State Permit Application for the Generation, Distribution and Use of Reclaimed Water

This application is for a reclaimed water permit issued by the Washington State Department of Ecology as required by Chapter 90.46 RCW and Chapter 173-219 WAC. It is not intended for use in applying for a reclaimed water permit issued by the Washington State Department of Health. (*See note on page 2 regarding lead agency designation*)

Permit applications provide Ecology with information about the domestic wastewater used as the source water for the reclaimed water treatment facility and about the production, distribution, and use of reclaimed water. The application requires characterization of the source water and final reclaimed water, detailed information about the treatment processes used to produce reclaimed water, and descriptions of the distribution systems for and beneficial use of the reclaimed water. Ecology may request additional information if necessary to clarify the current or proposed reclaimed water production, distribution, and use. Where appropriate, the applicant should include references to information previously submitted to Ecology that may aid in understanding the systems covered under the requested permit.

Attachment Checklist

The following list of additional materials are identified in this application as material the applicant is required to attach (identified with bold text) or may optionally attach as part of a complete application. Ecology may reject an application that does not include required attachments.

	Attachment Description	Attachment ID (Application Section)
☐	Description of changes in reclaimed water production volume or quality.	A-I-6
☐	Documentation of compliance with water rights impairment compensation or mitigation. (For permit renewal where impairment was previously identified).	A-II-3
☐	Collection system service area(s) that provide domestic wastewater to the reclaimed water treatment facility.	B-I-1
☐	Map or series of maps showing the treatment facility location and collection system service area.	B-I-4
☐	List of industrial or commercial facilities discharging waste to the treatment facility.	B-I-4
☐	Analytical results from expanded water quality testing.	B-II-6
☐	Treatment process flow diagram	B-III-5
☐	Reclaimed water distribution system map(s)	C-I-4
☐	Information on each authorized reclaimed water user and use location (other than wetland enhancement, surface water augmentation, or groundwater uses).	D
☐	General description of wetland enhancement project	E-2
☐	Description of soils groundwater recharge area (required only for groundwater recharge uses)	G-3
☐	Description of local geology and hydrogeology within one mile of the groundwater recharge site (required only for groundwater recharge uses)	G-4

FOR ECOLOGY USE ONLY **Check One** New/Renewal ☐ Modification ☐

Date Application Received _____ Application/Permit No. _____

Date Application Accepted _____ Date Fee Paid _____

This application is for a: *(check one)*

☐	**New Reclaimed Water Facility**	Anticipated facility start-up date:	
☐	**Permit Renewal**	Describe in A.I.6 any changes in volume or characteristics of the reclaimed water produced at the facility, compared to production authorized in the last permit.	
☐	**Permit Modification**	Describe in A.I.6 the reasons for a permit modification.	

In accordance with Chapter 173-219-140 WAC, Ecology will generally streamline permitting for domestic wastewater facilities by adding limits and conditions for reclaimed water generation, distribution, and use into a single NPDES or State Waste Discharge permit that also regulates wastewater discharges from the permitted facility. However, combining permits may not be practical in all cases. Select a statement below that best describes the intended use of this application. *(check one)*

☐	This application is for a **combined Reclaimed Water and Wastewater Discharge permit**. This is Ecology's default permit for a facility that produces reclaimed water and also discharges treated wastewater to the environment. This application supplements a *NPDES Application Form 2A* or an *Application for State Waste Discharge Permit to Discharge Domestic Wastewater to Ground Water by Land Treatment or Application.* It collects information necessary to develop reclaimed water conditions that Ecology will add to the waste discharge permit. Facility Name and Permit Number for parent application: The parent application: ☐ Accompanies this application ☐ Was submitted separately on (enter date)
☐	This application is for an **individual Reclaimed Water Permit** for a reclaimed water facility that does not have wastewater discharges regulated by an Ecology or Health permit. An applicant for an **individual permit** must demonstrate that all water is either adequately and reliably treated to the appropriate reclaimed water standard, or held on site for further treatment to the appropriate reclaimed standard.
☐	This application is for a **separate Reclaimed Water Permit** for a domestic wastewater treatment facility that also has wastewater discharges regulated by a NPDES or State Waste Discharge permit. A **separate permit** is an alternative to a combined permit that results in Ecology issuing 2 permits to a facility: one containing conditions for reclaimed water production and the other containing waste discharge conditions. Ecology may issue separate permits if the applicant justifies that doing so will improve their ability to implement the goals of the Reclaimed Water Law. Please provide reason for requesting a separate permit rather than a combined permit: Facility Name and Permit Number for parent wastewater treatment plant:

Lead Agency Designation:

Chapter 90.46 RCW requires Ecology and Health to designate in rule which agency will be the lead agency for particular aspects of reclaimed water use. Chapter 173-219-050 identifies the various situations when each agency will be designated as the lead agency. In most situations, Ecology and Health will determine lead agency designation for a particular reclaimed water facility during the initial project planning stages**. If a lead agency designation has not been determined for your project, or you are uncertain about a lead agency designation, do not proceed with this application and instead contact the appropriate Ecology regional office for assistance.**

SECTION A. GENERAL INFORMATION

A-I. BACKGROUND

1. Applicant Name:

Address:

Street

City/State Zip

2. Facility Name:

Address:

(if different from above) Street

City/State Zip

Facility coordinates as decimal degrees: (NAD83/WGS84)	Latitude:		Longitude:	

3. Contact information for person familiar with the information contained in this application:

Name Title

Telephone Number Fax Number Email

4. Are all reclaimed water treatment and domestic wastewater treatment unit processes located at the same facility site?

☐ Yes ☐ No

If no, identify the treatment processes located at a different locations.

Additional treatment site location

Facility Name:

Address:

Street

City/State Zip

Facility coordinates as decimal degrees: (NAD83/WGS84)	Latitude:		Longitude:	

5. Who is responsible for operation and maintenance of the facility?

☐ Facility owner is responsible for all facility operations and maintenance.

☐ Facility owner employs a contractor for facility operations and maintenance.

Please provide the following information for the contract operator

Contractor Name:

Address:

Street

City/State Zip

Contractor contact:

Name Title

Telephone Number Fax Number Email

6. Describe any changes in the volume or characteristics of the reclaimed water produced at the facility compared to production authorized in the last permit. Also, use this space to describe any request for a permit modification. The applicant should discuss in this section any facility improvements or changes that resulted in the change in reclaimed water production. Narrative may be submitted as an attachment. (*Label as Attachment A-I-6*)

7. List the submission and approval dates for the most recent versions of the following planning documents:

Document	Document or report title	Submittal date	Approval date
Feasibility Analysis			
Water Rights Impairment Analysis			
Engineering Report			
Plans and Specifications			

If any document listed above has not been approved as of the date of this application, please discuss the status of the document.

8. The reclaimed water facility is approved to produce and distribute the following class of reclaimed water: *(Note – consult with Ecology's regional office if facility is approved to produce more than one class of reclaimed water.)*

☐ Class A ☐ Class B

Approved beneficial use categories include: (*check **all** that apply*)

	Beneficial Use Category	Application Sections to Complete
☐	Indoor uses: toilet/urinal flushing or laundry in commercial, industrial, institutional, and certain residential buildings	Sections A, B, C, and D
☐	Commercial, Industrial, and Institutional uses: includes public water features; water used for construction purposes; cooling water; building, vehicle or pipeline cleaning.	
☐	Irrigation or land application: includes irrigation for landscapes; food and non-food crops; orchard frost protection; trees, fodder, fiber, or seed crops; and pasture lands.	
☐	Wetland enhancement: includes releases to eligible natural and constructed wetland areas.	Sections A, B, C, and E – may also require NPDES application
☐	Surface Water Augmentation: includes direct releases to rivers, reservoirs, or lakes and indirect releases via groundwater or bank infiltration.	Sections A, B, C, and F – also submit NPDES application
☐	Groundwater Recharge: includes direct and indirect recharge along with Aquifer Storage and Recovery projects.	Sections A, B, C, G, and H

9. Does the facility produce reclaimed water seasonally or during the full year?

☐ Full Year

☐ Seasonal, during the following months: through

☐ Other: *(provide further detail below about the typical reclaimed water production schedule)*

A-II. WATER RIGHTS PROTECTION

Chapter 173-219-090 WAC requires anyone applying for a reclaimed water permit to demonstrate that the proposed diversion of treated wastewater for the purposes of providing reclaimed water for beneficial uses will not impair any existing water right downstream from any freshwater discharge point(s) of the domestic wastewater facility unless compensation or mitigation for such impairment is agreed to by the holder of the affected water right.

1. Did the Water Rights Impairment Analysis listed in question A-I.7 above identify any impairment of existing water rights?

☐ Yes ☐ No *(Skip to Section A-III)*

2. Describe the compensation or mitigation agreed upon with the affected water rights holder.

3. For a permit renewal, attach documentation that demonstrates compliance with the agreed upon compensation or mitigation. *(Label as Attachment A-II-3)*

A-III. CERTIFICATION

The applicant is eligible to apply for a reclaimed water permit as a: *(select **all** that apply)*

☐ Municipal, quasi-municipal, or other governmental entity.

☐ The holder of an active State Waste Discharge or NPDES permit issued by Ecology under Chapter 90.48 RCW.

Permit Number:		Issuance Date:		Expiration Date:	

☐ A private utility.

Date of Ecology approval of the Feasibility Analysis that includes a Demonstration of Private Utility Capacity:

☐ The holder of an active on-site sewage treatment permit issued by Washington Department of Health under Chapter 70.118B RCW. (*Applicable only for uses where Ecology is the lead agency*)

Permit Number:		Issuance Date:		Expiration Date:	

All reclaimed water permit applications must be signed by the appropriate official for the owner's organization. Authorized officials are as follows:

Organization type	**Authorized signature**
• Municipal, state, or other public agency or facility	• Either the principal executive officer or ranking elected official
• Corporations	• A responsible corporate officer
• Partnership	• A general partner
• Sole proprietorship	• The proprietor
• Private utility	• A responsible officer

The person signing this application attests to 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 facility designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the facility, or those persons directly responsible for gathering the 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 a fine and/or imprisonment for knowing violations.

Signature _____ Date _____ Title _____

Printed Name _____

To request materials in a format for the visually impaired, visit https://ecology.wa.gov/accessibility, or call Ecology at 360-407-6831, Relay Service 711, or TTY 877-833-6341.

SECTION B. RECLAIMED WATER TREATMENT SYSTEMS

This section gathers detailed information about the domestic wastewater treatment facility or facilities used to produce reclaimed water from domestic wastewater. It contains questions related to the characteristics of the untreated wastewater entering the treatment system, all treatment processes needed to meet applicable reclaimed water performance and quality standards, and questions about treatment system reliability and facility operations and maintenance.

B-I. DOMESTIC WASTEWATER SOURCES

The following section gathers information about the untreated domestic wastewater that becomes the source water for the water reclamation facility. The applicant must complete all information in this section for all individual Reclaimed Water Permits. Applicants for combined or separate Reclaimed Water Permits for facilities that also have waste discharge permits may check the following appropriate boxes and skip this section.

1. **Collection System:** Provide information on municipalities and areas served by the facility. Provide the name and population of each entity and, if known, provide information on the type of collection system (combined vs. separate) and its ownership (municipal, private, etc.). Applicant may submit as an attachment. (*Label as Attachment B-I-1*)

Name	**Population**	**Type of Collection System**	**Ownership**
Total Population Served			

2. Does the municipality that owns the domestic wastewater treatment facility have, or is subject to, an approved pretreatment program?

☐ Yes ☐ No ☐ N/A *(not publicly owned)*

Number of Significant (SIUs) and Categorical Industrial Users (CIUs):

Number of non-categorical SIUs _____

Number of CIUs _____

3. Identify all industrial or commercial facilities discharging to the domestic wastewater treatment facility that provides the source water for the reclaimed water facility. Include business names, types of industry, address, telephone number and contact name. Attach extra sheet(s) if needed. Applicant may submit as an attachment (*Label as Attachment B-I-4*).

	INDUSTRY #1	INDUSTRY #2	INDUSTRY #3
NAME:			
INDUSTRY:			
ADDRESS:			
TELEPHONE:			
CONTACT NAME:			
INDUSTRIAL PRODUCT(S):			

4. Attach a map or series of maps that show the following: (*Label as Attachment B-I-4*)

   - Location of the treatment facility.
   - The service area for the wastewater collection system connected to the treatment facility.

B-II. DOMESTIC WASTEWATER TREATMENT

The following section gathers design information about the secondary treatment processes at the domestic wastewater treatment facility used to produce biologically oxidized reclaimed water. *(Enter all available data from the approved engineering report or design plan sheets.)*

1. Treatment facility design criteria.

   a. Maximum Month Design Flow: (MGD)[1] _____

   b. Influent BOD_5 Load for Maximum Month: (lbs/day) _____

   Design BOD_5 removal efficiency: (percent) _____

   Design BOD_5 concentration of oxidized wastewater: (mg/L) _____

   c. Influent TSS Load for Maximum Month: (lbs/day) _____

   d. Design TSS removal efficiency: (percent) _____

   Design TSS concentration of oxidized wastewater: (mg/L) _____

2. Do any approved uses of reclaimed water produced at the facility require enhanced nitrogen and/or phosphorous removal?

   ☐ Yes ☐ No

   If yes, indicate the targeted nutrient parameters and process design goals.

   ☐ Total Nitrogen: _____ mg/L – N ☐ Total Phosphorous: _____ mg/L – P

   ☐ Ammonia: _____ mg/L – N ☐ Ortho-Phosphorous: _____ mg/L – N

   ☐ TKN: _____ mg/L – N

3. Current influent wastewater characteristics.

   a. Report values below that are representative of influent characteristics for periods only when the facility provides biologically oxidized water for reclaimed water production.

   Reclaimed production season (enter months):
   _____ to _____
   OR
   ☐ Full Year

   b. Highest Monthly Average flow for the last 2 years _____ MGD

   c. Highest Monthly Average BOD_5 concentration and load. _____ mg/L
   _____ lbs/day

   d. Highest Monthly Average TSS concentration and load. _____ mg/L
   _____ lbs/day

[1] Report the maximum month design flow for the secondary treatment process or facility that produces the biologically oxidized water used for reclaimed water production. This value may be higher than the reclaimed water production design value reported in Section B-III.

4. Provide measurement values or range of measurements for the biologically oxidized domestic wastewater. The Applicant must report values obtained from samples collected only during the reclaimed water production season indicated in question B-II.3.a, above.

   In addition to reporting measured values, the Applicant must identify the test methods used to analyze samples and report the analytical method used and quantification level achieved for each parameter. The Applicant must use the analytical methods specified in 40 CFR Part 136 or 40 CFR Part 141. Recommended analytical methods and required detection limits (DLs) and quantitation levels (QLs) are included at the end of this application package.

☐ Check here if values listed below are estimates based on design assumptions.
(applicable only for new facilities)

Parameter		Measurement Values (in mg/L, unless noted otherwise)			Number of Analyses	Analytical Method	Quantification Level
		Minimum	Maximum	Average			
Biochemical Oxygen Demand (report one)	BOD (5 day)						
	CBOD (5 day)						
Total suspended solids							
Dissolved oxygen							
pH (minimum) (std. Units)							
pH (maximum) (std. Units)							
Temperature (Deg. C)							
Ammonia-N as N							
Total Kjeldahl Nitrogen as N							
Total Nitrogen							
Total-phosphorous-P as P							
Ortho-phosphate-P as P							
Total dissolved solids							
Conductivity (µS/cm)							
Alkalinity as $CaCO_3$							
Total Hardness as $CaCO_3$							

5. The Reclaimed Water Rule generally requires monitoring for compliance with the biological oxidation performance standard at the end of the treatment process. However, Ecology may specify alternate monitoring locations in the reclaimed water permit and the Applicant may report water quality data in this application from samples taken of the final reclaimed water prior to distribution. Please use the space below to describe the sampling location(s) used to collect the data reported in question B-II-4 above. Also, indicate if expanded testing data reported in question B-II-6, below (if applicable) are from the same sampling location(s).

6. Report values for expanded testing of the source water or final reclaimed water, if required by the facility's most recent reclaimed water permit. Applicants requesting a combined Reclaimed Water and Wastewater Discharge Permit or separate Reclaimed Water Permit for a facility that also has a permitted wastewater discharge may use priority pollutant testing reported in Part D of NPDES form 2A or in Section C of the State Waste Discharge Permit for the parent wastewater treatment facility to fulfill this reporting requirement.

   Select from the following options for reporting expanded testing: *(select one)*

   ☐ Previous reclaimed water permit did not require expanded testing and expanded testing was not required by a waste discharge permit for the facility.

   ☐ Use expanded testing data from application for permit number _____, submitted on _____.

   ☐ Use expanded testing data reported in the following table.

Applicant must enter "N/A" in the "Minimum" column below for any parameter listed below for which testing was not required in the most recent reclaimed water permit. If the applicant monitored for additional pollutants other than those listed below, it must include the results of that testing in the space provided on the next page, or attach the results to this application. (*Label as Attachment B-II-6*)

Parameter	Measurement Values (in µg/L, unless noted otherwise)			Number of Analyses	Analytical Method	Quantification Level
	Minimum	**Maximum**	**Average**			
Total Oil & grease (mg/L)						
NWTPH - Dx						
NWTPH - Gx						
Calcium						
Chloride						
Cyanide (weak acid dissociable)						
Fluoride						
Magnesium						
Potassium						
Sodium						
Sulfate						
Total Phenolic Compounds						
Antimony (total)						
Arsenic(total)						
Barium (total)						
Cadmium (total)						
Chromium (total)						
Copper (total)						
Iron (total)						
Lead (total)						
Manganese (total)						
Mercury (total) ng/L						
Nickel(total)						
Selenium (total)						
Silver (total)						
Zinc (total)						

Parameter	Measurement Values (in µg/L, unless noted otherwise)			Number of Analyses	Analytical Method	Quantification Level
	Minimum	**Maximum**	**Average**			

B-III. POST SECONDARY TREATMENT

This section gathers information about the filtration and disinfection processes used to produce reclaimed water from a biologically oxidized wastewater. These processes may be integrated into a single facility that completely converts raw domestic wastewater to reclaimed water, or may be stand-alone unit processes dedicated to treating secondary effluent to the appropriate reclaimed water standard.

1. Provide the following information about overall reclaimed water production at the facility.

Maximum design reclaimed water production capacity[2]	_____ MGD
Average design flow for the maximum month	_____ MGD
Total annual volume of reclaimed water available for all uses[3]	_____ MG
Actual average annual volume of reclaimed water produced for all uses over the last 2 years.	_____ MG
Maximum flow design capacity of filtration system	_____ MGD
Maximum flow design capacity of disinfection system	_____ MGD

2. Select the statement below that provides the best general description of the overall reclaimed water treatment system configuration.

☐ Facility uses a conventional secondary biological treatment system for wastewater treatment then diverts some or all of the secondary effluent to a separate treatment system for coagulation, media filtration and disinfection for reclaimed water production.

☐ Facility uses a conventional secondary biological treatment system for wastewater treatment then diverts some or all of the secondary effluent to a separate treatment system to advanced disinfection for reclaimed water production. *(Applicable to Class B only)*

☐ Facility uses a conventional secondary biological treatment system for wastewater treatment then diverts some or all of the secondary effluent to a separate treatment system for membrane filtration and disinfection for reclaimed water production.

☐ Facility uses an integrated membrane bioreactor treatment system to provide advanced wastewater treatment then routes some or all of the water through a disinfection system dedicated to reclaimed water production.

What method of disinfection does the facility use for reclaimed water production?

☐ Chlorination

☐ Ultraviolet Light

☐ Both *(provide further description below on how disinfection process is configured)*

☐ Other (identify disinfectant and date of Ecology approval for alternative method)

[2] "Maximum production capacity" refers to the amount of reclaimed water that a treatment facility is designed to produce at peak output and 24-hour production. This should reflect the design value of the most limiting unit process and may be lower than the maximum month design flow reported in Section B-II for the overall domestic wastewater treatment facility.

[3] Total annual volume based on the average design flow for the maximum month.

3. Does the facility use storage reservoirs at the treatment plant site to help manage reclaimed water prior to distribution? (This does not include storage within the distribution system.)

☐ Yes ☐ No

If yes, indicate below how storage is used (select all that apply).

☐ Temporary storage during production season to equalize supply to user demand

☐ Seasonal storage during months when there is low user demand

☐ Temporary storage for off-spec water for re-treatment

Does the facility re-disinfect reclaimed water withdrawn from storage reservoirs at the treatment plant prior to distributing the water to users?

☐ Yes ☐ No

4. Provide a process flow diagram or schematic that illustrates all unit process and flow paths involved in the production of reclaimed water. Indicate flow quantities in million gallons per day (MGD) or gallons per day (GPD) for the main wastewater and reclaimed water flow paths. Show all processes involved in the biological oxidation process along with the reclaimed water filtration and disinfection processes. Also show any storage basins used for final reclaimed water or rejected off-spec water. Indicate locations for key process and compliance monitoring points. Also show flow paths for waste streams (solid waste, waste activated sludge, scum, and filter backwash) along with flow paths for any internal recycle streams and for off-spec water management. Drawing should be 11" x 17" or smaller. (*Label as Attachment B-III-5*)

B-IV. TREATMENT SYSTEM RELIABILITY

Chapter 173-219-350 WAC requires reclaimed water facilities to maintain operational reliability at all times to prevent the distribution of inadequately treated reclaimed water. Facilities must use process sensors and alarm systems to continuously monitor key process areas and alert operators to problems. Provide information below about the reliability features used at the facility.

1. Primary Power Supply:

Identify critical power conditions that will trigger an alarm. *(check all that apply)*

☐ Loss of power *(required)*
☐ Low power quality
☐ Back-up power failure
☐ Other: *(specify)*

Indicate the automated response to the critical conditions that will trigger an alarm.

☐ Automatic switchover to back-up power
☐ Automatic diversion to off-spec storage
☐ Automated diversion to permitted wastewater discharge
☐ Other: *(specify)*

Provide any additional information necessary to fully describe the primary power reliability.

2. Biological Oxidation Treatment Processes: (includes all equipment and systems related to preliminary screening, primary settling, biological oxidation, and secondary clarification or membrane filtration when used as part of a membrane bioreactor system)

Does the facility have redundant, parallel treatment units that are capable of fully biologically oxidizing all wastewater up to the design flow capacity?

☐ Yes ☐ No

Identify critical process conditions that will trigger an alarm. *(check all that apply)*

☐ Failure of blowers, aerators, or other critical mechanical equipment.
☐ Out-of-range readings on critical process control sensors, such as DO or pH.
☐ Other (specify):

Indicate the automated response to the critical conditions that will trigger an alarm.

☐ Automatic switchover to redundant treatment units or components
☐ Automatic diversion to off-spec storage
☐ Automated diversion to permitted wastewater discharge
☐ Other: *(specify)*

Provide any additional information necessary to fully describe the level of biological oxidation treatment process redundancy and reliability at the facility.

3. Reclaimed Water Treatment Coagulation and Filtration Systems: (includes all equipment and systems used for dosing and mixing of coagulants and coagulant aids along with media filtration units or membrane filtration units when not used in an integrated membrane bioreactor system)

Does the facility have redundant, parallel filtration units that are capable of fully filtering all reclaimed water up to the design flow capacity with one unit out of service?

☐ Yes ☐ No

Identify critical process conditions that will trigger an alarm. *(check all that apply)*

☐ Failure of chemical pumps, mixers, backwash pumps, or other critical mechanical equipment.
☐ High turbidity readings in water leaving filtration system. *(required)*
☐ Other: *(specify)*

Indicate the automated response to the critical conditions that will trigger an alarm.

☐ Automatic switchover to redundant treatment units or components
☐ Automatic diversion to off-spec storage
☐ Automated diversion to permitted wastewater discharge
☐ Other: *(specify)*

Provide any additional information necessary to fully describe the level of process redundancy and reliability in the filtration system at the facility.

4. Reclaimed Water Treatment Disinfection Systems:

Does the facility have redundant, parallel disinfection units that are capable of fully disinfecting all reclaimed water up to the design flow capacity with one unit out of service?

☐ Yes ☐ No

Identify critical process conditions that will trigger an alarm (check all that apply).

☐ Failure of chemical pumps or injection systems and mixers. *(Chlorination only)*
☐ High flow through disinfection system
☐ Low flow through disinfection system
☐ UV reactor or bank failure *(UV Only)*
☐ Low UV intensity or dose *(UV Only)*
☐ Low UV Transmissivity *(UV Only)*
☐ Other: *(specify)*

Indicate the automated response to the critical conditions that will trigger an alarm.

☐ Automatic switchover to redundant treatment units or components
☐ Automatic diversion to off-spec storage
☐ Automated diversion to permitted wastewater discharge
☐ Other: *(specify)*

Provide any additional information necessary to fully describe the level of process redundancy and reliability in the disinfection system at the facility.

5. In the event that an alarm is activated, who is notified?

6. Describe the emergency diversion storage or disposal facilities. Include details about storage facilities, including storage capacity and maximum detention time at peak flow rates.

B-V. OPERATIONS AND MAINTENANCE

This section gathers general information about the operation and maintenance of the reclaimed water that is necessary to evaluate the facility's compliance with WAC 173-219-240 (Operations and Maintenance Manual) and WAC 173-219-250 (Certified Operator).

1. Does the reclaimed water facility have an up-to-date operations and maintenance manual approved by Ecology?

   ☐ Yes ☐ No

   Date of Ecology approval: _____

   If the reclaimed water facility does not have an operations and maintenance manual approved by Ecology, please describe the status of the document and provide an anticipated date for submission.

2. Are the duties and responsibilities of the operators at the reclaimed water treatment facility limited to operating and maintaining the wastewater treatment and/or reclaimed water production facilities, or do their duties include other operational responsibilities outside of the treatment facility? *(e.g., wastewater collection, drinking water treatment, or water/reclaimed water distribution system operations)*

   ☐ Dedicated to reclaimed water ☐ Responsible for other operations

   If operator's duties extend beyond operation of the reclaimed water treatment facility, please indicate all additional general duties:

   ☐ Operator for all or part of the domestic wastewater treatment facility that provides source water to the reclaimed water treatment system.

   ☐ Operate and maintain all or part of the domestic wastewater collection system.

   ☐ Operate and maintain all or part of the reclaimed water distribution system.

   ☐ Operator for the community's drinking water treatment facility.

   ☐ Operator for the community's drinking water distribution system.

   ☐ Other duties: *(describe)*

3. What is the Ecology-issued certification level of the operator in responsible charge of the reclaimed water treatment facility?

   Group _____

4. Please list the number of reclaimed water facility operators holding Ecology Wastewater Operator Certifications at the following levels:

Group IV:	Group III:	Group II:	Group I:	OIT:

SECTION C. RECLAIMED WATER DISTRIBUTION

If the reclaimed water facility provides water to multiple, separate distribution systems, complete a separate Section C for each system.

C-I. GENERAL INFORMATION

This section gathers general information about the network of pipes, open channels, and/or vehicles used to convey reclaimed water to the use location(s) identified in Sections D through G. For purposes of this section, "open channel" conveyance is limited to those open channel networks that only convey reclaimed water from the permitted reclaimed water facility. It does not include any conveyance within the production facility or any open channels that may convey water from other sources, such as irrigation canals or stormwater storage and conveyance systems.

If the applicant uses or intends to use any waters of the State (surface waterways or groundwater) as a means of conveyance, or will convey reclaimed water through a system that also conveys water from other sources (an irrigation canal or a constructed pond that also receives stormwater inflow), they must contact the appropriate Ecology regional office for instructions on appropriately documenting the means of conveyance.

1. Distribution System Name: *(name applicant uses to identify the system)*

2. Select the general statement below that most closely describes the complexity of the overall distribution system that conveys reclaimed water from the treatment facility to the use area(s).The applicant may select multiple statements if more than one statement describes to the distribution system. However, the applicant should consult with the appropriate Ecology regional office before selecting more than one statement.

   ☐ Reclaimed water flows directly from the treatment system to an infiltration basin or injection well located at the treatment facility site.

   ☐ System consists of a single, dedicated pipe or open channel that conveys reclaimed water from the treatment facility to a single point for general uses (irrigation/land application, indoor, or commercial/industrial/institutional,) or for release into groundwater (direct or indirect); natural surface water (direct or indirect); or into a natural or constructed wetland.

   ☐ System consists of one or more pipes or open channels conveying water to multiple use locations. System may include booster pumps and storage reservoirs prior to the use areas.

   ☐ System provides access either at the treatment facility or at a remote location for the filling of vehicles that transport reclaimed water to a use area.

3. Does the permittee own and operate the distribution system?

   ☐ Yes ☐ No

   If no, complete the following for the distributor:

Distributor Name:		
Primary Mailing Address:		
	Street	
	City, State	Zip
Primary Contact Name:		
Title:		
Telephone:	E-mail Address:	
Date of Distribution Agreement:		

4. Provide a brief description of the distribution system. Include details such as start and end points, total length of the system, number of users connected to the system (at the time of application), and areas or communities that would have a potential to receive water from the system. The applicant should include any other details that will help Ecology understand the scope of the distribution system. In addition, please attach a map of the distribution system *(Label as Attachment C-I-4),* that shows the direction of water flow, current use locations, and important reclaimed water and potable water features (storage tanks or reservoirs, potable water wellhead protection areas, and any reclaimed water monitoring locations).

5. Approximately how much of the typical daily reclaimed water production does this distribution system convey?

   _____ %

6. Has Ecology and Health granted a waiver from maintaining a chlorine residual in the distribution system?

   ☐ Yes *(Complete this question then skip to Section C-II)* ☐ No *(Answer questions 7-9 below)*

   If yes, describe reason for waiver, including details on alternative methods the distributor will use to prevent biological growth in the distribution pipe. *(If applicable)*

   Date of Ecology and Health's waiver: _____

7. What is the average value for the daily minimum chlorine residual monitored in the distribution system during the last 2 years?

   mg/L as *(check one)*

   ☐ Free chlorine ☐ Total chlorine

8. Is chlorine residual in the distribution system monitored continuously or daily with grab samples?

   ☐ Continuous ☐ Grab

9. Identify all points within the distribution system where chlorine residual monitoring occurs.

C-II. DISTRIBUTION STORAGE

1. Does the distribution system include storage reservoirs? (Not including storage at the treatment facility or at a use site.)

   ☐ Yes *(Answer questions 2-4 below)* ☐ No *(Skip to section C-III)*

2. Is chlorine added to the distribution system after storage?

   ☐ Yes ☐ No

3. Can stormwater runoff flow into the storage reservoir from adjacent land area?

☐ Yes ☐ No

If yes, describe steps taken to prevent contamination of the reclaimed water by pollutants that may be found in the stormwater runoff.

4. Is the storage reservoir equipped with an outlet or overflow line?

☐ Yes ☐ No

If yes, describe where water goes if the reservoir overflows.

C-III. DISTRIBUTION OPERATIONS

1. Has the reclaimed water distributor developed and implemented a Cross-Connection Control Program? *(Applies to applicant if they are the distributor, or to any third-party distributor.)*

☐ Yes ☐ No

Effective date of the program or, if not yet implemented, expected date of program implementation.

Date: _____

2. For distribution systems that require an operator certified by Department of Health for water systems operations please list the number of distribution system operators certified at the following levels. Any or all of the operators listed below may be employed directly by the distributor, or may be employed as a contract operator.

Water Distribution Manager: *(any level)* _____

Water Distribution Specialist: _____

Cross Connection Control Specialist: _____

Backflow Assembly Tester: _____

☐ Water system operator requirement not applicable *(check this box)*

If the Distribution system does not require an operator certified by Department of Health, please describe the reason(s) why one is not needed.

SECTION D. RECLAIMED WATER USE – GENERAL

Complete a separate Section D for each use location. Applicant may submit the following information as an attachment. *(Label as Attachment D)* **Do not use this section for the following uses: Wetland Enhancement, Surface Water Augmentation, or Groundwater uses.** Those uses have separate dedicated sections elsewhere in this application.

1. General Information				
Use Site Name:				
Use Site Location: *(List site address or legal site description)*				
Coordinates as decimal degrees (NAD83/WGS84):	Latitude:		Longitude:	
☐ The applicant/generator is the reclaimed water user. *(Skip to D.2 below)*[4]				
Name of Customer:				
Primary Contact:		Title:		
Date Ecology Approved Use Agreement:		Form of approved agreement:	☐ Individual Agreement ☐ General Master Agreement ☐ Approved Local Ordinance	
2. Use Details				
Name of Distribution System, as identified in Section C, that conveys water to the use site:				
Type(s) of use at this location:	☐ Indoor uses	☐ Commercial, Industrial, and Institutional uses	☐ Irrigation or land application	
List the specific use(s) at the site: *(i.e., landscape irrigation, toilet flushing, water feature, etc.)*				
• What is the total annual amount of reclaimed water commitment for this use site? (As documented in the use agreement.)			☐ MGY ☐ GPY	
• What is the average annual reclaimed water use at this site over the last three years?			☐ MGY ☐ GPY	
• The volume listed above is:	☐ Estimated	☐ Metered		
• Is supply commitment to this use area interruptible?	☐ Yes	☐ No		
If commitment is uninterruptible, describe measures in place to provide water to use area if reclaimed water is not available:				

[4] Check the box of "applicant/generator is the reclaimed water user," only if the use area is controlled by the same organizational division or department as the one that operates the treatment facility. If the use area is operated by a different division of the same organization, the applicant must identify this separate division as the "user" and have an up-to-date use agreement on file.

SECTION E. RECLAIMED WATER USE – WETLANDS

Please consult with Ecology's regional office prior to completing this section. The use of reclaimed water for enhancement of a natural wetland may require submission of a NPDES application to authorize the release of water to the wetland.

1. General Information				
Use Site Name				
Use Site Location: *(List site address or legal site description)*				
Coordinates as decimal degrees (NAD83/WGS84):	Latitude:		Longitude:	
☐ The applicant/generator is the reclaimed water user *(Skip to E.2 below)*[5]				
Name of Customer:				
Primary Contact:		Title:		
Date Ecology Approved Use Agreement:				

2. Use Details		
Type of wetland enhanced		
☐ Natural Wetland	Wetland category (II-IV):	☐ With Special Characteristics
☐ Constructed Wetland	☐ Constructed for Treatment	☐ Constructed for Other Benefits
What is the design capacity for the enhancement project?		☐ MGD ☐ GPD
What is the average daily reclaimed water use at this site over the last three years?		☐ MGD ☐ GPD
What is the average annual hydraulic loading rate to the wetland over the last three years?		cm/day
The flow and volume listed above are:	☐ Estimated	☐ Metered
Is supply commitment to this use area interruptible?	☐ Yes	☐ No
If commitment is uninterruptible, describe measures in place to provide water to use area if reclaimed water is not available:		

Continue on next page

[5] Check the box of "applicant/generator is the reclaimed water user," only if the use area is controlled by the same organizational division or department as the one that operates the treatment facility. If the use area is operated by a different division of the same organization, the applicant must identify this separate division as the "user" and have an up-to-date use agreement on file.

3. Provide a brief description of the physical characteristics of the wetland and the benefit(s) to wetland functions gained through the reclaimed water use (habitat restoration, water quantity or quality improvements, etc.). Description should summarize information from wetland enhancement plan developed during the original project planning. Applicant may include description as an attachment. (*Label as Attachment E-2*)

4. Does the reclaimed water comply with the following water quality requirements?

   - $BOD_5 \leq 20$ mg/L
   - TSS ≤ 20 mg/L
   - TKN ≤ 3 mg/L – N
   - Total Phosphorous ≤ 1 mg/L – P

   ☐ Yes ☐ No

   If no, does the approved engineering report demonstrate that the release of reclaimed water not meeting these requirements will not significantly decrease existing wetland functions or that it provides an overall net environmental benefit?

   ☐ Yes ☐ No

5. Describe any net environmental benefit claimed in the original wetland enhancement proposal.

6. Describe all monitoring undertaken to demonstrate a net environmental benefit.

7. Does monitoring include groundwater monitoring?

   ☐ Yes ☐ No

   If yes, complete Section H, Groundwater Information.

SECTION F. RECLAIMED WATER USE – SURFACE WATER

Please consult with Ecology's regional office prior to completing this section. Ecology may require additional information about the surface water augmentation project in addition to the information collected below. In most cases, the use of reclaimed water for surface water augmentation will require submission of a NPDES application to authorize the release of water to the surface water body. The information gathered below will supplement information collected in the NPDES application.

1. General Information				
Name of water body receiving reclaimed water:				
☐ The applicant/generator is the reclaimed water user. *(Skip to F.2 below)* [6]				
Name of Customer:				
Primary Contact:		Title:		
Date Ecology Approved Use Agreement:				
2. Use Details				
How is water released to the receiving water body?				
☐ Direct release	*(Applicant will describe the outfall in the NPDES application)*			
Coordinates of water release location as decimal degrees (NAD83/WGS84):	Latitude:		Longitude:	
☐ Indirect release – bank infiltration or groundwater (Complete Section I to report groundwater data)				
Provide a brief description of the indirect release system. If release includes a UIC well, include the well registration number.				
Coordinates of infiltration location as decimal degrees (NAD83/WGS84):	Latitude:		Longitude:	
What is the design capacity of the surface water augmentation project?				☐ MGD ☐ GPD
What is the average daily reclaimed water use at this site over the last three years?				☐ MGD ☐ GPD
The volume listed above is:		☐ Estimated		☐ Metered
Is supply commitment to this use interruptible?		☐ Yes		☐ No
If commitment is uninterruptible, describe measures in place to provide water to use area if reclaimed water is not available:				

[6] Check the box of "applicant/generator is the reclaimed water user" only if the use area is controlled by the same organizational division or department as the one that operates the treatment facility. If the use area is operated by a different division of the same organization, the applicant must identify this separate division as the "user" and have an up-to-date use agreement on file.

SECTION G. RECLAIMED WATER USE – GROUNDWATER

Please consult with Ecology's regional office prior to completing this section. Ecology may require additional information about the groundwater project to determine if additional groundwater studies are needed prior to submitting an application.

1. General Information				
Use Site Name				
Use Site Location: *(List site address or legal site description)*				
Coordinates as decimal degrees (NAD83/WGS84):	Latitude:		Longitude:	
☐ The applicant/generator is the reclaimed water user *(Skip to part G-2 below)* [7]				
Name of Customer:				
Primary Contact:		Title:		
Date Ecology Approved Use Agreement:				
2. Use Details				
Indicate the groundwater recharge method				
☐ Indirect recharge				
Provide a brief description of the indirect recharge system.				
☐ Direct recharge	UIC Well Registration Number:			
What is the design capacity of the indirect recharge system or injection well?			☐ MGD ☐ GPD	
What is the average daily reclaimed water use at this site over the last three years?			☐ MGD ☐ GPD	
The volume listed above is:	☐ Estimated		☐ Metered	
Is supply commitment to this use area interruptible?	☐ Yes		☐ No	
If commitment is uninterruptible, describe measures in place to provide water to use area if reclaimed water is not available:				

Continue on next page

[7] Check the box of "applicant/generator is the reclaimed water user," only if the use area is controlled by the same organizational division or department as the one that operates the treatment facility. If the use area is operated by a different division of the same organization, the applicant must identify this separate division as the "user" and have an up-to-date use agreement on file.

3. Include an attachment that describes the soils at the site using information from local soil survey reports. **Soil information is available from your county conservation district, USDA/NRCS Web Soil Survey, or from information contained in the facility's hydrogeologic report.** *(Label as Attachment G-3*)

   ☐ Check here if this information has already been provided in an approved engineering report or other document.

4. Include an attachment that describes the local geology and hydrogeology within one mile of the site. Include any groundwater quality data. **The local library, the site-specific hydrogeologic report, or soil conservation service may have this information**. *(Label as Attachment G-4)*

   ☐ Check here if this information has already been provided in an approved engineering design report or other document.

5. Aquifer Storage and Recovery: Will the applicant recover reclaimed water that has been recharged to an aquifer?

   ☐ Yes ☐ No

   If yes, provide the following information:

   - Date Ecology approved engineering report that included specific information on applicant's recovery plan. _____
   - What is quantity of reclaimed water available for recovery based on the approved engineering report? _____ ☐ MGD ☐ GPD
   - What is the average quantity of reclaimed water recovered during the last three years? _____ ☐ MGD ☐ GPD
   - What is the annual recovery period? (list beginning and end months) _____ through _____

SECTION H. GROUNDWATER INFORMATION

1. Use the table on the following page to provide available data or range of data for groundwater monitoring of monitoring or supply wells in the use area. List the analytical method and detection limit, if known for each measurement. Complete a separate Section H for each well.
2. Provide a map showing the location of each monitoring well. *(Label as Attachment H-1)*
3. Attach well logs, if available. *(Label as Attachment H-2)*

Continue on next page

Groundwater Monitoring Data							
Ecology Well Tag ID # (ExampleAAB123)			Well ID # (Example MW-1)				
Coordinates as decimal degrees (NAD83/WGS84):		Latitude:		Longitude:			
Well Elevation: (To the nearest 0.01 feet)		Depth to water level (to the nearest .01 feet)					
Elevation measurements are relative to: ☐ NAVD88 standard ☐ Mean sea level							
Parameter	Units	Range of Measurements	Number of Analyses	Analytical Method	Detection Limit		
BOD (5 day)	mg/L						
COD	mg/L						
Total organic carbon	mg/L						
Dissolved Fixed Solids	mg/L						
Total dissolved solids	mg/L						
pH	Standard units						
Conductivity	(micromhos/cm)						
Alkalinity	mg/L as $CaCO_3$						
Total hardness	mg/L						
Fecal coliform	organisms/100mL						
Total coliform	organisms/100mL						
Dissolved oxygen	mg/L						
Ammonia-N as N	mg/L						
Nitrate + nitrite-N, as N	mg/L						
Total kjeldahl N as N	mg/L						
Ortho-phosphate-P as P	mg/L						
Total-phosphorus-P as P	mg/L						
Total Oil & Grease	mg/L						
Total petroleum hydrocarbon	☐mg/L ☐ µg/l						
Calcium	☐mg/L ☐ µg/l						
Chloride	☐mg/L ☐ µg/l						
Fluoride	☐mg/L ☐ µg/l						
Magnesium	☐mg/L ☐ µg/l						
Potassium	☐mg/L ☐ µg/l						
Sodium	☐mg/L ☐ µg/l						
Sulfate	☐mg/L ☐ µg/l						
Barium	☐mg/L ☐ µg/l						
Cadmium	☐mg/L ☐ µg/l						
Chromium	☐mg/L ☐ µg/l						
Copper	☐mg/L ☐ µg/l						
Iron	☐mg/L ☐ µg/l						
Lead	☐mg/L ☐ µg/l						
Manganese	☐mg/L ☐ µg/l						
Mercury	☐mg/L ☐ µg/l						
Selenium	☐mg/L ☐ µg/l						
Silver	☐mg/L ☐ µg/l						
Zinc	☐mg/L ☐ µg/l						