	625	0.3	0.6
1,2,4-Trichlorobenzene	8	120-82-1	625	0.3	0.6

PRIORITY POLLUTANT	PP #	CAS Number (if available)	Recommended Analytical Protocol	Detection (DL)[1] *µg/L unless specified*	Quantitation Level (QL)[2] *µg/L unless specified*
DIOXIN					
2,3,7,8-Tetra-Chlorodibenzo-P-Dioxin (2,3,7,8 TCDD)	129	1746-01-6	1613B	1.3 pg/L	5 pg/L

PRIORITY POLLUTANTS	PP #	CAS Number (if available)	Recommended Analytical Protocol	Detection (DL)[1] *µg/L unless specified*	Quantitation Level (QL)[2] *µg/L unless specified*
PESTICIDES/PCBs					
Aldrin	89	309-00-2	608	0.025	0.05
alpha-BHC	102	319-84-6	608	0.025	0.05
beta-BHC	103	319-85-7	608	0.025	0.05
gamma-BHC (Lindane)	104	58-89-9	608	0.025	0.05
delta-BHC	105	319-86-8	608	0.025	0.05
Chlordane [8]	91	57-74-9	608	0.025	0.05
4,4'-DDT	92	50-29-3	608	0.025	0.05
4,4'-DDE	93	72-55-9	608	0.025	0.05
4,4' DDD	94	72-54-8	608	0.025	0.05
Dieldrin	90	60-57-1	608	0.025	0.05
alpha-Endosulfan	95	959-98-8	608	0.025	0.05

PRIORITY POLLUTANTS	PP #	CAS Number (if available)	Recommended Analytical Protocol	Detection (DL)[1] *µg/L unless specified*	Quantitation Level (QL) [2] *µg/L unless specified*
PESTICIDES/PCBs					
beta-Endosulfan	96	33213-65-9	608	0.025	0.05
Endosulfan Sulfate	97	1031-07-8	608	0.025	0.05
Endrin	98	72-20-8	608	0.025	0.05
Endrin Aldehyde	99	7421-93-4	608	0.025	0.05
Heptachlor	100	76-44-8	608	0.025	0.05
Heptachlor Epoxide	101	1024-57-3	608	0.025	0.05
PCB-1242 [9]	106	53469-21-9	608 - Modified	0.05	0.2
PCB-1254	107	11097-69-1	608 - Modified	0.05	0.2
PCB-1221	108	11104-28-2	608 - Modified	0.05	0.2
PCB-1232	109	11141-16-5	608 - Modified	0.05	0.2
PCB-1248	110	12672-29-6	608 - Modified	0.05	0.2
PCB-1260	111	11096-82-5	608 - Modified	0.05	0.2
PCB-1016 [9]	112	12674-11-2	608 - Modified	0.05	0.2
Toxaphene	113	8001-35-2	608	0.24	0.5

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, or 5) x 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).
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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.
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4. NWTPH Dx - Northwest Total Petroleum Hydrocarbons Diesel Extended Range – see http://www.ecy.wa.gov/biblio/97602.html
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5. NWTPH Gx - Northwest Total Petroleum Hydrocarbons Gasoline Extended Range – see http://www.ecy.wa.gov/biblio/97602.html

6. 1, 3-dichloroproylene (mixed isomers) You may report this parameter as two separate parameters: cis-1, 3-dichlorpropropene (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 0.025/0.050.

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