

Issuance Date: July 1, 2015  
Effective Date: August 1, 2015  
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## State Reclaimed Water Permit Number ST0007445

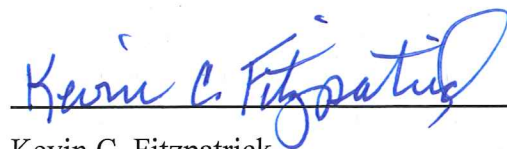
State of Washington  
DEPARTMENT OF ECOLOGY  
Northwest Regional Office  
3190 160<sup>th</sup> Avenue SE  
Bellevue, WA 98008-5452

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,

**King County Wastewater Treatment Division**  
**South Plant Water Reclamation Plant**  
**201 S. Jackson St., King Street Center, KSC-NR-0512**  
**Seattle, Washington 98104-3855**

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

Plant Location:	Water Reclamation Plant at King County South WWTP 1200 Monster Road SW, Renton, WA 98057
Reuse Locations:	Multiple locations identified in Reclaimed Water Condition R4.A
Treatment Type and Reuse Classification:	Advanced treatment of secondary effluent including coagulation, filtration, and disinfection
Beneficial Uses of Product Water:	Irrigation, commercial, and industrial uses at various locations as specified in Condition R4.A



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## Summary of Permit Report Submittals

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

Permit Section	Submittal	Frequency	First Submittal Date
R3.A	Discharge Monitoring Report (DMR)	Monthly	September 15, 2015
R3.B	Cross Connection Control Report	Annually	May 31, 2016
R3.G	Reporting Permit Violations	As necessary	
R4.C	Reclaimed Water Use Summary Plan	As necessary & with permit reapplication	July 31, 2019
R4.E	Sale and Distribution Agreements	As necessary	
R4.F	Service and Use Area Agreements	As necessary	
R6.E	Operations and Maintenance Manual	As necessary	
R9	Application for Permit Renewal	1/permit cycle	July 31, 2019

## Reclaimed Water Conditions

### R1. 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 at a concentration in excess of that authorized by this permit constitutes a violation of the terms and conditions of this permit.

Influent flows to the reclamation facility must not exceed the design criteria specified in Section R5, and must be secondary treated effluent from the South Plant WWTP that meets the effluents limits required by the NPDES permit #WA0029181.

Beginning on the effective date and lasting through the expiration date of this permit, the Permittee is authorized to produce and distribute Class A reclaimed water to public and private entities for commercial and industrial uses and to apply reclaimed water to land for irrigation at agronomic rates at the locations listed in Condition R4.

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. The distribution of reclaimed water is subject to the following limits:

Class A Reclaimed Water Limits		
Compliance Point - Coagulated/ Filtered Wastewater – Prior to Disinfection		
	Average Monthly <sup>a</sup>	Sample Maximum <sup>b</sup>
Turbidity	2 Nephelometric Turbidity Units (NTU)	5 NTU
Compliance Point - Disinfected - Reclaimed Water		
	7-Day Median <sup>c</sup>	Sample Maximum <sup>b</sup>
Total Coliform	2.2 cfu /100 mL	23 cfu /100 mL
	Instantaneous Minimum	Instantaneous Maximum
pH	6.0 standard units	9.0 standard units
Dissolved Oxygen (DO)	0.2 mg/L (must be measurable at all times)	No limit
Compliance Point – Reclaimed water storage tank distribution line		
	Instantaneous Minimum	
Total Chlorine Residual	0.5 mg/L <sup>d</sup>	

<sup>a</sup> Average monthly limits are based on the arithmetic mean of samples taken during distribution in a calendar month.

<sup>b</sup> Sample maximum means that no single sample may exceed this value. Report the maximum value measured per day 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, 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.

<sup>c</sup> Determine the 7-day median value using all of the bacteriological results of the last 7 days of analyses (the reporting day and the previous 6 days). If there is an even number of values over the 7 days, report the larger of the two median values.

<sup>d</sup> A total chlorine residual of at least 0.5 mg/L must be maintained during conveyance to the use area.

## R2. Monitoring requirements

### R2.A. Class A reclaimed water monitoring

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

Parameter	Units	Minimum Sampling Frequency	Sample Type
<b>(1) Coagulated/Filtered Water Prior to Disinfection</b>			
Turbidity <sup>a</sup>	NTU	Continuous <sup>b</sup>	Metered/recorded
<b>(2) Coagulant Feed</b>			
Coagulant	pounds	Daily	Metered Usage
<b>(3) Disinfected Reclaimed Water</b>			
pH <sup>c</sup>	Std Units	Daily	Measurement
Dissolved Oxygen <sup>d</sup>	mg/L	Daily	Grab <sup>e</sup>
Total Coliform <sup>f</sup>	# cfu /100mL	Daily	Grab
Total Residual Chlorine <sup>g</sup>	mg/L	Continuous <sup>b</sup>	Metered/recorded
Kjeldahl Nitrogen (TKN)	mg/L as N	Monthly	24-hour composite <sup>h</sup>
Nitrate + Nitrite Nitrogen	mg/L as N	Monthly	24-hour composite
Ammonia Nitrogen	mg/L as N	Monthly	24-hour composite
Total Nitrogen	mg/L as N	Monthly	Calculated
Total Phosphorus	mg/L as P	Monthly	24-hour composite
<b>(4) Distribution System – sampled at reclaimed water storage tank distribution line</b>			
Distributed Flow	gallons/day	Daily	Metered/recorded
Total Chlorine residual	mg/L	Daily	Grab
<b>(5) UV System <sup>i</sup></b>			
UV Dosage	mJ/cm <sup>2</sup>	Continuous <sup>b</sup>	Metered/recorded

<sup>a</sup> 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.

<sup>b</sup> Continuous means uninterrupted except for brief lengths of time for calibration, for power failure, or for unanticipated equipment repair or maintenance. The Permittee must measure and record continuous data at least every 30 minutes. The Permittee must sample every 4 hours when continuous monitoring is not possible.

<sup>c</sup> Report the instantaneous maximum and minimum pH daily. Do not average pH values.

<sup>d</sup> Report the daily minimum DO value.

<sup>e</sup> 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.

<sup>f</sup> 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: <http://www.ecy.wa.gov/programs/wq/permits/guidance.html> . Do not report a result as too numerous to count (TNTC). The Permittee must also calculate and report a daily 7-day median value.

<sup>g</sup> Permittee must monitor for chlorine continuously when using hypochlorite for disinfection purposes. When disinfecting with UV, chlorine monitoring only required daily in distribution system.

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

<sup>i</sup> UV system monitoring required when UV is used for disinfection; UV monitoring not required when disinfecting with hypochlorite.

***R2.B. Sampling and analytical procedures***

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

Sampling and analytical methods used to meet the 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 CFR Part 136.
- Standard Methods for the Examination of Water and Wastewater (APHA).

***R2.C. Flow measurement and continuous monitoring devices***

The Permittee must:

1. Select and use appropriate flow measurement and continuous monitoring devices and methods consistent with accepted scientific practices.
2. Install, calibrate, and maintain these devices to ensure the accuracy of the measurements is consistent with the accepted industry standard, the manufacturer's recommendation, and approved O&M manual procedures for the device and the wastestream.
3. 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 with a pH meter calibrated with standard buffers and analyzed within 15 minutes of sampling.
  - c. Must calibrate continuous chlorine measurement instruments using a grab sample within 15 minutes of sampling.
4. Maintain calibration records for at least three years.

***R2.D. Laboratory accreditation***

The Permittee must ensure that all monitoring data required by Ecology for permit specified parameters is prepared by a laboratory registered or accredited under the provisions of chapter 173-50 WAC, *Accreditation of Environmental Laboratories*. Flow, pH, and internal process control parameters are exempt from this requirement.

### **R3. Reporting and record keeping 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.

#### ***R3.A. Discharge monitoring reports***

The first monitoring period begins on the effective date of the permit. 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 and for the summary values (when applicable) included on the electronic form.

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

2. Enter the “No Discharge” reporting code for an entire DMR, for a specific monitoring point, or for a specific parameter as appropriate, if the Permittee did not discharge reclaimed water 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. Calculate the 7-day median values for coliform using:
  - a. The reported numeric value for all coliform samples measured above the detection value. For those samples measured below detection, use the detection value, unless all of the samples during the 7-day period are below detection, in which case report and use ½ the detection value in the calculation.
  - b. If multiple samples are taken in one day, use the arithmetic average for the day in the 7-day median calculation.
5. 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.
6. Calculate average values and total values 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 any 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.
7. Submit monthly DMRs for the parameters specified in R2, monitored at the corresponding frequencies, by the 15th day of the following month.

**R3.B. Cross connection control report**

Cross Connection Control Coordination: The Permittee must provide to DOH and Ecology an annual letter confirming that they have contacted all the public water supplier(s) where reclaimed water is being used in their service area. The letter must indicate where reclaimed water is used and for what purpose, and remind the water supplier(s) of their duty to comply with the cross connection control report requirements from DOH. This report is due annually by May 31<sup>st</sup>.

**R3.C. Permit submittals and schedules**

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

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

Water Quality Permit Coordinator  
Department of Ecology  
Northwest Regional Office  
3190 160<sup>th</sup> Avenue SE  
Bellevue, WA 98008-5452

**R3.D. Records retention**

The Permittee must retain records of all monitoring information for a minimum of three (3) years. Such information must include all calibration and maintenance records and all original recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit. The Permittee must extend this period of retention during the course of any unresolved litigation regarding the discharge of pollutants by the Permittee or when requested by Ecology.

The Permittee must retain all records pertaining to the Reclaimed Water Use Summary Plan for a minimum of three (3) years and must retain the plan onsite.

**R3.E. 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.

**R3.F. 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.

**R3.G. Reporting permit violations**

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

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

**a. Immediate reporting**

The Permittee must immediately report to Ecology and the Public Health of Seattle - King County:

- Any distribution of effluent that does not meet the requirements of this permit.
- Any overflows or discharges of effluent that does not meet the requirements of this permit to a waterbody used as a source of drinking water.

Northwest Regional Office	425-649-7000
Public Health of Seattle-King County	206-477-8177

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

The Permittee must report the following occurrences of noncompliance to Ecology at the telephone number listed above or on Ecology's spills website, within 24 hours from the time the Permittee becomes aware of any of the following circumstances. The Permittee must report:

1. Any noncompliance that may endanger health or the environment, unless previously reported under immediate reporting requirements.
2. Any unanticipated bypass that causes an exceedance of an effluent limit in the permit (see Section R6.D, "Bypass prohibited").
3. 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.

4. Any violation of an instantaneous minimum or maximum discharge limit for any of the pollutants in Section R1 of this permit.

**c. Report within five days**

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

1. A description of the noncompliance and its cause.
2. Maps, drawings, aerial photographs, or pictures to show the location and cause(s) of the non-compliance.
3. The period of noncompliance, including exact dates and times.
4. The estimated time the Permittee expects the noncompliance to continue if not yet corrected.
5. Steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.

**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 R3.A ("Discharge Monitoring Reports"). 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.

***R3.H. Failure to submit relevant or correct facts***

If 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.

***R3.I. 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 or DOH inspectors.

#### **R4. Class A reclaimed water distribution and use**

##### ***R4.A. Authorized uses and locations***

Beginning on the effective date and lasting through the expiration 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 Use Summary 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.B.

<b>Reclaimed Water Uses and Locations</b>		
<b>Customer</b>	<b>Use</b>	<b>Location</b>
Starfire Sports	Irrigation – soccer fields and landscaping areas.	Fort Dent Park - (leased from City of Tukwila)
City of Tukwila	Purple Hydrant – sewer flushing and street sweeping. Also, landscape irrigation.	Hydrant located south of Interurban Pump Station near S 140 <sup>th</sup> St.
King Conservation District	Irrigation – Wetland Plant Nursery	Island of land between Longacres Dr. and SW Grady Way.
City of Renton	Irrigation – Landscaping	North side of SW Grady Way between Longacres Dr. and Oaksdale Ave SW.
King County Wastewater Treatment Division	Irrigation – Landscaping	Outside WWTP fence line on north, west, and south sides.
King County Water and Land Resource Division Reclaimed Water Truck Fill Station @ South WWTP	Irrigation – Landscaping for levee, stream, and wetland buffer restoration.	Reclaimed water trucked to various sites in King County.
Bravo Environmental Reclaimed Water Truck Fill Station @ South WWTP	Hydro-excavation (excluding potable water lines), street sweeping, stormwater system cleaning, sewer flushing.	Reclaimed water trucked to various sites in King County.

##### ***R4.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 the *Water Reclamation and Reuse Standards*, 1997 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 County must meet the following conditions:

1. Beneficial use areas and requirements for use must comply with the *Water Reclamation and Reuse Standards*, 1997. 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 use area is located within King County or other nearby counties. The water reclamation facility and use areas must comply with local permitting and land use requirements.
3. 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.
4. The Permittee must list any new use areas in an updated Reclaimed Water Use Summary Plan and submit a copy of the revised plan to the DOH and Ecology as described in Reclaimed Water condition R4.C.
5. The Permittee must submit to the DOH and 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.

Groundwater recharge, 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.

**R4.C. Reclaimed Water Use Summary Plan**

The Permittee has prepared a Reclaimed Water Use Summary Plan which contains a summary description of the reclaimed water reuse distribution. The Permittee must review the plan at least annually and must update the plan whenever new uses or users are added to the distribution system. The Permittee must submit any plan revisions to Ecology for review and approval, and to DOH for review. The Permittee must also submit an updated plan with the next permit application. The plan must contain, but not be limited to, the following:

1. Description of the reclaimed water distribution system.
2. Identification of uses, users, purveyors, and location of reuse sites.
3. A thorough evaluation of reuse sites to include at a minimum the estimated volume of reclaimed water use at each site and the purpose and means of application (e.g., spray or drip irrigation). For irrigation uses, the plan must include the application rates and any expected impacts to ground water or surface water at the site.

**R4.D. Use area responsibilities**

1. The Permittee must develop general language, symbols, and colors to be used for notification signs and obtain approval from the DOH and Ecology. The signs must be used in all reclaimed water use areas, consistent with the *Water Reclamation and Reuse Standards*, 1997.
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 the DOH and 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 the DOH and 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 must be done so that cross connection problems do not arise. The Permittee must inspect tank trucks 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.
9. The Permittee must maintain setback distances from domestic wells as described in the *Water Reclamation and Reuse Standards*, 1997.

**R4.E. 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. A binding Sale and Distribution Agreement among the parties involved is required to ensure that distribution, operation, maintenance, and monitoring

meet all requirements of the DOH and Ecology. The Sale and Distribution Agreement must be consistent with the requirements of the *Water Reclamation and Reuse Standards*, 1997. A standard Sale and Distribution Agreement must be reviewed and approved by DOH and Ecology prior to implementation. A copy of each site-specific Sale and Distribution Agreement must be provided to DOH and Ecology prior to use.

2. The agreement must state which entity 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 the DOH and Ecology in accordance with this permit.
3. The Sale and Distribution Agreements must provide the Permittee with authority to terminate service of reclaimed water to a customer violating the *Water Reclamation and Reuse Standards* 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 DOH and Ecology in writing of any proposed changes to the approved standard Sale and Distribution Agreement.

**R4.F. Service and use area agreements**

Where the reclaimed water use area is not under direct control of the Permittee:

1. A binding Service and Use Area Agreement among the parties involved is required to ensure that construction, operation, maintenance, and monitoring meet all requirements of DOH and Ecology. This Service and Use Area Agreement must be consistent with the requirements of the *Water Reclamation and Reuse Standards*, 1997. A standard Service and Use Area Agreement must be reviewed and approved by DOH and Ecology prior to implementation. A copy of each site-specific Service and Use Area Agreement must be provided to DOH and Ecology prior to use.
2. The agreement must clarify which entity is responsible for on-site reclaimed water facilities, infrastructure, and activities inherent to the use of the reclaimed water to ensure that the system operates as approved by DOH and Ecology in accordance with this permit.
3. Reclaimed water use, including runoff and spray, must be confined to the designated and approved use areas.
4. The Service and Use Area Agreement must provide the Permittee with authority to terminate service of reclaimed water to a customer violating the state's Water Reclamation and Reuse Standards and restrictions outlined in the Reclaimed Water Use Agreement.
5. The Permittee must maintain all Service and Use Area Agreements for the duration of the permit. The Permittee must inform DOH and Ecology in writing of any proposed changes to the approved, standard Service and Use Area Agreement.

**R4.G. Irrigation uses**

1. For any irrigation use of reclaimed water, the hydraulic loading rate of reclaimed water must be applied at agronomic rates and be determined based on a water balance analysis or other methods such as moisture sensors, rain sensors, or hand inspections.
2. There must be no runoff of reclaimed water applied to land by spray irrigation to any surface waters of the state or to any land not authorized by approved Service and Use Area Agreement.
3. There must be no application of reclaimed water for irrigation purposes during periods of heavy or prolonged rainfall to prevent ground saturation and runoff.
4. There must be no application of reclaimed water for irrigation purposes when the ground is saturated or frozen.
5. The reclaimed water must not be applied to the irrigation lands in quantities that:
  - a. Significantly reduce or destroy the long-term infiltration rate of the soil.
  - b. Cause long-term anaerobic conditions in the soil.
  - c. Cause ponding of reclaimed water and produce objectionable odors or support insects or vectors.

**R4.H Commercial and industrial uses**

Commercial and industrial uses must conform to the state Water Reclamation and Reuse Standards for Class A reclaimed water. Any wastewater discharged from commercial or industrial uses is regulated as wastewater and subject to waste discharge permit requirements.

**R4.I. Other uses of reclaimed water**

Use of reclamation plant effluent within the bounds of the treatment facility is not required to meet the state Water Reclamation and Reuse Standards for Class A reclaimed water, except in areas where there is potential public exposure as determined by DOH and Ecology.

**R4.J. 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**

### ***R5.A. Design criteria***

The reclaimed water flows for the permitted facility must not exceed the following design criterion:

Maximum Daily Feed Rate to Filters	1.3 MGD
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### ***R5.B. Plans for increasing capacity***

The Permittee must submit to Ecology engineering reports and plans and specifications according to WAC 173-240 when planning to increase facility capacity.

### ***R5.C. Duty to mitigate***

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

### ***R5.D. Notification of new or altered sources***

The Permittee must submit written notice to Ecology whenever any new discharge or a substantial change in volume or character of an existing discharge into the wastewater treatment plant is proposed which would interfere with the operation of the reclaimed water treatment plant. This notice must include an evaluation of the treatment plant's ability to adequately treat the added flow and/or waste load, and the anticipated impact on the reclaimed water quality [40 CFR 122.42(b)].

## **R6. Operation and maintenance**

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.

### ***R6.A. Certified operator***

An operator certified for at least a Class IV plant by the State of Washington must be in responsible charge of the day-to-day operation of the reclaimed water treatment plant. An operator certified for at least a Class III plant must be in charge during all regularly scheduled shifts.

### ***R6.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. Maintenance of 0.5 mg/L total chlorine residual in the reclaimed water during conveyance from the treatment plant to the use areas, unless waived by the DOH and 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.

**R6.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 generators, or retention of inadequately treated wastes. The Permittee must maintain highest reliability class at the reclaimed water treatment plant as described in the *Water Reclamation and Reuse Standards* (1997), 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 oxidation, coagulation, 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.

**R6.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 and DOH by telephone within 24 hours of any discharge not meeting Class A entering the distribution system. The Permittee must not discharge substandard reclaimed water to the reclaimed water use areas.

**R6.E. Operations and maintenance manual**

1. O&M manual submittal and requirements

The Permittee must:

- a. Review the O&M Manual at least annually.
- b. Submit to Ecology for review and approval substantial changes or updates to the O&M Manual whenever it incorporates them into the manual.
- c. Keep the approved O&M Manual at the permitted facility.
- d. 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. The O&M manual must include:

- a. Emergency procedures for plant shutdown and cleanup in event of reclaimed water system upset or failure, or distribution system leak.
- b. System maintenance procedures that contribute to the generation of reclaimed water.
- c. Any directions to maintenance staff when cleaning, or maintaining other equipment or performing other tasks which are necessary to protect the operation of the reclaimed water system.
- d. Treatment plant process control monitoring schedule.
- e. Sampling protocols and procedures for compliance with the sampling and reporting requirements in the reclaimed water permit.
- f. Procedures to ensure that off spec reclaimed water is re-treated such that it meets all reclaimed water permit limits or is discharged through an approved NPDES outfall.
- g. 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.

**R7. Pretreatment**

The Permittee must ensure that all commercial and industrial contributors to the collection system are in compliance with pretreatment regulations, and that the pretreatment requirements in NPDES Permit No. WA0029581 are met.

**R8. Solid wastes**

Reclaimed water plant residual solids (i.e. sand filter backwash materials) must not be conveyed directly to the effluent transfer system (ETS). The handling of any residuals generated from the reclamation process must be as described in NPDES Permit No. WA0029581 and the South WWTP engineering report approved by Ecology.

**R9. Application for permit renewal or modification for facility changes**

The Permittee must submit an application for renewal of this permit by July 31, 2019.

The Permittee must also submit a new application or supplement at least one hundred eighty (180) days prior to commencement of process modifications in the permitted facility.

**General Conditions**

**G1. Signatory requirements**

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

1. All permit applications must be signed by either a principal executive officer or ranking elected official.
2. All reports required by this permit and other information requested by Ecology must be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:
  - a. The authorization is made in writing by the person described above and is submitted to Ecology at the time of authorization, and
  - b. The authorization specifies either a named individual or any individual occupying a named position.
3. Changes to authorization. If an authorization under paragraph G1.2, above, is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization must be submitted to Ecology prior to or together with any reports, information, or applications to be signed by an authorized representative.
4. Certification. Any person signing a document under this section must make the following certification:

"I certify under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system or those persons

directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

**G2. Right of 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 distribution 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 reclaimed water, 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:

1. Violation of any permit term or condition;
2. Obtaining a permit by misrepresentation or failure to disclose all relevant facts;
3. A material change in quantity or quality of reclaimed water distributed;
4. A material change in the condition of the waters of the state; or
5. 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 one hundred eighty (180) days before it wants to distribute more of any pollutant, a new pollutant, or more flow than allowed under this permit. The Permittee should use the State Waste Discharge Permit application, and submit required plans at the same time. Required plans include an Engineering Report, Plans and Specifications, and an Operations and Maintenance 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 obtain the written concurrence of the receiving POTW on the application before submitting it to Ecology. The Permittee must continue to comply with the existing permit until it is modified or reissued.

**G5. Plan review required**

Prior to constructing or modifying any treatment 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:

1. 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;
2. A copy of the permit is provided to the new owner and;
3. Ecology does not notify the Permittee of the need to modify the permit.

Unless this permit is automatically transferred according to Section 1, 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 ten thousand dollars and costs of prosecution, or by imprisonment in the discretion of the court. Each day upon which a willful violation occurs may be deemed a separate and additional violation.

Any person who violates the terms and conditions of a waste discharge permit incurs, in addition to any other penalty as provided by law, a civil penalty in the amount of up to ten thousand dollars 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 treatment facility covered by this permit. The review is to ensure consistency with chapters 90.46 and 90.48 RCW as required by RCW 70.150.040(9). In the event that Ecology does not comment within a thirty-day (30) period, the Permittee may assume consistency and proceed with the service agreement or the revised/updated service agreement.

## Appendix A

### LIST OF POLLUTANTS WITH ANALYTICAL METHODS, DETECTION LIMITS AND QUANTITATION LEVELS

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

- Another permit condition specifies other methods, detection levels, or quantitation levels.
- The method used produces measurable results in the sample and EPA has listed it as an EPA-approved method in 40 CFR Part 136, or EPA has granted the laboratory written permission to use the method.
- The Permittee knows that an alternate, less sensitive method (higher DL and QL) from those listed below is sufficient to produce measurable results in their effluent.
- If the Permittee is unable to obtain the required DL and QL due to matrix effects (such as for treatment plant influent or CSO effluent), the Permittee must strive to achieve to lowest possible DL and QL and report the DL and QL in the required report.

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.

All pollutants that have numeric limits in Section S1 of this permit must be analyzed with the methods specified below.

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.

Pollutant & CAS No. (if available)	Recommended Analytical Protocol	Detection (DL) <sup>1</sup> , µg/L unless specified	Quantitation Level (QL) <sup>2</sup> , µg/L unless specified
Biochemical Oxygen Demand	SM5210-B		2 mg/L
Total Suspended Solids	SM2540-D		5 mg/L
Total Ammonia (as N)	SM4500-NH3-B and C/D/E/G/H Kerouel & Aminot 1997		0.3 mg/L
Dissolved oxygen	SM4500-OC/OG		0.2 mg/L
pH	SM4500-H <sup>+</sup> B	N/A	N/A
Chlorine, Total Residual	SM4500 CI G 4500 CI D/E, Hach 8370		50.0
Total Coliform	SM 9221B, 9222B, 9223B	N/A	Specified in method - sample aliquot dependent
Nitrate + Nitrite Nitrogen (as N)	SM4500-NO3- E/F/H		200
Nitrogen, Total Kjeldahl (as N)	SM4500-N <sub>org</sub> B/C and SM4500NH <sub>3</sub> - B/C/D/EF/G/H EPA 351.2		500
Nitrogen, Total (as N)	SM4500-N-C	50	100
Soluble Reactive Phosphorus (as P)	SM4500- PE/PF	100	100
Phosphorus, Total (as P)	SM 4500 PB followed by SM4500-PE/PF	100	300

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 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).