DEPARTMENT OF ECOLOGY
State of Washington

Issuance Date: June 26, 2020
Effective Date: August 1, 2020
Expiration Date: July 31, 2025

STATE RECLAIMED WATER PERMIT NUMBER ST 6206

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 Reclaimed Water Act
Chapter 90.46 Revised Code of Washington
and the
State of Washington Water Pollution Control Law
Chapter 90.48 Revised Code of Washington, as amended,

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

is authorized to use, produce, and distribute reclaimed water in accordance with the reclaimed water and general conditions which follow.

Plant Location: Martin Way Reclaimed Water Plant 6121 Martin Way East Lacey, WA 98503	Reuse Location(s): Locations identified in Reclaimed Water Condition R4.A, including: Latitude: 47.07761 N 47.036256 N Longitude:-122.77275 W -122.794222 W
Treatment Type and Reuse Classification: Membrane Bioreactor (MBR), Class A Reclaimed Water	Beneficial uses of Product Water: Groundwater recharge

Andrew Kolosseus
Southwest Region Manager
Water Quality Program
Washington State Department of Ecology

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

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R3.A.	Discharge Monitoring Report (DMR)	Quarterly	January 15, 2021
R3.A.	Discharge Monitoring Report (DMR)	Annual	January 15, 2022
R3.F.	Reporting Permit Violations	As necessary	
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RECLAIMED WATER CONDITIONS

R1. WATER QUALITY LIMITS

A. Reclaimed Water Limits

All reclaimed water distribution and activities authorized by this permit must be consistent with the terms and conditions of this permit. The distribution of reclaimed water containing any of the following constituents or parameters more frequently than, or at a concentration in excess of, that authorized by this permit constitutes a violation of the terms and conditions of this permit.

Beginning on the effective date of this permit, the Permittee is authorized to produce, distribute and/or use Class A Reclaimed Water for commercial and industrial uses, for irrigation at agronomic rates, and for groundwater recharge. The Permittee must operate the system in accordance with the permit conditions to ensure statutory requirements are met including protecting the existing and future beneficial uses of waters of the State.

Class A Reclaimed Water Limits		
Compliance Point – Reclaimed Water		
Parameter	**Average Monthly [a]**	**Average Weekly [b]**
Flow	2.0 MGD [c]	
Biochemical Oxygen Demand (BOD_5)	20 milligrams/liter (mg/L)	30 mg/L
Total Suspended Solids (TSS)	30 milligrams/liter (mg/L)	45 mg/L
Parameter	**Instantaneous Minimum**	
Dissolved Oxygen	0.2 mg/L (Dissolved Oxygen must be measurable in the effluent at all times)	
Parameter	**Average Monthly [a]**	**Sample Maximum [d]**
Turbidity	0.2 Nephelometic Turbidity Units (NTU)	0.5 NTU
Parameter	**Average Monthly [a]**	**Sample Maximum [d]**
Total Nitrogen as N [e]	10 mg/L	15 mg/L
Parameter	**7-Day Median [f]**	**Sample Maximum [d]**
Total Coliform	2.2 MPN /100 mL	23 MPN /100 mL
Parameter	**Minimum Daily**	**Maximum Daily**
pH	6.0 Standard Units	9.0 Standard Units
Compliance Point - Distribution System		
Parameter	**Minimum Daily**	
Total Chlorine Residual [g]	0.5 mg/L	

Class A Reclaimed Water Limits	
a	Average monthly limit means the highest allowable average of daily discharges over a calendar month. To calculate the discharge value to compare to the limit, you add the value of each daily discharge measured during a calendar month and divide this sum by the total number of daily discharges measured.
b	Average weekly discharge limitation 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.
c	The flow can be used for any approved use. For the Woodland Creek Groundwater Recharge Facility, the flow is limited to a flow that maintains an appropriate unsaturated zone below the infiltration facility (at least 3 feet) and does not cause a local discharge to Woodland Creek.
d	Sample maximum means that no single sample measured value may exceed the sample maximum. If a Permittee measures parameters with sample maximum limits more than once during a day it must report the maximum value on the DMR form and report all additional values in the comments or as an attachment to the WQWebDMR form. For turbidity, which is measured continuously, the Permittee must report the maximum instantaneous turbidity that is recorded for longer than 5 consecutive minutes. Durations of less than or equal to 5 minutes over the sample maximum are not permit violations.
e	Total Nitrogen is calculated as the sum of Total Kjeldahl Nitrogen (TKN) plus Nitrite and Nitrate.
f	Determine the 7-day median value using all of the bacteriological results of the last seven days of analyses (the reporting day and the previous six days).
g	A total chlorine residual of at least 0.5 mg/L must be maintained in the reclaimed water during conveyance to the use area, unless groundwater recharge is the only use. The Department of Ecology (Ecology) may waive this parameter whenever necessary to preserve the water quality for an intended beneficial use.

B. Groundwater Enforcement Limits

All discharges to ground water (both direct and indirect) and activities authorized by this permit must comply with the terms and conditions of this permit. The discharge to ground water of any of the following constituents or parameters more frequently than, or at a concentration in excess of, that authorized by this permit violates the terms and conditions of this permit.

Beginning on the effective date, the Permittee is authorized to apply Class A Reclaimed Water to the designated groundwater recharge sites via surface percolation, defined in Revised Code of Washington (RCW) 90.46.010 as follows:

“Surface Percolation refers to the controlled application of water to the ground surface or to unsaturated soil for the purpose of replenishing groundwater."

Reclaimed water may be planned for in-situ environmental benefits or for subsequent recovery and use. Ground water recharge may also be used to mitigate impacts from other water withdrawals.

Groundwater Enforcement Limits [a]	
Discharges are subject to the following limits. The point of compliance is at monitoring wells MW1, MW5, MW6, MW8, MW9, and MW11 at the Hawks Prairie Ponds and Recharge Basins and at WC11S, and WC12 at the Woodland Creek Groundwater Recharge Facility. Two consecutive exceedances of an enforcement limit for the same parameter at the same well is a violation.	
Parameter	**Sample Maximum [b]**
Nitrate	10 mg/L as N
Arsenic	10 µg/L
Cadmium	5 µg/L
Chromium	50 µg/L
Fluoride	2 mg/L
Mercury	2 µg/L
Nickel	100 µg/L
Total Trihalomethanes	0.08 mg/L
Total Dissolved Solids	500 mg/L
Chloride	250 mg/L
Sulfate	250 mg/
Copper	1,000 µg/L
Lead	15 µg/L
Manganese	50 µg/L
Silver	50 µg/L
Zinc	5,000 µg/L
[a] Two consecutive exceedances of an enforcement limit constitutes a violation.	
[b] The sample maximum is the highest allowable concentration for any sample as measured in the ground water at the top of the uppermost aquifer beneath or down gradient of the surface percolation site. The limits in this table represent the maximum numeric value for a constituent listed in either chapter 246-290 Washington Administrative Code (WAC) or 173-200 WAC. If a finding is made that antidegradation must be applied to protect the beneficial use of a groundwater, lower or more protective limits may be required.	

R2. MONITORING REQUIREMENTS

A. Class A Reclaimed Water Monitoring

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

Class A Reclaimed Water Monitoring			
Parameter	**Units**	**Minimum Sampling Frequency**	**Sample Type**
(1) Reclaimed Water System Influent (Raw Wastewater)			
Flow	mgd	Continuous [a]	Metered
BOD_5	mg/L	3/Week	24-Hour Composite [b]
TSS	mg/L	3/Week	24-Hour Composite [b]
pH	Standard Units	Daily	Grab [c]
Total Nitrogen (as N)	mg/L	1/week	24-Hour Composite [b]
Parameter	**Units**	**Minimum Sampling Frequency**	**Sample Type**
(2) Final Class A Reclaimed Water			
Flow	mgd	Continuous [a]	Metered
BOD_5	mg/L	3/Week	24-Hour Composite [b]
TSS	mg/L	Daily	24-Hour Composite [b]
pH	Standard Units	Daily	Grab [c]
Dissolved Oxygen	mg/L	Daily	Grab [c]
Temperature	°Celsius	Daily	Grab [c]
Turbidity [d]	NTU	Continuous	Metered/ Recorded
Total Nitrogen (as N)	mg/L	Weekly	24-Hour Composite [b]
Total Coliform [e]	MPN/100 mL	Daily	Grab [c]
Total Chlorine Residual	mg/L	Daily	Grab [c]
Total Phosphorus	mg/L as P	Quarterly[f] for the First 2 Years	24-Hour Composite [b]

Class A Reclaimed Water Monitoring			
Ortho-Phosphate	mg/L as P	Quarterly[f] for the First 2 Years	24-Hour Composite [b]
Total Organic Carbon (TOC)	mg/L	Quarterly[f] for the First 2 Years	24-Hour Composite [b]
Total Kjeldahl Nitrogen (TKN)	mg/L as N	Quarterly[f] for the First 2 Years	24-Hour Composite [b]
Total Ammonia	mg/L as N	Quarterly[f] for the First 2 Years	24-Hour Composite [b]
Nitrate + Nitrite Nitrogen	mg/L as N	Quarterly[f] for the First 2 Years	24-Hour Composite [b]
Parameter	**Units**	**Minimum Sampling Frequency**	**Sample Type**
(3) Permit Renewal Application Requirements – Final Class A Reclaimed Water			
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.			
Cyanide	µg/L	Quarterly [f]	Grab [c]
Total Phenolic Compounds	µg/L	Quarterly [f]	Grab [c]
Priority Pollutants (PP) – Total Metals	µg/L; nanograms (ng/L) for mercury	Quarterly [f]	24-Hour Composite [b]
PP – Volatile Organic Compounds	µg/L	Once per year [g]	Grab [c]
PP – Acid-extractable Compounds	µg/L	Once per year [g]	Grab or Composite as Appropriate
PP – Base-neutral Compounds	µg/L	Once per year [g]	Grab or Composite as Appropriate
(4) Goose Pond			
Reclaimed Water Flow to Recharge Area	gpd	Continuous [a]	Metered
Water Surface Elevation of Goose Pond	Feet	1/week While Recharge Area is in Use	Measurement
Total Phosphorus	mg/L as P	Quarterly[f] for the First 2 Years	Grab [c]

Class A Reclaimed Water Monitoring			
Ortho-Phosphate	mg/L as P	Quarterly[f] for the First 2 Years	Grab [c]
Total Organic Carbon (TOC)	mg/L	Quarterly[f] for the First 2 Years	Grab [c]
Total Kjeldahl Nitrogen (TKN)	mg/L as N	Quarterly[f] for the First 2 Years	Grab [c]
Total Ammonia	mg/L as N	Quarterly[f] for the First 2 Years	Grab [c]
Nitrate + Nitrite Nitrogen	mg/L as N	Quarterly[f] for the First 2 Years	Grab [c]
Dissolved Oxygen	mg/L	Quarterly[f] for the First 2 Years	Grab [c]
pH	SU	Quarterly[f] for the First 2 Years	Grab [c]
Total Coliform	MPN/100 mL	Quarterly[f] for the First 2 Years	Grab [c]

a	Continuous means uninterrupted except for brief lengths of time for calibration, for power failure, or for unanticipated equipment repair or maintenance.
b	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.
c	Grab means an individual sample collected over a 15 minute, or less, period. Grab samples must be taken at the same time daily when water characteristics are the most demanding on the treatment facilities and disinfection processes.
d	Turbidity must be measured by a continuous recording instrument with sample frequencies between 6 and 90 seconds, with a default setting of 15 second intervals. Report the sample maximum turbidity for each day as the highest turbidity value during the day that lasts longer than five minutes. In addition, report the average turbidity value for the day by using the programming capability of the continuous meter to calculate the average value for the day.
e	Report a daily numerical value for total coliforms following the procedures in Ecology's *Information Manual for Wastewater Treatment Plant Operators*, Publication Number 04-10-020 available at: https://fortress.wa.gov/ecy/publications/SummaryPages/0410020.html. Do not report a result as Too Numerous To Count (TNTC). The Permittee must also calculate and report a daily value for the seven-day median as described in Reclaimed Water Condition R1.
f	Quarterly sampling periods are January through March, April through June, July through September, and October through December, **starting October 1, 2020**.
g	Once per year is defined as January to December, **starting January 1, 2021**.

B. Groundwater Monitoring

The Permittee must monitor groundwater at monitoring wells MW1, MW5, MW6, MW8, MW9, and MW11 at the Hawks Prairie Ponds and Recharge Basins and WC10D, WC11S, and WC12 at the Woodland Creek Groundwater Recharge Facility, in accordance with the following schedule and the requirements specified in Appendix A. WC11M can be substituted for WC11S during sampling periods when WC11S is dry.

Parameter	Units & Speciation	Sampling Frequency	Sample Type
Measured Depth to Groundwater	Feet (nearest 0.01 ft)	Quarterly [a]	Field Measurement
Temperature	Degrees Celsius	Quarterly [a]	Field Measurement
Dissolved oxygen	mg/L	Quarterly [a]	Field Measurement
pH	Standard Units	Quarterly [a]	Field Measurement
Conductivity	Micromho/cm	Quarterly [a]	Field Measurement
Total Coliform [b]	MPN/100 mL	Quarterly [a]	Grab
Total Dissolved Solids	mg/L	Quarterly [a]	Grab
Nitrate Nitrogen	mg/L as N	Quarterly [a]	Grab
Nitrite Nitrogen	mg/L	Quarterly [a]	Grab
Total Kjeldahl Nitrogen (TKN)	mg/L as N	Quarterly [a]	Grab
Chloride	mg/L	Quarterly [a]	Grab
Total Trihalomethanes (TTHM)	mg/L	Quarterly [a]	Grab
Fluoride	mg/L	Yearly [c]	Grab
Sulfate	mg/L	Yearly [c]	Grab
Calcium	mg/L	Yearly [c]	Grab
Potassium	mg/L	Yearly [c]	Grab
Magnesium	mg/L	Yearly [c]	Grab
Sodium	mg/L	Yearly [c]	Grab
Bicarbonate	mg/L	Yearly [c]	Grab
Carbonate	mg/L	Yearly [c]	Grab
Total Arsenic	µg/L	Yearly [c]	Grab
Total Cadmium	µg/L	Yearly [c]	Grab

Parameter	Units & Speciation	Sampling Frequency	Sample Type
Total Chromium	µg/L	Yearly [c]	Grab
Total Copper	µg/L	Yearly [c]	Grab
Total Lead	µg/L	Yearly [c]	Grab
Total Manganese	µg/L	Yearly [c]	Grab
Total Mercury	µg/L	Yearly [c]	Grab
Total Nickel	µg/L	Yearly [c]	Grab
Total Silver	µg/L	Yearly [c]	Grab
Total Zinc	µg/L	Yearly [c]	Grab

a	Quarterly sampling periods are January through March, April through June, July through September, and October through December. The Permittee must begin quarterly monitoring for the quarter **starting October 1, 2020**.
b	Report a numerical value for total coliforms following the procedures in Ecology's Information Manual for Wastewater Treatment Plant Operators, Publication Number 04-10-020 available at: https://fortress.wa.gov/ecy/publications/SummaryPages/0410020.html. Do not report a result as TNTC.
c	Yearly is defined as January to December, **starting January 1, 2021**.

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, including representative sampling of any unusual discharge or discharge condition, including bypasses, upsets, and maintenance-related conditions affecting effluent quality.

Groundwater sampling must conform to the latest protocols in the *Implementation Guidance for the Ground Water Quality Standards*, [the Department of Ecology (Ecology) 1996, revised October 2005].

Sampling and analytical methods used to meet the water and wastewater monitoring requirements specified in this permit must conform to the latest revision of the following rules and documents unless otherwise specified in this permit or approved in writing by Ecology.

- Guidelines Establishing Test Procedures for the Analysis of Pollutants contained in 40 Code of Federal Regulation (CFR) Part 136
- Standard Methods for the Examination of Water and Wastewater (APHA)

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 CHECK continuous chlorine measurement instruments using an appropriate method.

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

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

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

7. 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.

R3. REPORTING AND RECORDKEEPING REQUIREMENTS

The Permittee must monitor and report in accordance with the following conditions. The falsification of information submitted to Ecology constitutes 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 Reclaimed Water Condition R2 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: https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Water-quality-permits-guidance/WQWebPortal-guidance.

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. Submit **quarterly DMRs**, unless otherwise specified in the permit, by the 15th day of the month following the monitoring period. Quarterly sampling periods are January through March, April through June, July through September, and October through December, **starting October 1, 2020**.

    c. Submit **annual DMRs**, unless otherwise specified in the permit, by January 15 for the previous calendar year. The annual sampling period is the calendar year, **starting January 1, 2021**.

B. Permit Submittals and Schedules

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

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

Water Quality Permit Coordinator
Department of Ecology
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.

The Permittee must retain all records pertaining to the monitoring of sludge for a minimum of five years.

The Permittee must retain all records pertaining to the annual cross-connection control report completed by the water purveyor(s) that provides potable water to any reclaimed water use area for a minimum of three years. This report must identify all cross-connection control assemblies tested and any cross-connection incident that occurred relating to the reclaimed water system. This report only applies to those control assemblies under the control of the Permittee.

The Permittee must retain all records pertaining to the Reclaimed Water Use Plan for a minimum of three years and must retain the plan onsite.

D. Recording of Results

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

1. The date, exact place, and time of sampling

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 Reclaimed Water Condition R2 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 Reclaimed Water Condition R2.

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 (at the number listed below), all:

      - Failures of the disinfection system
      - Collection system overflows
      - Plant bypasses resulting in a discharge
      - Any other failures of the sewage system (pipe breaks, etc)
      - Overflows or leaks of transmission or irrigation pipelines that discharge to a waterbody used as a source of drinking or irrigation water.

      Southwest Regional Office 360-407-6300

   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. The Permittee must report:

      i. Any noncompliance that may endanger health or the environment, unless previously reported under immediate reporting requirements.

      ii. Any unanticipated bypass that causes an exceedance of an effluent limit in the permit (See Part R4.D., “Bypass Procedures”).

      iii. Any upset that causes an exceedance of an effluent limit in the permit. 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.

iv. Any violation of a maximum daily or instantaneous maximum discharge limit for any of the pollutants in Section R1.A of this permit.

v. 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:

i. A description of the noncompliance and its cause.

ii. Maps, drawings, aerial photographs, or pictures to show the location and cause(s) of the non-compliance.

iii. The period of noncompliance, including exact dates and times.

iv. The estimated time the Permittee expects the noncompliance to continue if not yet corrected.

v. Steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.

vi. 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 RCW 90.56.280 and chapter 173-303-145. You can obtain further instructions at the following website: https://ecology.wa.gov/About-us/Get-involved/Report-an-environmental-issue/Report-a-spill.

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.

R4. CLASS A RECLAIMED WATER DISTRIBUTION AND USE

A. Authorized Uses and Locations

Beginning on the effective date of this permit, the Permittee is authorized to distribute water reclaimed 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, or the use of reclaimed water other than for authorized uses or at authorized locations listed in an Ecology approved reclaimed water reuse plan is a violation of the terms and conditions of this permit.

The Permittee may produce and distribute Class A Reclaimed Water for the irrigation, commercial, and industrial uses at the locations listed in the table below and at new locations as described in R4.C.

Reclaimed Water Uses and Locations		
Customer	**Use**	**Location**
LOTT Clean Water Alliance	Groundwater Recharge	Hawks Prairie Ponds & Recharge Basins 47.07761 N -122.77275 W
Cities of Lacey & Olympia	Groundwater Recharge	Woodland Creek Groundwater Recharge Facility 47.036256 N -122.794222 W

B. Authorization for New Non-Potable Uses of Reclaimed Water

The Permittee may provide reclaimed water for all irrigation, and commercial and industrial uses as listed in Chapter 173-219 WAC at additional locations not listed in R4.A. Crop irrigation uses are allowed and include irrigation of both food and non-food crops.

The Permittee must document new locations for irrigation, and commercial and industrial use sites in the Reclaimed Water Use Summary Plan required by this permit. In accordance with the terms and conditions of this permit, the Permittee must meet the following conditions:

1. Beneficial use areas and requirements for use must comply with Chapter 173-219 WAC. The class of reclaimed water provided must meet or exceed the minimum requirements for the proposed use. Irrigation uses must not exceed agronomic rates of application.

2. The reclaimed water must meet all applicable requirements of this permit for the approved class of reclaimed water, including source control, treatment, water quality limits, monitoring, reporting, record keeping, operation and maintenance, distribution, and use.

3. The Permittee must list the new use areas in the next annual Reclaimed Water Use Summary Plan and submit a copy of the revised plan to Ecology as described in Reclaimed Water condition R4.C.

4. The Permittee must submit to Ecology the *Sale and Distribution of Reclaimed Water Agreement* (if applicable) which is the contract between the permittee and the water purveyor and/or the *Service and Use Area Agreement* which is the contract between the permittee and the end user and/or the purveyor and the end user.

Groundwater recharge at new locations, streamflow augmentation, and discharges to wetlands as beneficial uses are not authorized by this permit. A new "type" of use (i.e. groundwater recharge, streamflow augmentation, discharge to wetlands, etc.) will require the approval of an engineering report or amendments to the existing engineering report and reopening of this permit for review and public comment prior to implementation of the new type of use.

C. Reclaimed Water Use Plan

If the Permittee develops any uses other than those listed in R4.A, then the Permittee must prepare a Reclaimed Water Use Plan, which contains a summary description of the proposed reclaimed water reuse and the distribution system. The Permittee must prepare or update the Plan any year new uses or users are added to the distribution system. The plan must be submitted to Ecology by January 31st the year after any year in which a new use is put in service. The Permittee must submit any plan revisions to Ecology. The Plan must contain, but not be limited to, the following:

1. Description of the Reuse Distribution System

2. Identification of Uses, Users, Purveyors, and Location of Reuse Sites

3. An evaluation of reuse sites to include at a minimum estimated volume of reclaimed water use at each site, means of application, and purpose of application (e.g., irrigation). In addition to the above the evaluation for reclaimed water to be used for irrigation or surface percolation uses must include: the application rates, water balance, expected agronomic uptake, potential to impact ground water or surface water at the site, background water quality and hydrogeological information necessary to evaluate potential water quality impacts.

4. Cross-Connection Control Identification

D. Bypass Prohibited

1. Bypassing of untreated or partially treated wastewater from the reclaimed water plant or any intermediate unit processes to the distribution system or point of use is strictly prohibited.

2. All reclaimed water being distributed for beneficial use must meet Class A requirements at all times. The Permittee must retain water not meeting Class A reclaimed water standards for additional treatment by diversion to a bypass storage structure or discharge back to the sewer system or headworks for additional treatment.

3. The Permittee must notify Ecology by telephone within 24 hours of any discharge not meeting Class A entering the distribution system. The Permittee must not discharge substandard wastewater to the reclaimed water use areas.

E. Use Area Responsibilities

1. The Permittee must develop general language, symbols, and colors to be used for notification signs and have it approved by Ecology. The signs must be used in all reclaimed water use areas, consistent with Chapter 173-219 WAC.

2. All reclaimed water valves, storage facilities, and outlets must be tagged or labeled to warn the public or employees that the water is not intended for drinking. The signage or advisory notification must be colored purple with white or black lettering.

3. Reclaimed Water use, including runoff and spray drift must be confined to the designated and approved use area.

4. Precautions must be taken to assure that reclaimed water will not be sprayed on people or any facility or area not designated for reuse, including but not limited to buildings, passing vehicles, and drinking water fountains.

5. There must be no hose bibs on reclaimed irrigation lines unless approved by Ecology.

6. Where the reclaimed water production, distribution and use areas are under direct control of the Permittee, the Permittee must maintain control and be responsible

for all facilities and activities inherent to the production, distribution and use of the reclaimed water. The Permittee must ensure that the reuse system operates as approved by Ecology.

7. Tank trucks and other equipment used to distribute reclaimed water must be clearly identified with advisory signs. Tank trucks used to transport reclaimed water must not be used to transport potable water that is used for drinking or other potable purposes, unless they have been cleaned and disinfected to the satisfaction of the potable water purveyor, and the tank truck is contracted to or operated by an approved public water supplier. Methods for truck filling shall be done so that cross connection problems do not arise. Tank trucks used to transport reclaimed water must be inspected and approved for such use prior to transporting reclaimed water. A procedure must be in place that documents the above requirements.

8. The Permittee must assure that all customers or authorized personnel using reclaimed water have completed training in the requirements for appropriate use of the water, including signage, cross connection control requirements, public health, and environmental protection.

F. Sale and Distribution Agreements

Where the reclaimed water distribution system or additional treatment system to maintain reclaimed water quality is not under direct control of the Permittee:

1. The entity that provides additional treatment, distributes, owns, or otherwise maintains control over the reclaimed water use area is responsible for reuse facilities and activities inherent to the distribution and use of the reclaimed water to ensure that the system operates as approved by Ecology in accordance with this permit.

2. A binding sale and distribution agreement among the parties involved is required to ensure that distribution, operation, maintenance, and monitoring meet all requirements of Ecology. The sale and distribution agreement must be consistent with the requirements of Chapter 173-219 WAC. A standard sale and distribution agreement must be reviewed and approved by Ecology prior to implementation. A copy of each site-specific sale and distribution agreement must be provided to Ecology 60 days prior to use.

3. The sale and distribution agreements must provide the Permittee with authority to terminate service of reclaimed water to a customer violating Chapter 173-219 WAC and restrictions outlined in the sale and distribution agreement.

4. The Permittee must maintain all sale and distribution agreements for the duration of the permit. The Permittee must inform Ecology in writing of any proposed changes to the approved, standard sale, and distribution agreement.

G. Reclaimed Water Ordinance

The Permittee or contributing jurisdictions must complete local ordinances to include policies and procedures for the distribution and delivery of reclaimed water. The ordinances must provide the Permittee or contributing jurisdictions with the authority to

terminate service of reclaimed water from any customer violating Chapter 173-219 WAC and restrictions outlined in the sale and distribution agreement.

H. Revocation of Authorization

Ecology may revoke authorization to provide service if the Permittee fails to comply with any requirement in this permit. Ecology will base its determination to revoke authorization 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 will notify the Permittee in writing and provide a reasonable opportunity and time frame to correct the noncompliance.

R5. FACILITY LOADING

A. Design Criteria

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

Maximum Month Design Flow (MMDF)	2 MGD

B. 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.

C. 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 reclaimed water treatment plant is proposed which:

   a. Would interfere with the operation of, or exceed the design capacity of, any portion of the reclaimed water 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 Reclaimed Water 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)].

R6. OPERATION AND MAINTENANCE (O&M)

The Permittee must, at all times, properly operate and maintain all facilities or 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

An operator certified for at least a Class 4 plant by the state of Washington must be in responsible charge of the LOTT treatment plants and the day-to-day operation of the reclaimed water treatment plant. An operator certified for at least a Class 3 plant must be in charge during all regularly scheduled shifts.

B. O&M Program

The Permittee must:

1. Institute an adequate operation and maintenance program for the entire reclaimed water system including:

    a. Reliable operating condition of all equipment necessary for treatment, distribution and use of the reclaimed water.

    b. For uses other than groundwater recharge, maintenance of a 0.5 mg/L total chlorine residual in the reclaimed water during conveyance from the treatment plant to the use area(s), unless waived by Ecology. Maintenance of a chlorine residual is not required in reclaimed water impoundments and storage ponds.

2. Keep maintenance records on all major electrical and mechanical components of the treatment plant, as well as the sewage/wastewater collection system, pumping stations, distribution system, and beneficial use areas. 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. 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 reclaimed water treatment plant. Adequate safeguards include, but are not limited to alternate power sources, standby generator(s), or retention or return to sewer of inadequately treated wastes. The Permittee must maintain highest reliability class at the reclaimed water treatment plant as described in Chapter 173-219 WAC which requires power sufficient to operate all vital components and critical lighting and ventilation during peak flow conditions. Each of the critical reclamation treatment unit

processes of membrane filtration and disinfection must be provided with one of the following reliability features to assure that inadequately treated reclaimed water 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 must 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 must be either independent of the normal power supply or provided with a standby power supply.

D. Prevent Connection of Inflow

The Permittee and contributing jurisdictions must not allow the connection of inflow (roof drains, foundation drains, etc.) to the sanitary sewer system.

E. Bypass Procedures

This permit prohibits a bypass, which is the intentional diversion of waste streams from any portion of a treatment facility. Bypass of the treatment facility to distribution and use areas is prohibited. Diverting flows from the Martin Way plant to the Budd Inlet treatment plant does not constitute a bypass. The Permittee must immediately notify Ecology of any spill, overflow, or bypass from any portion of the collection system, treatment facilities, distribution or use areas as required in Reclaimed Water Condition R3.F(i). In addition to the above, 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 10 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 Reclaimed Water Condition R3.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.

F. O&M Manual

1. O&M Manual requirements

The Permittee must:

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

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

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

d. Keep the approved O&M Manual 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 Version and Chapter 173-219 WAC. The O&M Manual must include:

a. Emergency procedures for plant shutdown and cleanup in event of wastewater or reclaimed water system upset or failure, or collection/distribution system leak.

b. System maintenance procedures that contribute to the generation of wastewater or reclaimed water.

c. Reporting protocols for submitting reports to Ecology to comply with the reporting requirements in this permit.

d. 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 or reclaimed water system (for example, defining maximum allowable discharge rate for draining a tank, blocking all floor drains before beginning the overhaul of a stationary engine.)

e. Treatment plant process control monitoring schedule.

f. Sampling protocols and procedures for compliance with the sampling and reporting requirements in the reclaimed water permit.

g. Procedures to ensure that off spec reclaimed water (quality exceeds permit limits) is re-treated such that it meets all reclaimed water permit limits or is discharged through an approved NPDES outfall.

h. Procedures to decontaminate reclaimed water piping and other appurtenances prior to returning the facilities to reclaimed water service following incidents when off spec reclaimed water is produced.

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

j. Distribution system operational controls and procedures.

k. Protocols and procedures for ground water monitoring network, sampling and testing.

G. Groundwater Recharge Best Management Practices

The Permittee must:

1. Operate infiltration sites to protect the existing and future beneficial uses of the groundwater, and not cause a violation of the groundwater standards.

2. Not allow recharge practices to result in surface runoff of reclaimed water to any surface waters of the state or to any land not owned by or under its control.

3. Use recognized good practices, and all available and reasonable procedures to control odors from the recharge system.

4. Implement measures to reduce odors to a reasonable minimum when notified by Ecology.

5. Not apply reclaimed water to the infiltration basins in quantities that:

   a. Significantly reduce or destroy the long-term infiltration rate of the soil.

   b. Would cause long-term anaerobic conditions in the soil.

   c. Would alter groundwater quality in amounts that would affect current and future beneficial uses.

6. Immediately inform Ecology in writing of any proposed changes to existing use agreements.

7. Install and maintain signs and fencing to prevent unauthorized access into any surface recharge site.

R7. 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.

R8. APPLICATION FOR PERMIT RENEWAL OR MODIFICATION FOR FACILITY CHANGES

The Permittee must submit an application for renewal of this permit by **February 1, 2025**.

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.

GENERAL CONDITIONS

G1. SIGNATORY REQUIREMENTS

All applications, reports, or information submitted to Ecology must be signed as follows:

A. All permit applications must be signed by either a principal executive officer or ranking elected official.

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 the person described above and is submitted to Ecology at the time of authorization, and

2. The authorization specifies 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 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 ENTRY

Representatives of Ecology have the right to enter at all reasonable times in or upon any property, public or private for the purpose of inspecting and investigating conditions relating to the pollution or the possible pollution of any waters of the state. Reasonable times include normal business hours; hours during which production, treatment, or discharge occurs; or times when Ecology suspects a violation requiring immediate inspection. Representatives of Ecology must be allowed to have access to, and copy at reasonable cost, any records required to be kept under terms and conditions of the permit; to inspect any monitoring equipment or method required in the permit; and to sample the discharge, waste treatment processes, or internal waste streams.

G3. PERMIT ACTIONS

This permit is subject to modification, suspension, or termination, in whole or in part by Ecology for any of the following causes:

A. Violation of any permit term or condition;

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

C. A material change in quantity or type of waste disposal;

D. A material change in the condition of the waters of the state; or

E. Nonpayment of fees assessed pursuant to RCW 90.48.465.

Ecology may also modify this permit, including the schedule of compliance or other conditions, if it determines good and valid cause exists, including promulgation or revisions of regulations or new information.

G4. REPORTING A CAUSE FOR MODIFICATION

The Permittee must submit a new application at least 180 days before it wants to discharge more of any pollutant, a new pollutant, or more flow than allowed under this permit. The Permittee should use the Reclaimed Waste Permit application, and submit required plans at the same time. Required plans include an Engineering Report, Plans and Specifications, and an O&M Manual, (see Chapter 173-240 WAC). Ecology may waive these plan requirements for small changes, so contact Ecology if they do not appear necessary. The Permittee must continue to comply with the existing permit until it is modified or reissued. Submitting a notice of dangerous waste discharge (to comply with Pretreatment or Dangerous Waste rules) triggers this requirement as well.

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 should be submitted at least 180 days prior to the planned start of construction. 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

This permit is automatically transferred to a new owner or operator if:

A. A written agreement between the old and new owner or operator containing a specific date for transfer of permit responsibility, coverage, and liability is submitted to Ecology;

B. A copy of the permit is provided to the new owner and;

C. Ecology does not notify the Permittee of the need to modify the permit.

Unless this permit is automatically transferred according to Section A above, this permit may be transferred only if it is modified to identify the new Permittee and to incorporate such other requirements as determined necessary by Ecology.

G8. PAYMENT OF FEES

The Permittee must submit payment of fees associated with this permit as assessed by Ecology. Ecology may revoke this permit if the permit fees established under Chapter 173-224 WAC are not paid.

G9. PENALTIES FOR VIOLATING PERMIT CONDITIONS

Any person who is found guilty of willfully violating the terms and conditions of this permit is 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 at 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 incurs, 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 considered a separate and distinct violation.

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. DUTY TO COMPLY

The Permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of chapter 90.48 RCW and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.

G12. 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 Environmental Protection Agency (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
Color		SM2120 B/C/E		10 color units

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
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

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					
1,2-Trans-Dichloroethylene (Ethylene dichloride)	30	156-60-5	624	1.0	2.0
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

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)					
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
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

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)					
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
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

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					
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
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).

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

4. NWTPH Dx - Northwest Total Petroleum Hydrocarbons Diesel Extended Range – see http://www.ecy.wa.gov/biblio/97602.html

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.

FACT SHEET FOR LOTT CLEAN WATER ALLIANCE
MARTIN WAY RECLAIMED WATER PLANT
STATE RECLAIMED WATER PERMIT ST 6206

Purpose of this Fact Sheet

This fact sheet explains and documents the decisions the Department of Ecology (Ecology) made in drafting the proposed State Reclaimed Water permit for the LOTT Clean Water Alliance Martin Way Reclaimed Water Plant that will allow the beneficial use of reclaimed water to recharge groundwater at LOTT's Hawks Prairie Ponds and Recharge Basins and at the Woodland Creek Groundwater Recharge Facility, which is owned by the cities of Lacey and Olympia and operated by the city of Lacey.

State law requires any reclaimed water facility to obtain a permit before implementing a beneficial use that may impact waters of the state, which includes groundwater.

Ecology makes the draft permit and fact sheet available for public review and comment at least 30 days before it issues the final permit to the facility operator. Copies of the fact sheet and draft permit for the LOTT Clean Water Alliance Martin Way Reclaimed Water Plant, State Reclaimed Water Permit ST 6206, are available for public review and comment from May 9, 2018, until the close of business June 8, 2018. For more details on preparing and filing comments about these documents, please see **Appendix A - Public Involvement Information**.

The LOTT Clean Water Alliance and the cities of Lacey and Olympia have reviewed the draft permit and fact sheet for factual accuracy. Ecology corrected any errors or omissions regarding the facility's location, history, type and rate of reclaimed water production, recharge area(s), or receiving water prior to publishing this draft fact sheet for public notice.

After the public comment period closes, Ecology will summarize substantive comments and our responses to them. Ecology will include our summary and responses to comments to this fact sheet as **Appendix D - Response to Comments**, and publish it when we issue the final State Reclaimed Water permit. Ecology generally will not revise the rest of the fact sheet. The full document will become part of the legal history contained in the facility's permit file.

Summary

LOTT Clean Water Alliance uses reclaimed water for beneficial groundwater recharge at the Hawks Prairie Ponds and Recharge Basins. Ecology issued the previous permit for this facility on October 1, 2011, and modified it on July 29, 2013, to include groundwater recharge at the Woodland Creek Groundwater Recharge Facility. The Woodland Creek Groundwater Recharge Facility functions as mitigation for new and transferred municipal water rights for the cities of Lacey and Olympia. The facility was constructed on property owned by the city of Lacey. The facility itself is jointly owned by the cities of Lacey and Olympia. Lacey operates the facility, while Olympia shares the cost.

Reclaimed water quality limits for Biochemical Oxygen Demand (BOD_5), Total Suspended Solids (TSS), Turbidity, Total Coliform, and pH remain the same from the permit issued in 2011. The permit includes new monitoring requirements for Goose Pond.

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I. INTRODUCTION

The Reclaimed Water Act, chapter 90.46 Revised Code of Washington (RCW), authorized the development of Water Reclamation and Reuse Standards for the beneficial use of reclaimed water. The Departments of Health (DOH) and Ecology (Ecology) completed these standards in 1997. Ecology then adopted the Reclaimed Water Rule, chapter 173-219 WAC, in January 2018.

RCW 90.46.220 and WAC 173-219-070 requires any person proposing to generate any type of reclaimed water for a use regulated under this chapter to obtain a permit from the lead agency (either Ecology or DOH). The permitted facility may then distribute and use the water subject to the provisions in the permit governing the location, rate, water quality and purposes of use. RCW 90.46.030 states that DOH may issue a permit for industrial and commercial uses of reclaimed water and that the permits will govern the location, rate, water quality and purposes of use. RCW 90.46.240 requires the submittal and approval by the lead agency of feasibility studies, planning documents, engineering reports, and plans and specifications for the construction of reclaimed water facilities.

All reclaimed water permits issued by Ecology must specify conditions demonstrating that the facility has adequately and reliably treated its wastewater to meet the requirements in Chapter 173-219 WAC appropriate for the use. In addition to meeting the water quality limits, the Reclaimed Water WAC requires specific treatment and disinfection requirements beyond those of most conventional wastewater treatment facilities. The Reclaimed Water WAC also require automated alarms, redundancy of treatment units, emergency storage, stringent operator training requirements and public notification of reclaimed water use.

In addition to the standards adopted in WAC 173-219, reclaimed water produced for beneficial uses of groundwater recharge, surface water augmentation, or wetland enhancement must also comply with rules adopted under the Water Pollution Control Act, chapter 90.48 RCW. These rules give Ecology additional authority that applies to reclaimed water permits:

- State waste discharge program [chapter 173-216 Washington Administrative Code (WAC)]
- Water quality standards for groundwaters of the state of Washington (chapter 173-200 WAC)
- Discharge standards and effluent limits for domestic wastewater facilities (chapter 173–221 WAC)
- Submission of plans and reports for construction of wastewater facilities (chapter 173-240 WAC)

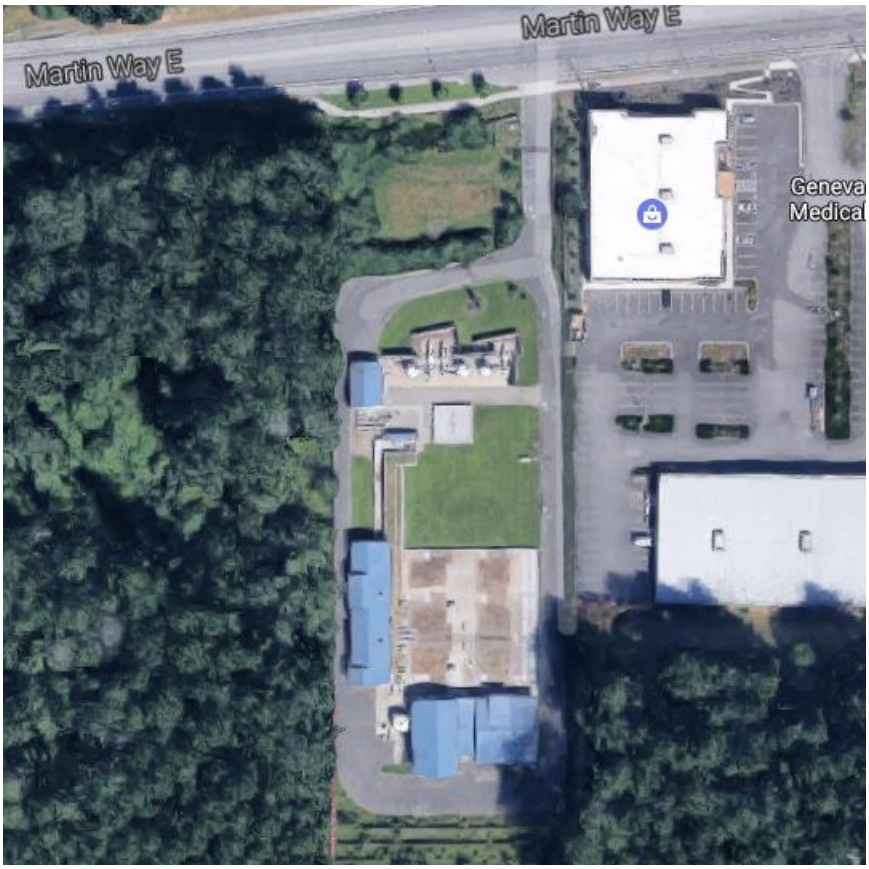
Under the State Reclaimed Water permit program and in response to a complete and accepted permit application, Ecology must prepare a draft permit and accompanying fact sheet, and make it available for public review before final issuance. Ecology must also publish an announcement (public notice) telling people where they can read the draft permit, and where to send their comments, during a period of 30 days. (See **Appendix A-Public Involvement Information** for more detail about the public notice and comment procedures). After the public comment period ends, Ecology may make changes to the draft State Reclaimed Water permit in response to comment(s). Ecology will summarize the responses to comments and any changes to the permit in **Appendix D**.

II. BACKGROUND INFORMATION

Table 1 General Facility Information

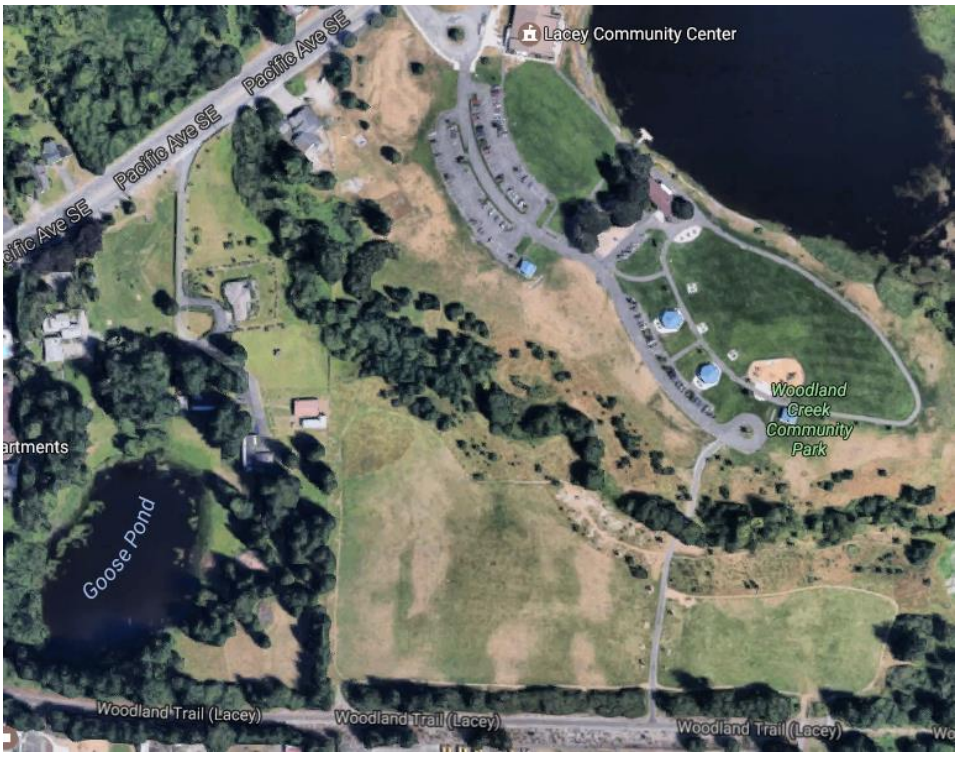
Facility Information	
Applicant	LOTT Clean Water Alliance 500 Adams Street Northeast Olympia, WA 98501
Facility Name and Address	Martin Way Reclaimed Water Plant 6121 Martin Way East Lacey, WA 98516-5547
Contact at Facility	Name: Terri Prather Telephone #: 360-528-5724
Responsible Official	Name: Michael Strub, P.E. Title: Executive Director Address: 500 Adams Street Northeast Olympia, WA Telephone #: 360-664-2333
Type of Treatment	Membrane Bioreactor (MBR), Class A Reclaimed Water
Facility Location (NAD83/WGS84 Reference Datum)	Latitude: 47.0493 N Longitude: -122.80174 W
Reuse Locations	Latitude: 47.07761 N 47.036256 N Longitude: -122.77275 W -122.794222 W
Permit Status	
Renewal Date of Previous Permit	October 1, 2011
Application for Permit Renewal Submittal Date	March 1, 2016
Date of Ecology Acceptance of Application	March 24, 2016
Inspection Status	
Date of Last Non-sampling Inspection	November 3, 2016

Figure 1 Facility Location Maps – Martin Way Reclaimed Water Plant



Hawks Prairie Ponds and Recharge Basins

Woodland Creek Groundwater Recharge Facility



A. Facility Description

History

The LOTT Clean Water Alliance's treatment facilities are a regional system serving portions of the cities of Lacey, Olympia, Tumwater, and Thurston County. The Budd Inlet treatment plant was the first treatment facility to serve the area. The Budd Inlet facility provides advanced treatment, more specifically nitrogen removal, with discharge to Budd Inlet. Reclaimed water production was added to the Budd Inlet facility in 2004. The Budd Inlet plant is covered by National Pollutant Discharge Elimination System (NPDES) permit WA0037061. LOTT plans to add satellite reuse treatment plants to the system as needed to handle growth, as discharge into Budd Inlet is limited. The facility covered by this permit and fact sheet, the Martin Way Reclaimed Water Plant was the first satellite plant added to the system. It came on-line in 2006. The plant features membrane bioreactor technology, which combines biological treatment and microfiltration. It can produce up to 2 million gallons of Class A Reclaimed Water each day. The planned satellite plants are part of the long term plan to reduce dependence on the discharge to Budd Inlet.

Collection System Status

Each jurisdiction (Lacey, Olympia, Tumwater, and Thurston County) is responsible for their respective collection systems. Several major interceptors are identified as LOTT facilities and are owned and maintained by LOTT. As a part of the collection system planning process, each jurisdiction produces their own general sewer plans.

Thurston County currently has no collection lines that discharge into the LOTT sewer system. The city of Lacey is served primarily by a conventional collection system including 15 pump stations, over 309,500 linear feet of gravity flow sewer lines serving approximately 12 square miles. Portions of the Lacey sewer system have been designated to be served by Septic Tank Effluent Pumping (STEP) systems. The city of Tumwater is served by a conventional sewer system including over 223,894 feet of gravity sewer lines serving approximately 8 square miles. It also includes 15 wastewater pumping stations. The city of Olympia is served primarily by a conventional sewer system and some STEP systems serving a total of approximately 18 square miles. The system consists of over 698,212 feet of sewer pipe. The system has 51 lift stations. The system is primarily a separate sewer system; however, approximately 600 acres of the downtown area is served by a combined sewer system.

Flow to the Martin Way plant comes from the Lacey collection system and is diverted to the plant from LOTT's Martin Way Pump Station.

Reclaimed Water Treatment Process (Prior to Beneficial Use)

The headworks of the Martin Way facility start at the Martin Way Pump Station. At the pump station the wastewater is screened, prior to being pumped to the Martin Way plant. Up to 2 MGD is pumped to the plant. Treatment at the Martin Way plant starts with grit removal and finer screening. The grit removal is typically not used. The waste then goes to a Return Activated Sludge (RAS) mixing box and into aeration basins. The design is for a Mixed Liquor Suspended Solids (MLSS) of 7,000-8,500 mg/L in the aeration basins. MLSS is pumped from the aeration basins to the membrane tanks. The design MLSS in the membrane tanks is 10,000 mg/L. RAS is returned to an anoxic channel before the RAS mixing box. Waste Activated Sludge (WAS) is returned to the Martin Way Pump Station and pumped to the Budd Inlet Treatment Plant for further processing.

The effluent from the membranes is pumped to the disinfection channel. Hypochlorite is used for disinfection. The reclaimed water is then pumped to use sites.

The Water Reclamation and Reuse Standards require the generator of the reclaimed water to either have an Ecology delegated industrial wastewater treatment program or all industries discharging into the generator's wastewater collection system need to have current waste discharge permits issued by Ecology. LOTT has a delegated pretreatment program, as required by NPDES Permit No. WA0037061.

The LOTT Budd Inlet treatment plant is a class 4 plant, so adding the reclaimed water satellite facility does not change the overall classification of the system.

Distribution System and Use Areas

The reclaimed water distribution system includes a 14-inch pipeline that runs three miles from the reclaimed water plant to the Hawks Prairie Ponds and Recharge Basins. The ponds and basins are on a 41-acre site on Hogum Bay Road. There are five constructed wetland ponds that are used for reclaimed water storage. The ponds also allow for public visibility and education in a park-like setting. Reclaimed water flows from the ponds to the 8 acres of groundwater recharge basins. The reclaimed water infiltrates through the

soils to the underground aquifer. Use of the eight recharge cells is rotated so that some of the cells can be rested and rehabilitated while others are in operation.

All reclaimed water produced by the Martin Way Reclaimed Water Plant had been used for groundwater recharge at the Hawks Prairie Ponds and Recharge Basins until 2014. Two of the partner cities of LOTT, Lacey, and Olympia, developed a groundwater recharge facility at the Woodland Creek Community Park that began using reclaimed water for infiltration in 2014. The reclaimed water used at Woodland Creek Community Park is provided as mitigation for the acquisition of new municipal water rights by the cities of Lacey and Olympia.

The city of Lacey built a reclaimed water pipeline to the Park that delivers reclaimed water produced by the LOTT Martin Way Reclaimed Water Plant. The cities constructed an infiltration facility at the Park. Groundwater infiltration flow modeling indicated an average of 490,000 gallons per day and a maximum of 900,000 gallons per day of reclaimed water could be infiltrated at the Woodland Creek Groundwater Recharge Facility. Ecology concurred that some water could be infiltrated at this site, but not necessarily as much as the modeling indicated. The reclaimed water will not be allowed to discharge locally to the nearby Woodland Creek. Over a period of years, some of the reclaimed water may reach the lower reaches of Woodland Creek, about a mile downstream of the infiltration site. Monitoring wells are used to monitor the level of the groundwater at the infiltration site, and if the groundwater level nears the Creek bottom or the ground surface, infiltration at this location will need to be reduced or stopped.

For all the uses, appropriate flow rates, setbacks, signs, and other controls will be in place for the use of class A reclaimed water per Chapter 173-219 WAC.

Solid Wastes

The treatment facilities remove solids during the treatment of the wastewater at the headworks (grit and screenings), and at the MBRs, in addition to incidental solids (rags, scum, and other debris) removed as part of the routine maintenance of the equipment. LOTT drains grit, rags, scum, and screenings and disposes this solid waste at the local landfill. Solids wasted from the MBRs returned to the Martin Way pump station and are sent to the Budd Inlet Treatment Plant. At the Budd Inlet plant the solids are removed and are treated by dissolved air floatation, anaerobic digestion, and centrifuges. This facility has met the solid waste requirements for screening, as required by WAC 173-308-205, by the headwork fine screens.

B. Description of the Groundwater

At the Hawks Prairie site, the recharge basins infiltrate water downward through the unsaturated zone to the shallow aquifer approximately 90-feet below the surface. The water will then move laterally away from the basins. Groundwater mounding is expected to occur.

The shallow aquifer is hosted by unconsolidated sedimentary deposits that underlie the basin site. The uppermost of these sediments is the Vashon Recessional Outwash Formation, a highly permeable sandy gravel that is unsaturated (vadose zone). Beneath this layer is the Vashon Advance Outwash Formation, which is the uppermost shallow unconfined aquifer that is composed of sand and gravel with interbeds of silty sand. The saturated thickness ranges from about 25 to 50

feet. The depth to groundwater in the Shallow Aquifer ranges from about 80 feet to 130 feet from ground surface. The Vashon Till Formation (unsorted, dense, silt, clay, sand, and gravel) is regionally present in thin 2 to 5-foot thick layers on the property. The lower portion of the Vashon Advance Outwash transitions into the Kitsap Formation, a low permeability unit composed of silty sand with some silty-clay interbeds. The Kitsap Formation forms the lower confining unit boundary to the shallow aquifer. Below the Kitsap Formation is a deeper confined aquifer called the Sea Level Aquifer which is composed of discontinuous, sand and gravel layers interbedded with silt/sand layers.

LOTT has installed 16 monitoring wells at the basin site that can be used to test groundwater quality. Six of these wells are included in the permit as monitoring wells.

The reclaimed water is also infiltrated at the Woodland Creek Groundwater Recharge Facility site. This site has subsurface galleries for reclaimed water infiltration. The site has Glacial drift/Outwash soils and shallow groundwater. There are nearby surface water bodies such as Woodland Creek and Goose Pond.

Permit writers in cases such as this must decide if the discharge of a pollutant onto the ground near a surface water is subject to an NPDES permit or State Reclaimed Water permit. Ecology believes the best guidance on this issue comes from the United States District Court Eastern District of Washington (Washington Wilderness Coalition v. Hecla Mining, 870 F. Supp 983, 990). The Court held that since the goal of the Clean Water Act (CWA) is to protect the quality of surface waters, any pollutant, which enters such waters, whether directly or through groundwater, is subject to regulation by NPDES permit. The Court went on to hold, "It is not sufficient to allege groundwater pollution, and then to assert a general hydrological connection between all waters. Rather, pollutants must be traced from their source to surface waters, in order to come within the purview of the CWA."

The decision on pollutant continuity depends upon the:

- Pollutant (type and mobility in soils)
- Pollutant loading
- Soils at the site
- Hydrology of the site

Ecology has determined that it should issue a State Reclaimed Water Permit and not an NPDES permit for this site because the cities agreed to monitor the groundwater level and reduce the reclaimed water infiltration rate if the groundwater level reached within 3 feet of the bottom of Woodland Creek. So far, the facility as operated does not appear to have discharged to Woodland Creek, but may have had a direct connection to Goose Pond. Infiltration at the facility may be limited due to this issue.

The LOTT Clean Water Alliance is conducting a multi-year infiltration study with the goal of providing local scientific data and community perspectives to help policymakers make informed decisions about future reclaimed water treatment and uses.

The study began in 2012, and the effort is divided into three phases:

Phase 1 is complete; it included background work to review current research and case studies from other parts of the country, forming an advisory structure for the study, including a Community Advisory Group, and developing a Public Involvement Plan.

Phase 2 is complete; it included developing the study design and scoping the work to be completed as part of Phase 3, the implementation phase of the study.

Phase 3 is underway; it includes field work, data analysis and modeling, and more public involvement. The study is expected to be complete in 2019.

C. Wastewater Influent Characterization

LOTT reported the concentration of influent pollutants in discharge monitoring reports. The influent wastewater is characterized as follows:

Parameter	Units	Average Value	Maximum Value
Biochemical Oxygen Demand (BOD_5)	mg/L	**281**	**729**
Total Suspended Solids (TSS)	mg/L	**245**	**923**
Nitrogen	mg/L	**57**	**87**
Flow	MGD	**1.1**	**1.8**
Parameter	**Units**	**Minimum Value**	**Maximum Value**
pH	Standard Units	**6.3**	**8.0**

D. Reclaimed Water Characterization

LOTT reported the concentration of pollutants in the reclaimed water in the permit application and in discharge monitoring reports. The tabulated data represents the quality of the reclaimed water produced during the last permit term. The reclaimed water prior to groundwater recharge is characterized as follows:

Parameter	Units	Average Value	Maximum Value
BOD_5	mg/L	**2.2**	**6.8**
TSS	mg/L	**2**	**2**
Turbidity	NTU	**0.07**	**0.63**
Flow	MGD	**0.98**	**1.63**
Nitrogen	mg/L as N	**5.85**	**13.2**
Dissolved Oxygen	mg/L	**5.29**	**11.5**
Temperature	°C	**19.5**	**25**

Parameter	Units	Average Value	Maximum Value
Total Residual Chlorine	mg/L	**1.2**	**2.4**
Parameter	**Units**	**7- day median**	**Maximum Value**
Total Coliforms	#/100 mL	**0**	**70**
Parameter	**Units**	**Minimum Value**	**Maximum Value**
pH	Standard Units	**6.2**	**8.2**

E. Summary of Compliance with Previous Permit Issued

The previous permit placed reclaimed water limits on flow, BOD_5, TSS, dissolved oxygen, turbidity, total nitrogen, total coliform, and pH.

LOTT has mostly complied with the reclaimed water limits and permit conditions throughout the duration of the permit issued on October 1, 2011. Ecology assessed compliance based on its review of the facility's discharge monitoring reports (DMRs) and on inspections conducted by Ecology.

The following table summarizes the violations and permit triggers that occurred during the permit term.

Date	Violation	Parameter	Statistical Base	Value	Limit
7/1/2012	Late Submittal of DMRs	-	-	-	-
7/1/2012	Numeric effluent violation	Total Coliforms	Maximum	69.7	23
8/1/2012	Late Submittal of DMRs	-	-	-	-
2/1/2014	Frequency of Sampling Violation	Total Coliforms (7 Day Median)	7 Day Median	0	2.2
2/1/2014	Frequency of Sampling Violation	pH (Hydrogen Ion)	Maximum	7.2	9
2/1/2014	Frequency of Sampling Violation	pH (Hydrogen Ion)	Minimum	6.6	6
2/1/2014	Frequency of Sampling Violation	Temperature, Measured	Average	14.9	-

Date	Violation	Parameter	Statistical Base	Value	Limit
2/1/2014	Frequency of Sampling Violation	Dissolved Oxygen	Maximum	10.5	-
2/1/2014	Frequency of Sampling Violation	Temperature, Measured	Maximum	16	-
2/1/2014	Numeric effluent violation	Turbidity (Nephelometric), Measured	Maximum	0.63	0.5
2/1/2014	Frequency of Sampling Violation	Chlorine, Total residual	Minimum	1.7	-
2/1/2014	Frequency of Sampling Violation	Total Coliforms	Maximum	0	23
2/1/2014	Frequency of Sampling Violation	Dissolved Oxygen	Average	8.5	-
2/1/2014	Frequency of Sampling Violation	Solids (Residue), Total suspended (TSS)	Weekly Average	2	45
12/1/2014	Frequency of Sampling Violation	Solids (Residue), Total suspended (TSS)	Average	2	30

The following table summarizes permit submittals that occurred during the permit term.

Submittal Name	Due Date	Received Date
Ground Water Sampling Plan	5/1/2012	2/8/2012
Operation And Maintenance Manual Update/Review Letter	12/15/2012	11/15/2012
Operation And Maintenance Manual Update/Review Letter	5/15/2013	5/13/2013
Operation And Maintenance Manual Update/Review Letter	5/15/2014	9/4/2015
Operation And Maintenance Manual Update/Review Letter	5/15/2015	9/4/2015
Operation And Maintenance Manual Update/Review Letter	5/15/2016	12/14/2016

Submittal Name	Due Date	Received Date
Application For Permit Renewal	3/1/2016	3/1/2016

F. State Environmental Policy Act (SEPA) Compliance

State law exempts reissuance or modification of any reclaimed water permit from the SEPA process as long as the permit contains conditions no less stringent than federal and state rules and regulations (RCW 43.21C.0383). The exemption applies only to existing reclaimed water uses, not to new uses.

G. Water Use Status

The Permittee is the owner of the reclaimed water treatment facility and RCW 90.46.120 gives the Permittee exclusive right to any water generated by the reclaimed water treatment facility. Use and distribution of reclaimed water is exempt from the water right permit requirements of RCW 90.03.250 and 90.44.060.

III. PROPOSED PERMIT LIMITS

The Reclaimed Water Act, Chapter 90.46 RCW and the Reclaimed Water Rule, Chapter 173-219 WAC requires that reclaimed water generators adequately and reliably treat wastewater to meet reclaimed water standards prior to distribution and beneficial use. Ecology and DOH have adopted criteria to demonstrate compliance with these requirements in Chapter 173-219 WAC. State regulations require that Ecology base limits in a State Reclaimed Water permit on the:

- Technology and treatment methods available to treat specific pollutants (technology-based). Dischargers must treat wastewater using all known, available, reasonable methods of prevention, control, and treatment (AKART). In addition, reclaimed water must receive Adequate and Reliable Treatment (ART) as specified by Chapter 173-219 WAC.

- Quantity and quality of the reclaimed water infiltrated to recharge groundwater that have been determined to protect the quality of the groundwater.

- State drinking water contaminant criteria found in the drinking water quality standards adopted by the state board of health pursuant to chapter 43.20 RCW and the DOH pursuant to chapter 70.119A RCW for groundwater recharge via surface percolation.

- Washington State Groundwater Quality Standards pursuant to chapter 173-200 WAC for groundwater recharge.

- Applicable requirements of other local, state and federal laws.

Ecology and DOH have adopted criteria to demonstrate compliance with these requirements in Chapter 173-219 WAC and Chapter 173-221 WAC. Ecology applies the most stringent of technology and water quality-based limits to each parameter of concern and further describes the proposed limits below.

The limits in this permit reflect information received in the application and from supporting reports (engineering, hydrogeology, and monitoring). Ecology evaluated the permit application and determined the limits needed to comply with the rules and standards adopted by the state of Washington. Ecology does

not develop reclaimed water limits for all reported pollutants. Some pollutants are not treatable at the concentrations reported, are not controllable at the source, and are not listed in regulation.

Ecology does not usually develop permit limits for pollutants not reported in the permit application but may be present in the reclaimed water. The permit does not authorize the discharge of the non-reported pollutants. During the five-year permit term, the facility may change the conditions of use of its reclaimed water from those conditions reported in the permit application. The facility must notify Ecology if significant changes occur in any constituent. Until Ecology modifies the permit to reflect additional pollutants, a permitted facility could be violating its permit.

A. Design Criteria

Under WAC 173-216-110 (4), flows and waste loadings must not exceed approved design criteria. Ecology approved design criteria for this facility's treatment plant in the plans and specifications submitted on May 20, 2004 and prepared by Brown and Caldwell. The table below includes design criteria from the referenced report.

Table 6 Design Criteria for Wastewater Treatment Facility

Parameter	Design Quantity
Maximum Month Design Flow (MMDF)	2 MGD

B. Technology-Based Reclaimed Water Limits

Waste discharge permits issued by Ecology specify conditions requiring the facility to use all known available and reasonable methods of prevention, control, and treatment of discharges (AKART) before discharging to waters of the state (RCW 90.48). Ecology defines AKART for domestic wastewater facilities in chapter 173-221 WAC, Discharge Standards and Effluent Limits for Domestic Wastewater Facilities and in the Department of Health's design criteria (1994).

Reclaimed Water permits issued by Ecology specify conditions requiring the facility to use AKART before implementing a beneficial use contributing to waters of the state (RCW 90.48). All Reclaimed Water permits must assure that generators treat water derived from wastewater with a domestic wastewater component adequately and reliably before use for beneficial purposes. Reclaimed water is not considered a wastewater (RCW 90.46.010(14).

The authority and duties for reclaimed water use are in addition to those already provided in law with regard to sewage and wastewater collection, treatment and disposal for the protection of public health and the safety of the State's waters. All waste discharge permits issued by Ecology must specify conditions requiring all known available and reasonable methods of prevention, control, and treatment of discharges to waters of the state (WAC 173-216-110). For infiltration, the proposed permit requires application of reclaimed water at rates not to exceed the infiltration capacity of the soils.

Ecology approved the engineering report titled: *LOTT Wastewater Resource Management Plan* as amended and supplemented by the *Hawks Prairie Reclaimed Water Satellite Basis of Design Report* and the *Hawks Prairie Reclaimed Water Satellite Facilities SERP Compliance Volumes 1 and 2*, submitted November 1998 and December 23, 2003, and prepared by Brown and Caldwell.

Ecology evaluated the report for technology based requirements using the:

- Chapter 173-219 WAC
- Discharge Standards and Effluent Limits for Domestic Wastewater Facilities
- *Criteria for Sewage Works Design,* (Ecology, 2008)
- *Reclaimed Water Facilities Manual* (Ecology, 2018).

Ecology determined that the facility meets the minimum requirements demonstrating consistency with Chapter 173-219 WAC and the AKART standard if LOTT operates the treatment system and uses the reclaimed water for the beneficial uses as described in the approved engineering report and any subsequent Ecology approved reports.

Ecology also evaluated the report for water quality based requirements which are described in the next section of the fact sheet.

LOTT produces Class A reclaimed water. Class A is the highest quality of reclaimed water and therefore provides the broadest range of reuse opportunities. Conversely, Class A reclaimed water requires the most stringent treatment and water quality limits. The technology and water quality requirements for the production of Class A reclaimed water are as follows:

"Class A Reclaimed Water" is reclaimed water that had been adequately and reliably treated and, at a minimum is, at all times, an oxidized, coagulated, filtered and disinfected wastewater.

1. Oxidized is defined as wastewater in which the organic matter has been stabilized such that the biochemical oxygen demand (BOD_5) does not exceed 30 mg/L and Total Suspended Solids (TSS) does not exceed 30 mg/L, is non-putrescible and contains Dissolved Oxygen.

2. Filtered wastewater is defined as having passed through a micro or ultra pore size membrane barrier so that the turbidity as determined by an approved laboratory method does not exceed an average operating turbidity of 0.2 Nephelometric Turbidity Units (NTU), determined monthly, and does not exceed 0.5 NTU at any time.

3. Adequate disinfection is defined as the median number of Total Coliform organisms in the wastewater after disinfection does not exceed 2.2 MPN per 100 milliliters, as determined from the bacteriological results of the last seven days for which analyses have been completed, and the number of total coliform organisms does not exceed 23 MPN per 100 milliliters in any sample.

4. The reclamation facility must maintain at minimum a 0.5 mg/L Total Chlorine Residual in the reclaimed water during conveyance to the use areas if used for uses other than groundwater recharge.

Table 7 Technology-Based Limits for Class A Reclaimed Water using Membrane Filtration Methods

Compliance Point – Reclaimed Water		
Parameter	**Average Monthly Limit**	**Average Weekly Limit**
BOD_5 (concentration)	30 mg/L	45 mg/L
TSS (concentration)	30 mg/L	45 mg/L
Parameter	**Instantaneous Minimum**	
Dissolved Oxygen	0.2 mg/L (Dissolved Oxygen must be measurable in the effluent at all times.)	
Parameter	**Average Monthly**	**Sample Maximum**
Turbidity	0.2 NTU	0.5 NTU
Parameter	**Seven Day Median**	**Sample Maximum**
Total Coliform Bacteria	2.2 MPN /100 mL	23 MPN /100 mL
Parameter	**Daily minimum**	**Daily Maximum**
pH	6.0 Standard Units	9.0 Standard Units

C. Groundwater Quality-Based Reclaimed Water Limits

RCW 90.46.080 states that reclaimed water may be beneficially used for groundwater recharge via surface percolation to unsaturated soil provided that it meets the state drinking water criteria as measured in the groundwater beneath or down gradient of the recharge project site. The state drinking water contaminant criteria are defined in RCW 90.46.010 as the contaminant criteria found in the drinking water quality standards adopted by the state board of health pursuant to chapter 43.20 RCW and the DOH pursuant to chapter 70.119A RCW. Drinking water is the beneficial use generally requiring the highest quality of groundwater. Providing protection to the level of drinking water standards will protect a great variety of existing and future beneficial use.

Chapter 90.48 RCW also requires the state of Washington to maintain the highest possible standards to insure the purity of all waters of the state consistent with public health and public enjoyment thereof. In order to protect existing water quality and preserve the designated beneficial uses of Washington's groundwaters including the protection of human health, WAC 173-200-100 requires Ecology to condition discharge permits in such a manner as to authorize only activities that will not cause violations of the groundwater quality standards. The goal of the groundwater quality standards is to maintain the highest quality of the State's groundwaters and to protect existing and future beneficial uses of the groundwater through the reduction or elimination of the discharge of contaminants to groundwater [WAC 173-200-010(4)]. Ecology achieves this goal by:

- Applying all known available and reasonable methods of prevention, control and treatment (AKART) to any discharge

- Applying the antidegradation policy of the Groundwater Standards

- Establishing numeric and narrative criteria for the protection of human health and the environment in the Groundwater Quality Standards

Ecology approved the engineering report as noted above in the technology based limits section. In addition, Ecology evaluated the report to ensure compliance with groundwater standards using the:

- *Guidelines for the Preparation of Engineering Reports for Industrial Wastewater Land Application Systems*, Ecology, May 1993

- *Guidance on Land Treatment of Nutrients in Wastewater, with Emphasis on Nitrogen, Ecology*, November 1994.

Antidegradation Policy

The state of Washington's Groundwater Quality Standards (GWQS) require preservation of existing and future beneficial uses of groundwater through the antidegradation policy, which includes the two concepts of antidegradation and non-degradation.

Antidegradation

Antidegradation is not the same as non-degradation (see below). Antidegradation applies to calculation of permit limits in groundwater when background (see below) contaminant concentrations are less than criteria in the GWQS. Ecology has discretion to allow the concentrations of contaminants at the point of compliance to exceed background concentrations but not exceed criteria in the GWQS. Ecology grants discretion through an approved AKART engineering analysis of treatment alternatives. If the preferred treatment alternative predicts that discharges to groundwater will result in contaminant concentrations that fall between background concentrations and the criteria, then the preferred treatment alternative should protect beneficial uses and meet the antidegradation policy. In this case, the predicted concentrations become the permit limits. If the preferred alternative will meet background contaminant concentrations, background concentrations become the permit limits. Permit limits must protect groundwater quality by preventing degradation beyond the GWQS criteria. If discharges will result in exceedance of the criteria, facilities must apply additional treatment before Ecology can permit the discharge.

Non-Degradation

Non-degradation applies to permit limits in groundwater when background contaminant concentrations exceed criteria in the GWQS. Non-degradation means that discharges to groundwater must not further degrade existing water quality. In this case, Ecology considers the background concentrations as the Water Quality Criteria and imposes the criteria as permit limits. To meet the antidegradation policy, the facility must prepare an AKART engineering analysis that demonstrates that discharges to groundwater will not result in increasing background concentrations. Ecology must review and approve the AKART engineering analysis.

You can obtain more information on antidegradation and non-degradation by referring to the *Implementation Guidance for the Ground Water Quality Standards (Implementation Guidance)*, Ecology Publication #96-02 (available at https://fortress.wa.gov/ecy/publications/SummaryPages/9602.html).

Background Water Quality

Background water quality is determined by a statistical calculation of contaminant concentrations without the impacts of the proposed activity. The calculation requires an adequate amount of groundwater quality data and determining the mean and standard deviation of the data, as described in the *Implementation Guidance*. Following the procedure in the *Implementation Guidance*, Ecology then defines background water quality for most contaminants as the 95 percent upper tolerance limit. This means that Ecology is 95 percent confident that 95 percent of future measurements will be less than the upper tolerance limit. There are a few exceptions to the use of the upper tolerance limit. For pH, Ecology will calculate both an upper and a lower tolerance limit resulting in an upper and lower bound to the background water quality. If dissolved oxygen is of interest, Ecology will calculate a lower tolerance limit without an upper tolerance limit.

Either the drinking water numeric criteria defined in chapter 246-290 WAC or the applicable groundwater numeric criteria as defined in chapter 173-200 WAC and in RCW 90.48.520 for this use include those listed in the table below.

Parameter	Units	Groundwater Criteria
Arsenic	µg/L	10
Cadmium	µg /L	5
Chromium	µg/L	50
Copper	mg/L	1
Fluoride	mg/L	2
Lead	µg/L	15 (Action Level) 50 (Groundwater Criteria)
Mercury	µg/L	2
Nickel	µg/L	100
Nitrate as N	mg/L	10
Nitrite as N	mg/L	1
Total Trihalomethanes (TTHM)	µg/L	80
Total Dissolved Solids	mg/L	500
Chloride	mg/L	250
Sulfate	mg/L	250
Manganese	µg/L	50

Parameter	Units	Groundwater Criteria
Silver	µg/L	50
Zinc	mg/L	5

Ecology established groundwater enforcement limits to protect the quality of the groundwater based on the Drinking Water/Groundwater Criteria. The proposed permit establishes limits, applied after infiltration in the groundwater.

The proposed groundwater enforcement limits establish the quantity and quality of the reclaimed water that LOTT may apply at the reclaimed water use sites.

The table below includes the groundwater enforcement limits for the reclaimed water. Two consecutive exceedances of an enforcement limit for the same parameter at the same well constitutes a violation.

Table 9 Groundwater Quality-Based Reclaimed Water Limits

Compliance Point – Final Reclaimed Water		
Parameter	**Average Monthly Limit**	**Average Weekly Limit**
BOD_5	20 mg/L	30 mg/L
Parameter	**Seven Day Median**	**Sample Maximum**
Total Coliform	≤2.2 MPN /100 mL	≤23 MPN /100 mL
Parameter	**Average Monthly Limit**	**Sample Maximum**
Total Nitrogen as N	10 mg/L	15 mg/L
Compliance Point - Groundwater		
Parameter	**Units**	**Groundwater Enforcement Limits [a]**
Nitrate (as nitrogen)	mg/L	10
Arsenic	µg/L	10
Cadmium	µg/L	5
Chromium	µg/L	50
Fluoride	mg/L	2
Mercury	µg/L	2
Nickel	µg/L	100
Total Trihalomethane	µg/L	80
Total Dissolved Solids	mg/L	500
Chloride	mg/L	250
Sulfate	mg/L	250

Compliance Point – Final Reclaimed Water		
Copper	mg/L	1
Lead	µg/L	15
Manganese	µg/L	50
Silver	µg/L	50
Zinc	mg/L	5
[a]	Two consecutive exceedances of an enforcement limit for the same parameter at the same well constitutes a violation.	

D. Comparison of Reclaimed Water Limits with the Previous Permit Modified on July 29, 2013

Table 10 Comparison of Previous and Proposed Limits

		Previous Limits: Reclaimed Water		Proposed Limits: Reclaimed Water	
Parameter	**Basis of Limit**	**Average Monthly**	**Average Weekly**	**Average Monthly**	**Average Weekly**
Flow	Technology	2.0 MGD		2.0 MGD	
TSS	Technology	30 mg/L	45 mg/L	30 mg/L	45 mg/L
BOD_5	Water Quality	20 mg/L	30 mg/L	20 mg/L	30 mg/L
Parameter	**Basis of Limit**	**Average Monthly Limit**	**Sample Maximum**	**Average Monthly Limit**	**Sample Maximum**
Total Nitrate as N	Water Quality	10 mg/L	15 mg/L	10 mg/L	15 mg/L
Parameter	**Basis of Limit**	**Seven Day Median**	**Sample Maximum**	**Seven Day Median**	**Sample Maximum**
Total Coliform Bacteria	Technology	2.2 MPN / 100 mL	23 MPN / 100 mL	2.2 MPN / 100 mL	23 MPN / 100 mL
Parameter	**Basis of Limit**	**Limit**		**Limit**	
pH	Technology	6.0 – 9.0		6.0 – 9.0	
Dissolved Oxygen	Technology	Measurably present		> 0.2 mg/L	
Parameter	**Basis of Limit**	**Average Monthly**	**Maximum Daily**	**Average Monthly**	**Maximum Daily**
Turbidity	Technology	0.2 NTU	0.5 NTU	0.2 NTU	0.5 NTU

IV. MONITORING REQUIREMENTS

Ecology requires monitoring, recording, and reporting (WAC 173-216-110) to verify that the treatment process functions correctly, the discharge meets groundwater criteria and that the discharge complies with the permit's effluent limits.

If a facility uses a contract laboratory to monitor wastewater, it must ensure that the laboratory uses the methods and meets or exceeds the method detection levels required by the permit. The permit describes when facilities may use alternative methods. It also describes what to do in certain situations when the laboratory encounters matrix effects. When a facility uses an alternative method as allowed by the permit, it must report the test method, Detection Level (DL), and Quantitation Level (QL) on the Discharge Monitoring Report or in the required report.

A. Lab Accreditation

Ecology requires that facilities must use a laboratory registered or accredited under the provisions of chapter 173-50 WAC, Accreditation of Environmental Laboratories, to prepare all monitoring data (with the exception of certain parameters). Analysis for the Martin Way plant is completed at the LOTT Budd Inlet Plant. Ecology accredited the laboratory at the LOTT Budd Inlet Treatment Plant for:

Table 11 Accredited Parameters

Parameter Name	Category	Method Name	Matrix Description
Ammonia	General Chemistry	EPA 350.1_2_1993	Non-Potable Water
Nitrogen, Total Kjeldahl	General Chemistry	EPA 351.2_2_1993	Non-Potable Water
Dissolved Oxygen	General Chemistry	Hach 10360 Rev 1.1	Non-Potable Water
Turbidity	General Chemistry	SM 2130 B-01	Non-Potable Water
Specific Conductance	General Chemistry	SM 2510 B-97	Non-Potable Water
Solids, Total	General Chemistry	SM 2540 B-97	Non-Potable Water
Solids, Total Suspended	General Chemistry	SM 2540 D-97	Non-Potable Water
Chlorine (Residual), Total	General Chemistry	SM 4500-Cl D-00	Non-Potable Water
pH	General Chemistry	SM 4500-H+ B-00	Non-Potable Water
Nitrite	General Chemistry	SM 4500-$NO2^-$ B-00	Non-Potable Water
Nitrate	General Chemistry	SM 4500-$NO3^-$ F-00	Non-Potable Water
Nitrate + Nitrite	General Chemistry	SM 4500-$NO3^-$ F-00	Non-Potable Water
Dissolved Oxygen	General Chemistry	SM 4500-O G-01	Non-Potable Water
BOD	General Chemistry	SM 5210 B-01	Non-Potable Water
Fecal coliform-count	Microbiology	SM 9222 D (m-FC)-97	Non-Potable Water

Parameter Name	Category	Method Name	Matrix Description
Total Coli/Ecoli - count	Microbiology	SM 9223 B (Colilert® QTray)	Non-Potable Water

B. Wastewater and Reclaimed Water Monitoring

Ecology details the proposed monitoring schedule under Reclaimed Water Condition R2. Specified monitoring frequencies take into account the quantity and variability of the reclaimed water, quantity of each of the approved uses the treatment method, past compliance, significance of pollutants, and cost of monitoring. The required monitoring frequency is consistent with agency guidance given in the current version of Ecology's *Permit Writer's Manual* (Publication Number 92-09) and with Chapter 173-219 WAC.

C. Sludge Monitoring

Monitoring of sludge quantity and quality is necessary to determine the appropriate uses of the sludge. Biosolids monitoring is required by the current state and local solid waste management program and also by Environmental Protection Agency (EPA) under 40 Code of Federal Regulation (CFR) 503. Waste solids from this facility are sent to the Budd Inlet Treatment Plant for processing. Sludge monitoring is completed at the Budd Inlet Treatment Plant.

D. Groundwater Monitoring

Ecology requires groundwater monitoring at the groundwater recharge sites in accordance with the Groundwater Quality Standards, chapter 173-200 WAC. Ecology has determined that this use of reclaimed water has a potential to pollute the groundwater. Therefore, the Facility must evaluate the impacts on groundwater quality. Ecology considers monitoring of the groundwater at the site boundaries and within the site an integral component of such an evaluation.

E. Reclaimed Water Limits which are Near Detection or Quantitation Levels

Water quality-based effluent concentration limits may be near the limits of current analytical methods to detect or accurately quantify. The MDL also known as DL is the minimum concentration of a pollutant that a laboratory can measure and report with a 99 percent confidence that its concentration is greater than zero (as determined by a specific laboratory method). The QL is the level at which a laboratory can reliably report concentrations with a specified level of error. Estimated concentrations are the values between the DL and the QL. Ecology requires permitted facilities to report estimated concentrations. When reporting maximum daily effluent concentrations, Ecology requires the facility to report "less than X" where X is the required detection level if the measured effluent concentration falls below the detection level.

V. OTHER PERMIT CONDITIONS

A. Reporting and Recordkeeping

Ecology based Reclaimed Water Condition R3 on its authority to specify any appropriate reporting and recordkeeping requirements to prevent and control waste discharges (WAC 173-216-110).

B. Prevention of Facility Overloading

Overloading of the treatment plant is a violation of the terms and conditions of the permit. To prevent this from occurring, RCW 90.48.110 and WAC 173-216-110 require LOTT to:

- Take the actions detailed in proposed permit Reclaimed Water Condition R5
- Design and construct expansions or modifications before the treatment plant reaches existing capacity
- Report and correct conditions that could result in new or increased discharges of pollutants

Reclaimed Water Condition R5 restricts the amount of flow.

C. Operations and Maintenance (O&M)

Ecology requires Permittees to take all reasonable steps to properly operate and maintain their wastewater treatment system in accordance with state regulations (WAC 173-240-080 and WAC 173-216-110). The facility must maintain an updated O&M Manual for the wastewater facility.

Implementation of the procedures in the operation and maintenance manual ensures the facility's compliance with the terms and limits in the permit and ensures the facility provides AKART to the waste stream.

D. Pretreatment

The LOTT Clean Water Alliance has a delegated pretreatment program that is described in their NPDES permit WA0037061 for the Budd Inlet Treatment Plant. As the service area for the Martin Way Reclaimed Water Plant is included within the service area of the Budd Inlet Treatment Plant, the pretreatment language is not repeated in the reclaimed water permit. All of the provisions of the LOTT pretreatment program apply to the total service area of the LOTT system. Pretreatment provisions include:

Duty to Enforce Discharge Prohibitions

This provision prohibits LOTT from authorizing or permitting an industrial discharger to discharge certain types of waste into the sanitary sewer.

- The first section of the pretreatment requirements prohibits LOTT from accepting pollutants which causes "pass-through" or "interference." This general prohibition is from 40 CFR §403.5(a). Appendix C of this fact sheet defines these terms.
- The second section reinforces a number of specific state and federal pretreatment prohibitions found in WAC 173-216-060 and 40 CFR §403.5(b). These reinforce that LOTT may not accept certain wastes, which:

  1. Are prohibited due to dangerous waste rules
  2. Are explosive or flammable

3. Have too high or low of a pH (too corrosive, acidic or basic)

4. May cause a blockage such as grease, sand, rocks, or viscous materials

5. Are hot enough to cause a problem

6. Are of sufficient strength or volume to interfere with treatment

7. Contain too much petroleum-based oils, mineral oil, or cutting fluid.

8. Create noxious or toxic gases at any point

Forty (40) CFR Part 403 contains the regulatory basis for these prohibitions, with the exception of the pH provisions, which are based on WAC 173-216-060.

- The third section of pretreatment conditions reflects state prohibitions on LOTT accepting certain types of discharges unless the discharge has received prior written authorization from Ecology. These discharges include:

1. Cooling water in significant volumes

2. Stormwater and other direct inflow sources

3. Wastewaters significantly affecting system hydraulic loading, which do not require treatment

Ecology delegated authority to LOTT for permitting, monitoring, and enforcement over industrial users discharging to their treatment systems to provide more direct and effective control of pollutants. Ecology oversees the delegated Industrial Pretreatment Program to assure compliance with federal pretreatment regulations (40 CFR Part 403) and categorical standards and state regulations (chapter 90.48 RCW and chapter 173-216 WAC).

E. Reclaimed Water Distribution and Use

These permit requirements are based on Chapter 173-219 WAC authorized in Chapter 90.46 RCW. The Reclaimed Water WAC contains requirements to assure that distribution and use of reclaimed water are protective of public health and the environment at all times. The requirements in this section cover use area responsibilities, alarms, alternative disposal of substandard water, maintenance of operational records, cross connection control, enforceable contracts, local reclaimed water use ordinances, and prohibitions on bypass.

F. Solid Wastes

To prevent water quality problems the facility is required in Reclaimed Water Condition R7 to store and handle all residual solids (grit, screenings, scum, sludge, and other solid waste) in accordance with the requirements of RCW 90.48.080 and state water quality standards.

The final use and disposal of sewage sludge from this facility is regulated by U.S. EPA under 40 CFR 503, and by Ecology under chapter 70.95J RCW, chapter 173-308 WAC "Biosolids

Management," and chapter 173-350 WAC "Solid Waste Handling Standards." The disposal of other solid waste is under the jurisdiction of the Thurston County Health Department.

G. Goose Pond Water Quality Monitoring

During the initial operation of the Woodland Creek Groundwater Recharge Facility, there has been indication of a potential impact on the neighboring Goose Pond. Due to this impact, additional monitoring was added to the Reclaimed Water and to Goose Pond. The additional monitoring should inform ways to prevent impacts to the pond and improve the Standard Operating Procedure for the Facility.

H. General Conditions

Ecology bases the standardized general conditions on state law and regulations. They are included in all state waste discharge permits issued by Ecology.

VI. PERMIT ISSUANCE PROCEDURES

A. Permit Modifications

Ecology may modify this permit to impose numerical limits, if necessary to comply with water quality standards for groundwaters, based on new information from sources such as inspections, effluent monitoring, outfall studies, and effluent mixing studies.

Ecology may also modify this permit to comply with new or amended state regulations.

B. Proposed Permit Issuance

This proposed permit meets all statutory requirements for Ecology to authorize a beneficial use of reclaimed water. The permit includes limits and conditions to protect human health and aquatic life, and the beneficial uses of waters of the state of Washington. Ecology proposes to issue this permit for a term of five years.

VII. REFERENCES FOR TEXT AND APPENDICES

Gavlak, R., D. Horneck, R.O. Miller, and J. Kotuby-Amacher.

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Washington State Department of Ecology.

1993. *Guidelines for Preparation of Engineering Reports for Industrial Wastewater Land Application Systems*, Ecology Publication Number 93-36. 20 pp. https://fortress.wa.gov/ecy/publications/SummaryPages/9336.html.

1997. *Water Reclamation and Reuse Standards*, Ecology Publication Number 97-23. 73 pp.

Laws and Regulations (https://ecology.wa.gov/About-us/How-we-operate/Laws-rules-rulemaking)

Permit and Wastewater Related Information (https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Water-quality-permits-guidance)

Revised October 2005. *Implementation Guidance for the Ground Water Quality Standards, Ecology Publication* Number 96-02. https://fortress.wa.gov/ecy/publications/SummaryPages/9602.html.

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December 2011. *Permit Writer's Manual*. Publication Number 92-109 (https://fortress.wa.gov/ecy/publications/SummaryPages/92109.html)

November 2004. *Guidance on Land Treatment of Nutrients in Wastewater, with Emphasis on Nitrogen, Ecology Publication* Number 04-10-081; https://fortress.wa.gov/ecy/publications/SummaryPages/0410081.html.

Washington State Department of Health.

February 1994. *Design Criteria for Municipal Wastewater Land Treatment Systems for Public Health Protection*.

APPENDIX A--PUBLIC INVOLVEMENT INFORMATION

Ecology proposes to reissue a permit to LOTT Clean Water Alliance for the Martin Way Reclaimed Water Plant. The permit includes reclaimed water limits and other conditions. This fact sheet describes the facility and Ecology's reasons for requiring permit conditions.

Ecology placed a Public Notice of Application on June 13, 2016; June 20, 2016; June 13, 2017; and June 20, 2017, in the *Olympian* to inform the public about the submitted application and to invite comment on the reissuance of this permit.

Ecology will place a Public Notice of Draft on May 9, 2018, in the *Olympian* to inform the public and to invite comment on the proposed draft State Reclaimed Water permit and fact sheet.

The notice:

- Tells where copies of the draft Permit and Fact Sheet are available for public evaluation (a local public library, the closest Regional or Field Office, posted on our website).
- Offers to provide the documents in an alternate format to accommodate special needs.
- Urges people to submit their comments, in writing, before the end of the Comment Period
- Tells how to request a public hearing of comments about the proposed state waste discharge permit.
- Explains the next step(s) in the permitting process.

Ecology has published a document entitled *Frequently Asked Questions about Effective Public Commenting*, which is available on our website.

You may obtain further information from Ecology by telephone, 360-407-6278, by email at david.dougherty@ecy.wa.gov, or by writing to the address listed below.

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

The primary author of this permit and fact sheet is Dave Dougherty.

APPENDIX B--YOUR RIGHT TO APPEAL

You have a right to appeal this permit to the Pollution Control Hearing Board (PCHB) within 30 days of the date of receipt of the final permit. The appeal process is governed by chapter 43.21B RCW and chapter 371-08 WAC. "Date of receipt" is defined in RCW 43.21B.001(2) (see glossary).

To appeal you must do the following within 30 days of the date of receipt of this permit:

- File your appeal and a copy of this permit with the PCHB (see addresses below). Filing means actual receipt by the PCHB during regular business hours.
- Serve a copy of your appeal and this permit on Ecology in paper form - by mail or in person. (See addresses below.) E-mail is not accepted.

You must also comply with other applicable requirements in chapter 43.21B RCW and chapter 371-08 WAC.

ADDRESS AND LOCATION INFORMATION

Street Addresses	Mailing Addresses
Department of Ecology Attn: Appeals Processing Desk 300 Desmond Drive Southeast Lacey, Washington 98503 **Pollution Control Hearings Board** 1111 Israel Road Southwest, Suite 301 Tumwater, Washington 98501	**Department of Ecology** Attn: Appeals Processing Desk P.O. Box 47608 Olympia, Washington 98504-7608 **Pollution Control Hearings Board** P.O. Box 40903 Olympia, Washington 98504-0903

APPENDIX C--GLOSSARY

1-DMax or 1-Day Maximum Temperature -- The highest water temperature reached on any given day. This measure can be obtained using calibrated maximum/minimum thermometers or continuous monitoring probes having sampling intervals of thirty minutes or less.

7-DADMax or 7-Day Average of the Daily Maximum Temperatures -- The arithmetic average of seven consecutive measures of daily maximum temperatures. The 7-DADMax for any individual day is calculated by averaging that day's daily maximum temperature with the daily maximum temperatures of the three days prior and the three days after that date.

Acute Toxicity --The lethal effect of a compound on an organism that occurs in a short time period, usually 48 to 96 hours.

AKART -- The acronym for "all known, available, and reasonable methods of prevention, control and treatment." AKART is a technology-based approach to limiting pollutants from wastewater discharges, which requires an engineering judgment and an economic judgment. AKART must be applied to all wastes and contaminants prior to entry into waters of the state in accordance with RCW 90.48.010 and 520, WAC 173-200-030(2)(c)(ii), and WAC 173-216-110(1)(a).

Alternate Point of Compliance -- An alternative location in the groundwater from the point of compliance where compliance with the groundwater standards is measured. It may be established in the groundwater at locations some distance from the discharge source, up to, but not exceeding the property boundary and is determined on a site specific basis following an AKART analysis. An "early warning value" must be used when an alternate point is established. An alternate point of compliance must be determined and approved in accordance with WAC 173-200-060(2).

Ambient Water Quality -- The existing environmental condition of the water in a receiving water body.

Ammonia -- Ammonia is produced by the breakdown of nitrogenous materials in wastewater. Ammonia is toxic to aquatic organisms, exerts an oxygen demand, and contributes to eutrophication. It also increases the amount of chlorine needed to disinfect wastewater.

Annual Average Design Flow (AADF) -- Average of the daily flow volumes anticipated to occur over a calendar year.

Average Monthly (Intermittent) Discharge Limit-- The average of the measured values obtained over a calendar month's time taking into account zero discharge days.

Average Monthly Discharge Limit -- The average of the measured values obtained over a calendar month's time.

Background Water Quality -- The concentrations of chemical, physical, biological or radiological constituents or other characteristics in or of groundwater at a particular point in time upgradient of an activity that has not been affected by that activity, [WAC 173-200-020(3)]. Background water quality for any parameter is statistically defined as the 95 percent upper tolerance interval with a 95 percent confidence based on at least eight hydraulically upgradient water quality samples. The eight samples are collected over a period of at least one year, with no more than one sample collected during any month in a single calendar year.

Best Management Practices (BMPs) -- Schedules of activities, prohibitions of practices, maintenance procedures, and other physical, structural and/or managerial practices to prevent or reduce the pollution of waters of the state. BMPs include treatment systems, operating procedures, and practices to control: plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. BMPs may be further categorized as operational, source control, erosion and sediment control, and treatment BMPs.

BOD5 -- Determining the five-day Biochemical Oxygen Demand of an effluent is an indirect way of measuring the quantity of organic material present in an effluent that is utilized by bacteria. The BOD5 is used in modeling to measure the reduction of dissolved oxygen in receiving waters after effluent is discharged. Stress caused by reduced dissolved oxygen levels makes organisms less competitive and less able to sustain their species in the aquatic environment. Although BOD_5 is not a specific compound, it is defined as a conventional pollutant under the federal Clean Water Act.

Bypass -- The intentional diversion of waste streams from any portion of a treatment facility.

Categorical Pretreatment Standards -- National pretreatment standards specifying quantities or concentrations of pollutants or pollutant properties, which may be discharged to a POTW by existing or new industrial users in specific industrial subcategories.

Chlorine -- A chemical used to disinfect wastewaters of pathogens harmful to human health. It is also extremely toxic to aquatic life.

Chronic Toxicity -- The effect of a compound on an organism over a relatively long time, often 1/10 of an organism's lifespan or more. Chronic toxicity can measure survival, reproduction or growth rates, or other parameters to measure the toxic effects of a compound or combination of compounds.

Clean Water Act (CWA) -- The federal Water Pollution Control Act enacted by Public Law 92-500, as amended by Public Laws 95-217, 95-576, 96-483, 97-117; USC 1251 et seq.

Compliance Inspection-Without Sampling -- A site visit for the purpose of determining the compliance of a facility with the terms and conditions of its permit or with applicable statutes and regulations.

Compliance Inspection-With Sampling -- A site visit for the purpose of determining the compliance of a facility with the terms and conditions of its permit or with applicable statutes and regulations. In addition it includes as a minimum, sampling and analysis for all parameters with limits in the permit to ascertain compliance with those limits; and, for municipal facilities, sampling of influent to ascertain compliance with the 85 percent removal requirement. Ecology may conduct additional sampling.

Composite Sample -- A mixture of grab samples collected at the same sampling point at different times, formed either by continuous sampling or by mixing discrete samples. May be "time-composite" (collected at constant time intervals) or "flow-proportional" (collected either as a constant sample volume at time intervals proportional to stream flow, or collected by increasing the volume of each aliquot as the flow increased while maintaining a constant time interval between the aliquots).

Construction Activity -- Clearing, grading, excavation, and any other activity, which disturbs the surface of the land. Such activities may include road building; construction of residential houses, office buildings, or industrial buildings; and demolition activity.

Continuous Monitoring -- Uninterrupted, unless otherwise noted in the permit.

Critical Condition -- The time during which the combination of receiving water and waste discharge conditions have the highest potential for causing toxicity in the receiving water environment. This situation usually occurs when the flow within a water body is low, thus, its ability to dilute effluent is reduced.

Date of Receipt – This is defined in RCW 43.21B.001(2) as five business days after the date of mailing; or the date of actual receipt, when the actual receipt date can be proven by a preponderance of the evidence. The recipient's sworn affidavit or declaration indicating the date of receipt, which is unchallenged by the agency, constitutes sufficient evidence of actual receipt. The date of actual receipt, however, may not exceed forty-five days from the date of mailing.

Detection Limit -- The minimum concentration of a substance that can be measured and reported with 99 percent confidence that the pollutant concentration is above zero and is determined from analysis of a sample in a given matrix containing the pollutant.

Dilution Factor (DF) -- A measure of the amount of mixing of effluent and receiving water that occurs at the boundary of the mixing zone. Expressed as the inverse of the percent effluent fraction, for example, a dilution factor of 10 means the effluent comprises 10 percent by volume and the receiving water 90 percent.

Distribution Uniformity -- The uniformity of infiltration (or application in the case of sprinkle or trickle irrigation) throughout the field expressed as a percent relating to the average depth infiltrated in the lowest one-quarter of the area to the average depth of water infiltrated.

Early Warning Value -- The concentration of a pollutant set in accordance with WAC 173-200-070 that is a percentage of an enforcement limit. It may be established in the effluent, groundwater, surface water, the vadose zone or within the treatment process. This value acts as a trigger to detect and respond to increasing contaminant concentrations prior to the degradation of a beneficial use.

Enforcement Limit -- The concentration assigned to a contaminant in the groundwater at the point of compliance for the purpose of regulation, [WAC 173-200-020(11)]. This limit assures that a groundwater criterion will not be exceeded and that background water quality will be protected.

Engineering Report -- A document that thoroughly examines the engineering and administrative aspects of a particular domestic or industrial wastewater facility. The report must contain the appropriate information required in WAC 173-240-060 or 173-240-130.

Fecal Coliform Bacteria -- Fecal coliform bacteria are used as indicators of pathogenic bacteria in the effluent that are harmful to humans. Pathogenic bacteria in wastewater discharges are controlled by disinfecting the wastewater. The presence of high numbers of fecal coliform bacteria in a water body can indicate the recent release of untreated wastewater and/or the presence of animal feces.

Grab Sample -- A single sample or measurement taken at a specific time or over as short a period of time as is feasible.

Groundwater -- Water in a saturated zone or stratum beneath the surface of land or below a surface water body.

Industrial User -- A discharger of wastewater to the sanitary sewer that is not sanitary wastewater or is not equivalent to sanitary wastewater in character.

Industrial Wastewater -- Water or liquid-carried waste from industrial or commercial processes, as distinct from domestic wastewater. These wastes may result from any process or activity of industry, manufacture, trade or business; from the development of any natural resource; or from animal operations such as feed lots, poultry houses, or dairies. The term includes contaminated stormwater and, also, leachate from solid waste facilities.

Interference -- A discharge which, alone or in conjunction with a discharge or discharges from other sources, both:

- Inhibits or disrupts the POTW, its treatment processes or operations, or its sludge processes, use or disposal; and

- Therefore is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation) or of the prevention of sewage sludge use or disposal in compliance with the following statutory provisions and regulations or permits issued thereunder (or more stringent State or local regulations): Section 405 of the Clean Water Act, the Solid Waste Disposal Act (SWDA) (including title II, more commonly referred to as the Resource Conservation and Recovery Act (RCRA), and including State regulations contained in any State sludge management plan prepared pursuant to subtitle D of the SWDA), sludge regulations appearing in 40 CFR Part 507, the Clean Air Act, the Toxic Substances Control Act, and the Marine Protection, Research and Sanctuaries Act.

Local Limits -- Specific prohibitions or limits on pollutants or pollutant parameters developed by a POTW.

Major Facility -- A facility discharging to surface water with an EPA rating score of > 80 points based on such factors as flow volume, toxic pollutant potential, and public health impact.

Maximum Daily Discharge Limit -- The highest allowable daily discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. The daily discharge is calculated as the average measurement of the pollutant over the day.

Maximum Day Design Flow (MDDF) -- The largest volume of flow anticipated to occur during a one-day period, expressed as a daily average.

Maximum Month Design Flow (MMDF) -- The largest volume of flow anticipated to occur during a continuous 30-day period, expressed as a daily average.

Maximum Week Design Flow (MWDF) -- The largest volume of flow anticipated to occur during a continuous seven-day period, expressed as a daily average.

Method Detection Level (MDL) -- See Detection Limit.

Minor Facility -- A facility discharging to surface water with an EPA rating score of < 80 points based on such factors as flow volume, toxic pollutant potential, and public health impact.

Mixing Zone -- An area that surrounds an effluent discharge within which water quality criteria may be exceeded. The permit specifies the area of the authorized mixing zone that Ecology defines following procedures outlined in state regulations (chapter 173-201A WAC).

National Pollutant Discharge Elimination System (NPDES) -- The NPDES (Section 402 of the Clean Water Act) is the federal wastewater permitting system for discharges to navigable waters of the United States. Many states, including the state of Washington, have been delegated the authority to issue these permits. NPDES permits issued by Washington State permit writers are joint NPDES/State permits issued under both state and federal laws.

pH -- The pH of a liquid measures its acidity or alkalinity. It is the negative logarithm of the hydrogen ion concentration. A pH of 7 is defined as neutral and large variations above or below this value are considered harmful to most aquatic life.

Pass-through -- A discharge which exits the POTW into waters of the State in quantities or concentrations which, alone or in conjunction with a discharge or discharges from other sources, is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation), or which is a cause of a violation of State water quality standards.

Peak Hour Design Flow (PHDF) -- The largest volume of flow anticipated to occur during a one-hour period, expressed as a daily or hourly average.

Peak Instantaneous Design Flow (PIDF) -- The maximum anticipated instantaneous flow.

Point of Compliance -- The location in the groundwater where the enforcement limit must not be exceeded and a facility must comply with the Ground Water Quality Standards. Ecology determines this limit on a site-specific basis. Ecology locates the point of compliance in the groundwater as near and directly downgradient from the pollutant source as technically, hydrogeologically, and geographically feasible, unless it approves an alternative point of compliance.

Potential Significant Industrial User (PSIU) --A potential significant industrial user is defined as an Industrial User that does not meet the criteria for a Significant Industrial User, but which discharges wastewater meeting one or more of the following criteria:

a. Exceeds 0.5 percent of treatment plant design capacity criteria and discharges <25,000 gallons per day or;

b. Is a member of a group of similar industrial users which, taken together, have the potential to cause pass through or interference at the POTW (e.g. facilities which develop photographic film or paper, and car washes). Ecology may determine that a discharger initially classified as a potential significant industrial user should be managed as a significant industrial user.

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).

Reasonable Potential -- A reasonable potential to cause a water quality violation, or loss of sensitive and/or important habitat.

Responsible Corporate Officer -- 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 employing more than 250 persons or have gross annual sales or expenditures exceeding $25 million (in second quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures (40 CFR 122.22).

Sample Maximum -- No sample may exceed this value.

Significant Industrial User (SIU) --

a. All industrial users subject to Categorical Pretreatment Standards under 40 CFR 403.6 and 40 CFR Chapter I, Subchapter N; and

b. Any other industrial user that: discharges an average of 25,000 gallons per day or more of process wastewater to the POTW (excluding sanitary, noncontact cooling, and boiler blow-down wastewater); contributes a process wastestream that makes up 5 percent or more of the average dry weather hydraulic or organic capacity of the POTW treatment plant; or is designated as such by the Control Authority* on the basis that the industrial user has a reasonable potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement [in accordance with 40 CFR 403.8(f)(6)].

Upon finding that the industrial user meeting the criteria in paragraph 2, above, has no reasonable potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement, the Control Authority* may at any time, on its own initiative or in response to a petition received from an industrial user or POTW, and in accordance with 40 CFR 403.8(f)(6), determine that such industrial user is not a significant industrial user.

*The term "Control Authority" refers to the Washington State Department of Ecology in the case of non-delegated POTWs or to the POTW in the case of delegated POTWs.

Slug Discharge -- Any discharge of a non-routine, episodic nature, including but not limited to an accidental spill or a non-customary batch discharge to the POTW. This may include any pollutant released at a flow rate that may cause interference or pass through with the POTW or in any way violate the permit conditions or the POTW's regulations and local limits.

Soil Scientist -- An individual who is registered as a Certified or Registered Professional Soil Scientist or as a Certified Professional Soil Specialist by the American Registry of Certified Professionals in Agronomy, Crops, and Soils or by the National Society of Consulting Scientists or who has the credentials for membership. Minimum requirements for eligibility are: possession of a baccalaureate, masters, or doctorate degree from a U.S. or Canadian institution with a minimum of 30 semester hours or 45 quarter hours professional core courses in agronomy, crops or soils, and have 5,3,or 1 years, respectively, of professional experience working in the area of agronomy, crops, or soils.

Solid Waste -- All putrescible and non-putrescible solid and semisolid wastes including, but not limited to, garbage, rubbish, ashes, industrial wastes, swill, sewage sludge, demolition and construction wastes,

abandoned vehicles or parts thereof, contaminated soils and contaminated dredged material, and recyclable materials.

Soluble BOD_5 -- Determining the soluble fraction of Biochemical Oxygen Demand of an effluent is an indirect way of measuring the quantity of soluble organic material present in an effluent that is utilized by bacteria. Although the soluble BOD_5 test is not specifically described in Standard Methods, filtering the raw sample through at least a 1.2 um filter prior to running the standard BOD_5 test is sufficient to remove the particulate organic fraction.

State Waters -- Lakes, rivers, ponds, streams, inland waters, underground waters, salt waters, and all other surface waters and watercourses within the jurisdiction of the state of Washington.

Stormwater--That portion of precipitation that does not naturally percolate into the ground or evaporate, but flows via overland flow, interflow, pipes, and other features of a stormwater drainage system into a defined surface water body, or a constructed infiltration facility.

Technology-Based Effluent Limit -- A permit limit based on the ability of a treatment method to reduce the pollutant.

Total Coliform Bacteria--A microbiological test, which detects and enumerates the total coliform group of bacteria in water samples.

Total Dissolved Solids--That portion of total solids in water or wastewater that passes through a specific filter.

Total Maximum Daily Load (TMDL) --A determination of the amount of pollutant that a water body can receive and still meet water quality standards.

Total Suspended Solids (TSS) -- Total suspended solids is the particulate material in an effluent. Large quantities of TSS discharged to a receiving water may result in solids accumulation. Apart from any toxic effects attributable to substances leached out by water, suspended solids may kill fish, shellfish, and other aquatic organisms by causing abrasive injuries and by clogging the gills and respiratory passages of various aquatic fauna. Indirectly, suspended solids can screen out light and can promote and maintain the development of noxious conditions through oxygen depletion.

Upset -- 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, lack of preventative maintenance, or careless or improper operation.

Water Quality-Based Effluent Limit -- A limit imposed on the concentration of an effluent parameter to prevent the concentration of that parameter from exceeding its water quality criterion after discharge into receiving waters.

APPENDIX D--RESPONSE TO COMMENTS

The following comments were received during the Public Notice of Permit held for State Reclaimed Water Permit ST 6206. The public notice lasted from May 9, 2018, through June 29, 2018.

Below is a listing of the comments received. Some comments have been summarized for brevity. Each comment is followed by the corresponding response, permit change (or lack of change), and the Ecology justification of the change (or lack of change).

Comments by LOTT Clean Water Alliance, the city of Lacey, and the city of Olympia:

Comment 1:

> Permit ST 6206, Page 1, Permittees. Please correct the address for the city of Lacey. It should be listed as "420 College Street Southeast" rather than Northeast.

Response 1:

> The city of Lacey was deleted as a Permittee.

Comment 2:

> Permit ST 6206, Page 2, Table of Contents. There are two typos in the Table of Contents; R2B: Ground Waterwater Monitoring and R6A: Certified Pperator.

Response 2:

> Typos have been corrected.

Comment 3:

> Permit ST 6206, Page 7, Groundwater Enforcement Limits. The points of compliance for the Hawks Prairie Ponds and Recharge Basins are listed as multiple wells: MW1, MW5, MW6, MW8, MW9, and MW11. Having multiple points of compliance can be complex and confusing. In addition, several of the wells listed are located in the interior of the site (MW6 and MW8), rather than along the perimeter, thus, data from these wells would not account for any soil aquifer treatment that occurs within the site prior to the groundwater reaching the property boundaries. We ask that you consider limiting the points of compliance for the Hawks Prairie site to those wells located along the southern boundary, as the primary flow path for infiltrated water is to the south. Those wells are MW5, MW6, and MW11.

Response 3:

> WAC 173-200-060 states that the point of compliance shall be established in the groundwater as near the source as technically, hydrogeologically, and geographically feasible. Alternative points of compliance can be established at a location some distance from the source up to but not exceeding the property boundary. We have tried to streamline the number of wells monitored during previous permit cycles and all the wells still being monitored have some merit as continuing use as compliance wells. Typically several wells are used as compliance wells and the monitoring network seems to be working fine as is. With LOTT's Reclaimed Water Infiltration Study still

ongoing, it seems premature to make any additional changes to the monitoring network now. No changes were made to the permit based on this comment.

Comment 4:

Permit ST 6206, Page 10, Groundwater Monitoring. The first sentence should refer to the "Permittees" plural since LOTT is monitoring the Hawks Prairie wells and Lacey is monitoring the Woodland Creek Groundwater Recharge Facility wells.

Response 4:

Lacey was eliminated as a Permittee, so "Permittee" was not made plural. While the permit requires the Permittee to monitor the wells, it is understood that LOTT may pass that requirement on to the city of Lacey with a Reclaimed Water Use Agreement, or other such agreement.

Comment 5:

Permit ST 6206, Page 11, Groundwater Monitoring Parameters Table. For the metals, we are assuming that the samples should be analyzed for total metals, as with the current permit. If that is the case, please indicate that in the table.

Response 5:

Monitoring should continue to be for Total Metals. Table was clarified.

Comment 6:

Permit ST 6206, Page 12, Section R2D3c, Calibration of chlorine measurement instruments. The draft permit states that the chlorine measurement instrument will be calibrated. The continuous chlorine measuring instrument that is used is the Hach Cl17. It cannot be calibrated. It is checked on a daily basis and its reagents and tubing are changed on a monthly basis.

Response 6:

R2.D.3.c was changed to reflect the chlorine measurement instrument not being calibrated.

Comment 7:

Permit ST 6206, Page 29, Section R9, Goose Pond Water Quality Study. First paragraph: please clarify the roles of the Permittees. Suggest editing this to, "This permit requirement will be implemented by both Permittees, with LOTT being the Permittee responsible for implementing subsection B, and the city of Lacey being the Permittee responsible for implementing subsections A, C, D, and F. The report required in subsection E will be jointly submitted by both Permittees. To implement this permit requirement, the city of Lacey will need permission for access to Goose Pond located immediately west of the Woodland Creek Groundwater Recharge Facility. The City of Lacey shall make good faith efforts to obtain that permission."

Response 7:

With the city of Lacey having purchased Goose Pond, permit condition R9 was deleted. Some of the monitoring requirements that were part of R9 were moved to R2 as the monitoring is still needed to better understand what is happening to Goose Pond. The permit does not specify roles in the monitoring listed in R2. That will need to be worked out between LOTT and the city of Lacey in their Reclaimed Water Use Agreement.

Comment 8:

Fact Sheet, Page 1, Purpose of this Fact Sheet. First paragraph, last sentence: This sentence in not entirely clear or accurate regarding which entity owns and/or operates each facility. We suggest instead "… allow the beneficial use of reclaimed water to recharge groundwater at LOTT's Hawks Prairie Ponds and Recharge Basins and at the Woodland Creek Groundwater Recharge Facility, which is owned by the cities of Lacey and Olympia and operated by the city of Lacey."

Fourth paragrah, first sentence: For accuracy, please indicate "The LOTT Clean Water Alliance and the cities of Lacey and Olympia have reviewed the draft permit…"

Response 8:

Sentences changed as suggested to improve clarity and accuracy.

Comment 9:

Fact Sheet, Page 1, Summary. First paragraph, last sentence: For accuracy, please replace this sentence with the following: "The Woodland Creek Groundwater Recharge Facility functions as mitigation for new and transferred municipal water rights for the cities of Lacey and Olympia. The facility was constructed on property owned by the city of Lacey. The facility itself is jointly owned by the cities of Lacey and Olympia. Lacey operates the facility, while Olympia shares the cost."

Response 9:

Sentence changed as suggested to improve accuracy.

Comment 10:

Third paragraph: As noted in comments above, LOTT will have some involvement in complying with Permit Condition R9 and Lacey also monitors groundwater for Permit Condition R2 B. Suggest editing this paragraph to, "in the permit, the term "Permittee" refers to LOTT; except in Permit Condidtion R2 B and R9, in which "Permittees" refers to both LOTT and the city of Lacey."

Response 10:

With the city of Lacey no longer being a Permittee, the paragraph was deleted.

Comment 11:

Fact Sheet, Page 6, second paragraph. The Woodland Creek Groundwater Recharge Facility started infiltrating reclaimed water in July 2014. The facility was tested using potable water in December

2013. Suggest editing this paragraph to state "All reclaimed water produced by the Martin Way Reclaimed Water Plant had been used for groundwater recharge at the Hawks Prairie Ponds and Recharge Basins until 2014. Two of the partner cities of LOTT, Lacey and Olympia, developed a groundwater recharge facility at the Woodland Creek Community Park that began using reclaimed water for infiltration in 2014. The reclaimed water used at…"

Response 11:

Sentences changed as suggested to clarify start date.

Comment 12:

Fact Sheet, Page 6, B. Description of Groundwater. As a result of LOTT's Reclaimed Water Infiltration Study, we have improved our understanding of the hydrogeology underlying the Hawks Prairie Recharge Basins. In case you wish to update the information provided in the second paragraph of the description, here is a slightly revised version: "The shallow aquifer is hosted by unconsolidated sedimentary deposits that underlie the basin site. The uppermost of these sediments is the Vashon Recessional Outwash Formation, a highly permeable sandy gravel that is unsaturated (vadose zone). Beneath this layer is the Vashon Advance Outwash Formation, which is the uppermost shallow unconfined aquifer that is composed of sand and gravel with interbeds of silty sand. The saturated thickness ranges from about 25 to 50 feet. The depth to groundwater in the Shallow Aquifer ranges from about 80 feet to 130 feet from ground surface. The Vashon Till Formation (unsorted, dense, silt, clay, sand and gravel) is regionally present in thin 2 to 5-foot thick layers on the property. The lower portion of the Vashon Advance Outwash transitions into the Kitsap Formation, a low permeability unit composed of silty sand with some silty-clay interbeds. The Kitsap Formation forms the lower confining unit boundary to the shallow aquifer. Below the Kitsap Formation is a deeper confined aquifer called the Sea Level Aquifer which is composed of discontinuous, sand and gravel layers interbedded with silt/sand layers."

Response 12:

Paragraph updated as suggested.

Comment 13:

Fact Sheet, Page 7, second paragraph. LOTT installed additional monitoring wells at the site as part of the Reclaimed Water Infiltration Study. This paragraph could be updated to state "LOTT has installed 16 monitoring wells at the basin site that can be used to test groundwater quality. Six of these wells are include in the permit as monitoring wells."

Response 13:

The number of wells was revised to 16.

Comment 14:

Fact Sheet, Page 23, first paragraph. There is a typo in …Standard Operatingon Procedure…

Response 14:

Updated paragraph and corrected typo.

Comments by Rick and Lavada Sprout & Nathaniel and Thelma Jackson.

Comment 15:

We request that the LOTT-Woodland Creek Station Treatment Facility located in the Woodland Creek Community Park be **discontinued**, and this permit not be issued until such time that the city of Lacey complies with the terms of the permit and provides a comprehensive plan which ensures that Goose Pond is kept free of contamination. A treatment plant at this environmentally sensitive location isn't safe for the surrounding water resources as evidenced by the recent contamination of the historic Goose Pond.

We base our request on the following concerns:

1. Section R1-A, page 5 reads: *All reclaimed water distribution and activities authorized by this permit must be consistent with the terms and conditions of this permit. The distribution of reclaimed water containing any of the following constituents or parameters more frequently than, or at a concentration in excess of, that authorized by this permit constitutes a violation of the terms and conditions of this permit.*

   Treated water was released in excess of permissible levels and we, the property owners, were not notified and didn't know of the release until the pond showed obvious signs that it had been contaminated. No arrangements were made to ensure monitoring of the pond after the release of polluted water from the treatment facility until we observed drastic ecological changes in wildlife habits and rapid growth of an invasive weed on the surface of the pond. Had we been informed sooner, the city of Lacey may have taken measures to reduce the extent of the damage before it reached the disastrous level it did before we became aware. Pictures of the pond, before and after this contaminated water release, are evidence of the damage. **We have witnessed the following effects since polluted water was released in the pond:**

   - Decline in number and species of ducks using the pond
   - Disappearance of annual pair of nesting Canadian geese
   - Drastic change in the appearance of the pond due to invasion of duckweed and other aquatic plants, resulting in 2.5 to 3 inch mat of growth covering the pond
   - Noticeable decline in the number of Great Blue Herons using the pond. Eye witnessed death of one of them drowning after landing on the carpet of duckweed growth and other new weed species and was unable to swim.
   - Decline in bullfrog population, as evidenced by disappearance of their Spring mating calls
   - Drastic decline in species and quantity of different birds around and using the pond

- Absence of usual and naturally-occurring weeds and vegetation after application of herbicide resulting in loss of traditional food supply for wildlife and fish

- Loss of recreational fishing (rainbow trout and bass) due to contamination, making the fish no longer edible

- Other consequences not known at this time

2. Section R4-H, page 22 reads: *Ecology may revoke authorization to provide service if the Permittee fails to comply with any requirement in this permit. Ecology will base its determination to revoke authorization 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 will notify the Permittee in writing and provide a reasonable opportunity and time frame to correct the noncompliance.*

   The city of Lacey can't ensure adequate monitoring of Goose Pond **without ownership**. This in itself is a violation and should result in the termination of using the pond to catch the treated water. Under the current permit, contaminated water was released into the pond without notification to the Department of Ecology or the property owners.

   No communications were provided to property owners about plans for such a release. If the facility is allowed to continue, we request that all parties - the Department of Ecology and the property owners of record for Goose Pond and its shoreline - be notified immediately on discovery that any and all reclaimed water distribution and activities authorized by this permit have been violated.

3. Section R9, page 29 reads: *To implement this permit requirement, the Permittee and city of Lacey will need permission for access to Goose Pond located immediately west of the Woodland Creek Groundwater Recharge Facility. The Permittee and the Cities shall make good faith efforts to obtain that permission.*

   If written permission to access the property is not granted by October 1, 2018, the Permittee shall notify Ecology that access has not been granted; and if requested by the Permittee, Ecology may waive these requirements in whole or in part for the monitoring period of January 1, 2019, through December 31, 2019. Ecology may consider a request for waiver for 2020 if property owners do not grant permission for access by October 1, 2019.

   While we are not consenting customers, we are, by default, using this water in our pond. As such, we have received nothing to provide us with environmental protection. **We have been very cooperative with the city of Lacey in the procedures utilized thus far:**

   a. Collection and analysis of aquatic weed growth - found to be duckweed

   b. Water sampling by qualified DOE personnel and contracted specialists which confirmed extraordinary and unusually high levels of nitrogen and phosphorus

c. Removal of excessive growth of vegetation from surface of the pond, collecting several truckloads of duck weed, the primary identified invader

d. Addition of 17 carp fish to eat overgrown vegetation

e. Several applications of herbicide to kill or halt weed growth

f. On-going inspection and water testing

g. Surveying pond for purchase

h. Adjusting our work schedules and calendars for a litany of meetings with City of Lacey employees regarding Goose Pond problems and issues

The draft permit further states that *The Permittee shall conduct a study to evaluate the impact, if any, of the Woodland Creek Groundwater Recharge Facility on Goose Pond.*

This step should have been followed before the current permit was issued and the pond should have been monitored from the inception of the water treatment facility. In addition, we request that the study includes documented measures to ensure the protection of the pond from future contamination and that all permits be suspended until such time as a study is complete.

4. General Conditions- G2 Right of Entry, page 31 reads: *Representatives of Ecology have the right to enter at all reasonable times in or upon property, public or private for the purpose of inspecting and investigating conditions relating to the pollution or the possible pollution of any waters of the state.*

The city of Lacey has not acted in good faith to obtain our property. Access to the pond for testing purposes is dependent upon access to our property on a weekly basis for several years, to which we object. We are **declining access** to the pond from our property and are not entertaining a change to that decision. It seems from our view that the City is expecting the Department of Ecology to force us to give away our rights and concede our property without fair compensation. In essence, they are forcing us to give them access. **The issues of liability and invasion of our privacy are of grave concern to us** as it relates to access to our property by governmental entities. They should have first notified and explained to us that the system was designed to run off into the pond. We would have protested once the design was made public. They should have been required to gain access to regularly monitor the pond before the facility was developed. This is an egregious violation of transparency and property ownership rights. This was a serious failure to realize the necessity for access before the project could become viable. The City needs to own the pond to gain the frequent and regular access needed for the testing and monitoring of the water as required in the permit, now that so much harm has been done. We have not been informed of the possible short and long-term harm that multiple remaining chemicals in LOTT waste water can do to our pond, fish and other aquatic species.

5. G3 - Permit Actions, page 32 reads: *This permit is subject to modification, suspension, or termination, in whole or in part by Ecology for any of the following causes:*

a. Violation of any permit term or condition;

b. Obtaining a permit by misrepresentation of failure to disclose all relevant facts;

c. A material change in quantity or type of waste disposal;

d. A material change in the condition of the waters of the state; or

e. Nonpayment of fees accessed pursuant to RCW 90.48.465.

It appears to us that items A through D are in question for this permit.

6. G5 - Reporting a Cause for Modification - page 32 reads: *The Permittee must submit a new application at least 180 days before it wants to discharge more of any pollutant, a new pollutant, or more flow than allowed under this permit... Submitting a notice of dangerous waste discharge triggers this requirement as well.*

   We strongly object to granting discharge permission of any more pollutants, a new pollutant, or more flow than allowed under this permit. We are appalled and disheartened that a government agency, whose mission is to protect natural resources and the ecosystem, would give credence by allowing harmful pollutants to be discharged into our ecologically pristine pond in this permit. After seeing the before and after photos of this once beautiful small body of water, we're sure that you will agree that the pond has reached its saturation level and more serious consequences will result with the release of any more contaminated water from the treatment facility into our pond.

We sincerely hope that these important concerns will be taken into consideration as you contemplate approval of this permit.

Response 15:

When Ecology first reviewed this site for the use of groundwater recharge by the cities of Lacey and Olympia, the Woodland Creek Groundwater Recharge Facility seemed poorly located. It has nearby surface water bodies (Goose Pond, Woodland Creek, and Goose Lake) along with seasonally shallow groundwater. Modeling completed by the cities of Lacey and Olympia did seem to indicate that some of the water would flow through Goose Pond.

In originally considering permitting the recharge site, Ecology determined that the cities of Lacey and Olympia may not be able to recharge as much water as their studies indicated they could, but that there likely was a safe level of recharge that could be completed. Ecology would deny the permit only if we determined no water could safely be recharged at the site.

Ecology tried to limit recharge to a safe level by requiring an unsaturated zone of at least 3 feet be maintained under the recharge facility and requiring that no local discharge occur to Woodland Creek. This requirement could be confirmed by water level measurements in monitoring well WC-12. This strategy seems to have worked to protect Woodland Creek, as monitoring well WC-12 is north of the recharge site, between the site and the creek. This monitoring strategy may not have been as successful in protecting Goose Pond, as the pond is west of the recharge site, and at a lower elevation. The lower elevation is the more difficult issue, with Goose Pond really being a groundwater feature where the surface level mirrors the groundwater level.

Ecology had recommended background studies be done on Goose Pond prior to recharge at the site. It is Ecology's understanding that the cities were unable to work out access to do any background studies. It is unfortunate that background studies were not completed, and disappointing that back in 2014 when the reclaimed water had more nutrients than expected, the cities decided to start-up the recharge site anyway and recharge at higher nutrient levels than had been modeled. It would not be a surprise if there was an impact to Goose Pond by the initial, inappropriate operation of the recharge facility.

The cities have continued to recharge at the site, but at lower flow levels and with reclaimed water with lower nutrient levels. The cities can continue to do this under the existing permit; the issuance of this permit would not allow the cities to do anything they are not already doing. Instead, the issuance of this permit is meant to add additional monitoring on the recharge.

Ecology has been informed that since these comments were submitted, that the city of Lacey has purchased Goose Pond. Ecology had planned to develop better controls on the recharge by requiring the Goose Pond Study described in section R9 of the draft permit. With Lacey now owning the pond, the Goose Pond Study was deleted from the permit, and some of the basic monitoring that would have been required by the study were moved into section R2 of the permit. Ecology is requiring monitoring of the Reclaimed Water and the pond. Ecology also expects the Standard Operating Procedure that describes how recharge is done, will be followed. The monitoring may refine the Standard Operating Procedure.

Already, the existing Standard Operating Procedure puts meaningful controls on the recharge such as only accepting reclaimed water with a nitrogen level of less than 5 mg/L, and more closely monitoring the water levels in monitoring well WC-11S. Monitoring well WC-11S is west of the recharge area, between the recharge area and Goose Pond. With the information gained from the operation up to this point, and better future tracking of reclaimed water nitrogen levels, groundwater levels, and climate as committed to in the present Standard Operating Procedures, the cities are on their way to safe operation of the Woodland Creek Groundwater Recharge Facility.

So, while initial poor operation at the Recharge Facility likely did impact Goose Pond, and while those impacts may linger for a while in a small pond with no inlet or outlet, it appears the cities are getting better at operating the Recharge Facility and are learning the limits of what they can do. Their ongoing present operation of the facility does not seem to be having the same negative impact as before.

As long as the cities keep the recharge to a safe level and follow the Standard Operating Procedures, the operation should be able to continue.