173-219 WAC Reclaimed Water (AO #06-12)

ROUND 1 Working DRAFT

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This is a working draft of the Reclaimed Water rule language.

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WAC 173-219-010 Definitions

(1.) Definitions.

Unless the context clearly requires otherwise, the definitions in this section apply throughout this chapter.

- "Agricultural irrigation" means the application of water to agricultural land with the intent of meeting the water needs for production of agricultural food or nonfood crops.
- "ART" means adequate and reliable treatment as provided for in 90.46 RCW.
- "Alarm" means an integrated system of sensor instruments, or devices that continuously monitors a specific function or process and automatically alerts operators to abnormal conditions by means of visual, or audible signals, or both.
- "Applicant" means any person applying for a reclaimed water permit.
- "Approval" means written Ecology or Health approval by the lead agency.
- "Beneficial purpose" or "beneficial use" means the uses of Class A and Class B reclaimed water identified in the most recent edition of the Ecology and Health *Reclaimed Water Facilities Manual (Purple Book)* and as included in chapter 90.46 RCW and WAC 173-219-
- "BOD" means five-day biochemical oxygen demand.
- "Certified operator" means a person certified as a wastewater treatment plant operator under chapter 173-230 WAC for wastewater treatment; or, where applicable and required in the permit, under chapter 246-292 WAC for potable waterworkstreatment and distribution, cross-connection control, and testing back flow assemblies; or certified under a program yet to be developed, for reclaimed water works treatment, distribution, or operations.
- "CBOD" means five-day carbonaceous biochemical oxygen demand.
- "Commercial, industrial, and institutional use" means non-potable uses of water to produce private sector or institutional products or provide goods and services and associated sanitary uses such as toilet flushing. The term does not include land application.
- "Contaminants of emerging concern" or "CEC" means substances in the reclaimed water or source water not included in Ecology's ground water standards or in Health drinking water standards and identified by Ecology or Health as needing evaluation for detrimental effects if included in reclaimed water used beneficially.
- "Distributor" means the person authorized by a generator agreement with the reclaimed water permittee to distribute or supply reclaimed water to users.
- "Groundwater recharge" means the controlled addition of water for the purpose of replenishing groundwater including addition directly into the saturated portion of the subsurface environment and where water percolates through the soil at a rate dependent upon soil properties.
- "Domestic wastewater" means urine, feces, and the water carrying human wastes, including kitchen, bath, and laundry wastes from residences, nonresidential buildings such as churches and schools, commercial establishments, or other buildings, excluding industrial wastewater and storm water. WAC 246-272B-01100.
- "Health" means the Washington State Department of Health.
- "Ecology" means the Washington State Department of Ecology.
- "Engineering report" means a document that thoroughly examines the engineering and administrative aspects of a reclaimed water generation facility, as required under this chapter 173-240 WAC.
- "Food crops" means any crops intended for human consumption.
- "Generator" means any public or private entity reclaiming or proposing to reclaim water who is eligible to apply for and receive a reclaimed water generation permit under this chapter.
- "Generator Agreement" means an agreement between the generator and the distributor and or user that identifies contractual terms for water quality, water quantity, handling, reporting and others specified in this chapter.
- "Groundwater" means water in a saturated zone or stratum beneath the surface of land or below a surface water body. "Land Application" means use of reclaimed water as permitted under 90.46 RCW for the beneficial purpose of irrigation or watering of landscape vegetation.
- "Lead Agency" means the state agency with regulatory oversight for the wastewater treatment portion of the project, unless agreed otherwise by both Health and Ecology.
- "Mitigation" see "wetland mitigation".
- "Most recent edition" means that version of a specific guidance or reference documents in effect at the time lead agency begins the feasibility and design review process.

"Non-Potable" means water that has not been examined, properly treated, and is not approved by Health as being safe for human consumption

"Net environmental benefit" demonstrates that the environmental benefits of the reclaimed water generation project are greater than the environmental impacts associated with the project.

"Non-lead agency" means Health or Ecology when they are not the lead agency as defined in this chapter.

Non-potable" means water that has not been examined, properly treated, and is not approved by Health as being safe for human consumption.

"NPDES" means the National Pollutant Discharge Elimination System.

"Off-spec water" means water treated by a reclaimed water process that does not meet the reclaimed water specification.

"Operator" means a person who is responsible for operating the generation and/or distribution system and ensuring that it consistently and reliably treats and delivers reclaimed water according to the terms and conditions of the operating permit, and if applicable, who meets the operator certification requirements in the permit.

"Owner" means a person responsible for the generation and/or delivery of reclaimed water and for complying with this chap-ter.

"Person" means any individual, public or private corporation, political subdivision, governmental subdivision, governmental agency, municipality, co-partnership, association, firm, trust estate, or any other legal entity.

"pH" means the negative logarithm of the hydrogen ion concentration.

"Plans and specifications" means the detailed engineering drawings and specifications prepared by a professional engineer and used in the construction or modification of the reclaimed water generation and related facilities.

"Potable Recharge" means the method by which Class A reclaimed water is introduced into waters of the state that are or can be used as potable water sources. This includes both groundwater and surface waters and includes the following:

- (a.) Indirect potable recharge: where highly treated Class A reclaimed water is released into surface water or ground-water resources through surface infiltration or subsurface injection systems where the introduced water travels through an intermediary environment and the comingling with the surface water or groundwater of the state is not immediate.
- **(b.) Direct potable recharge**: occurs when highly treated Class A reclaimed water is released directly and immediately into surface water or groundwater resources.

"Potable Reuse" means the planned introduction of Class A reclaimed water with additional treatement rquirements from an advanced water treatment facility, into either the source water of a potable water supply or directly into the potable water supply system, such as at a drinking water treatment facility, storage reservoir, or at a direct intake point. Potable reuse projects can be:

- (a.) Indirect potable reuse (IPR), in which Class A reclaimed water with additional treatment requirements is introduced into an environmental buffer, such as a groundwater aquifer or surface water reservoir, lake, or river, before the blended water is introduced into a source water that is used a potable supply source.
- **(b.) Direct potable reuse** (DPR), in which Class A reclaimed water with additional treatment requirements is introduced at various locations into an existing water distribution, storage or treatment system without benefit of an environmental buffer. Any direct potable reuse project must be granted a waiver by the Washington state board of health as defined under WAC 246-290-060.

Potable water" or "drinking water" means water that has been examined, properly treated, and approved by Health under Chapter 246-290 WAC as being safe and suitable for human consumption.

"Primary contact recreation" means activities where a person would have direct contact with water to the point of complete submergence including, but not limited to, skin diving, swimming, and water skiing. (As defined in WAC 173-201A-020).

"Private utility" means all utilities, both public and private, which provide sewerage and/or water service and which are not municipal corporations within the definition of this chapter. The owner of a private utility may be corporation, non-profit or for profit, a cooperative association, a mutual organization, or an individual.

"Public entity" means a municipal, quasi-municipal, or other governmental entity or entities formed under the Interlocal Cooperation Act.

"Reclaimed irrigation" means the beneficial use of reclaimed water for agricultural crop or urban landscape irrigation. It includes spray, surface, and subsurface irrigation methods. It does not include wastewater applied to dedicated fields used for land treatment of wastewater.

- "Reclaimed water" means water derived in any part from a wastewater with a domestic wastewater component that has been adequately and reliably treated to meet the requirements of this chapter, so that it can be used for beneficial purposes. Reclaimed water is not considered a wastewater.
- "Reclaimed water generation permit" means an operating permit identifying the conditions and required level of treatment and operating conditions issued to a generator of reclaimed water under Part III of this chapter.
- "Reclaimed water facility" or "facility" means the treatment plant, equipment, storage, conveyance devices, and dedicated sites for reclaimed water generation. Some reclaimed water facilities may be under the control of a distributor, who may not be directly permitted un-der this chapter.
- "Reclaimed water use" means use of reclaimed water of required quality for a beneficial purpose.
- "Reliability" means the ability of a system or component(s) thereof to perform a required function under permit stated conditions for a permit stated period.
- "Reliability assessment" means an evaluation performed and report by a professional engineer on the reliability of facility components, equipment, and certified operators that are used or proposed to be used to generate and manage reclaimed water.
- "Source water" means treated wastewater effluent or domestic wastewater, depending on facility configuration, that supplies a reclaimed water generation treatment facility.
- "Spray irrigation" means application of water in the form of finely divided water droplets to land using artificial means.
- "Streamflow or surface water augmentation" means the intentional use of reclaimed water for rivers and streams of the state or other surface water bodies, for the purpose of increasing volumes. RCW 90.46.010(17)
- "Surface irrigation" means application of water to the land surface by means of spraying equipment or flood irrigation.
- "Surface percolation" means the controlled application of water to the ground surface for the purpose of replenishing ground water.
- "Third-party guarantor" means an entity approved by the lead agency to provide stand-by management services if a permittee fails to operate a reclaimed water facility in compliance with this chapter.
- "TSS" means total suspended solids.
- "Unit process" one or more defined grouped processes that performs an identified step in a process.
- "Use" means an application of reclaimed water in a manner and for a purpose, as designated in a generator agreement, and in compliance with all applicable lead agency and permit requirements.
- "Use area" means any facility, building, or land area, surface water, or groundwater identified in the generator agreement.
- "USEPA" means the United States Environmental Protection Agency
- "User" means any person that utilizes reclaimed water for a beneficial use, in accordance with the requirements of the generator agreement.
- "Vadose zone" refers to the unsaturated region of the soil that geologic media which lies below the surface of the earth but above the saturated groundwater water table of the shallowest year-round aquifer.
- "Waters of the state" means lakes, rivers, ponds, streams, inland waters, underground waters, salt waters and all other surface waters and watercourses within the jurisdiction of the state of Washington, as defined in RCW 90.48.020.
- "Water Table" means the elevation where, if a borehole were drilled into the very top of the shallowest aquifer, water would fill the hole to this height.
- "Wetland enhancement" means intentional actions taken to improve the functions, processes, and values of existing wetlands.
- "Wetland mitigation" means a sequence of intentional steps or actions taken to reduce impacts to wetlands. Unless the context refers to the entire mitigation sequence, or clearly indicates other steps, the term "wetland mitigation" means compensatory mitigation or the compensation stage of the wetland mitigation sequence, where impacts to wetland functions are offset through the creation, restoration, enhancement, or preservation of other wetlands.
- "Wetland restoration" means intentional actions taken to return historic functions and processes to a former or degraded wetland site.

WAC 173-219-020 Purpose and scope

(1.) Purpose.

The purpose of this chapter is to preserve and protect public health, the environment, and existing water rights by establishing a comprehensive framework for generation, delivery, and use of reclaimed water for the beneficial uses established in <u>90.46 RCW</u> and this chapter.

Nothing in this chapter shall supersede or diminish the provisions of Chapters <u>173-200</u>, <u>173-201A</u>, <u>173-500</u>, <u>246-290</u>, 246-292, 246-272, 246-272B, 246-274 WAC.

(2.) Scope.

This chapter implements <u>90.46 RCW</u> and establishes requirements for production, distribution, and use of reclaimed water. This chapter also establishes lead and non-lead agency designations, roles, and responsibilities over particular aspects of reclaimed water, as well as requirements for:

- (a.) Planning, designing, constructing, operating, and maintaining reclaimed water facilities.
- **(b.)** Permitting of reclaimed water facilities.
- (c.) Technology based treatment, operational storage and distribution, and use-based requirements.
- (d.) Compliance with RCW 90.46.130, preventing impairment of exisiting water rights.

WAC 173-219-030 Applicability requirements

(1.) Applicability.

The requirements in this chapter apply to all existing and proposed facilities that are or will be designed, constructed, operated, and maintained in the state of Washington to generate, distribute, and or use reclaimed water, and to the persons involved in these activities as defined in RCW 90.46.010 and this chapter.

(2.) Severability.

The provisions of this chapter are separate and severable from one another. If any provision is stayed or determined to be invalid, it is Ecology's intention that the remaining provisions shall continue in effect.

WAC 173-219-___ Direct enforceability

All persons and facilities subject to the requirements of this chapter must comply on the effective date of this chapter, except as allowed under subsection (1) of this section.

(1.) Exceptions.

Existing permittees—issued a permit before the effective date of this chapter—are subject to this chapter except as follows:

- (a.) The lead agency may issue an extension for compliance to an existing permittee to provide a reasonable timeline for compliance with this chapter.
- **(b.)** An existing permittee:
 - (i.) Must request the extension for compliance in writing and provide good cause for the request.
 - (ii.) Is not required to obtain a modification of the existing reclaimed water permit until the application for the permit renewal is due under WAC 173-219-___.

(2.) Waiver Request.

The applicant or permittee may request in writing a waiver from specific requirements of this chapter. Waiver requests must:

- (a.) Identify the requirement requested be waived.
 - (i.) If the requested waiver is to a provision regulated by the state board of health, or Health the requester must apply directly to the state board of health, or Health.

- **(A.)** The lead agency may only consider and approve a waiver that is first granted by the state board of health, or Health.
- **(b.)** State the reason for the waiver.
- (c.) Provide information supporting the request and any additional information identified by the lead agency needed to make the waiver determination.

The lead agency may grant a waiver, in consultation with the non-lead agency, if it:

- (d.) Is consistent with the applicable standards and the intent this chapter.
- **(e.)** Does **not** lower the level of public health and environmental protection provided prior to the waiver request, or that is provided within this chapter.

The lead agency must provide:

- **(f.)** Twenty-one days for the non-lead agency to review and comment on the waiver request before granting or denying a waiver.
- **(g.)** Written notice to the permittee within 90 days granting or denying a waiver request, requesting additional information, or explaining any delay and stating an expected date for issuing a decision.

WAC 173-219-___ Lead agency designation

When either Health or Ecology is the lead agency under this section, the other agency will be the non-lead agency. On a case by case basis, Ecology and Health may, in the pursuit of fulfilling the intent of this chapter and 90.46 RCW, agree to a lead agency designation other than provided for in (1.) and (2.) below. If such a situation arises, the new lead agency must notify the reclaimed water project proponent within 10 business days of the change.

(1.) Ecology as lead agency.

Ecology is the lead agency and will issue reclaimed water permits when the reclaimed water generation facility source water is wastewater effluent from a water pollution control facility permitted by Ecology , or:

- (a.) The primary use of reclaimed water, or the disposal of off-spec water, surplus source water, or surplus reclaimed water is:
 - (i.) Release to water bodies regulated under the <u>Federal Water Pollution Control Act</u> or chapter 90.48 RCW.
 - (ii.) Release to a water pollution control facility permitted by Ecology.

(2.) Health as lead agency.

Health is the lead agency when the reclaimed water generation facility source water is wastewater effluent from an onsite sewage system with a design flow less than or equal to one hundred thousand gallons per day, regulated under chapters <u>246-272A</u> or <u>246-272B</u> WAC and there is no direct release of reclaimed water to the waters of the state, or

- (a.) The reclaimed water permit is dependent on or supplemental to an on-site sewage treatment system operating permit issued for required treatment and reliability, or
- **(b.)** The only discharge of off-spec water, surplus source water, or surplus reclaimed water is to an on-site sewage system.

WAC 173-219-___ Agency requirements and responsibilities

(1.) Lead agency responsibilities.

- (a.) Coordinate with the non-lead agency, including for the following:
 - (i.) Pre-planning meeting and scoping of project.
 - (ii.) Schedule for review of required documents, including but not limited to all project or permit applications, reports, plans, specifications, and draft and final permits and fact sheets.
 - (iii.) Incorporation of non-lead agency permit requirements as directed in this chapter.
- **(b.)** Monitor reclaimed water permit compliance, including conducting inspections of a permitted reclaimed water facility.
- (c.) Enforce reclaimed water permit terms and conditions as provided for in WAC 173-219-____.
- (d.) Notify non-lead agency of violations, compliance, and enforcement actions.

- **(e.)** Assess and collect fees as authorized by that agency's regulations.
- **(f.)** Respond to appeals of reclaimed water permit decisions.

(2.) Non-lead agency responsibilities.

- (a.) Participate in meetings requested and convened by the lead agency.
- **(b.)** Determine scope for non-lead agency review of project or permit applications, reports, documents, and permit monitoring and renewal.
- (c.) Submit and review comments and provide any reclaimed water permit conditions to the lead agency within thirty (30) days of receipt of documents.
- **(d.)** Assess and collect any fees as authorized by that agency's regulations.
- **(e.)** Assist the lead agency with appeals of reclaimed water permit decisions and compliance and enforcement actions.

(3.) Ecology responsibilities.

As the lead agency or non-lead agency, Ecology will:

- (a.) Develop reclaimed water permit requirements necessary to protect waters of the state and to regulate facility upgrades, modifications, and operation of all sewer systems and associated water pollution control facilities that collect or treat wastewater generate, and deliver, if appropriate, reclaimed water, except as exempted under RCW 90.48.110.
- **(b.)** Certify operators for facilities generating reclaimed water, when operator certification under <u>173-230 WAC</u> is required.
- (c.) Issue all regulatory decisions related to compliance with Chapter 90.46.130 RCW.
- (d.) Incorporate Health-required public health conditions to reclaimed water permits it issues.

Ecology may:

- (e.) Issue the wastewater discharge permit under the <u>Federal Water Pollution Control Act</u> and/or <u>90.48 RCW</u> concurrently with the reclaimed water permit.
- **(f.)** Require the generator or distributor to employ one or more operators, or a contractor, with any of the following certifications for:
- (g.) Wastewater treatment, certified by Ecology for under chapter 173-230 WAC
- **(h.)** Reclaimed water treatment, certified by a state agency with a reclaimed water certification program, and/or
- (i.) Waterworks treatment, distribution, cross-connection control, or backflow assembly tester, certified by Health under chapter 246-292 WAC.

(4.) Health responsibilities.

As the lead agency or the non-lead agency, Health will:

- (a.) Develop reclaimed water permit requirements as necessary to ensure adequate public health protection in the the generation, storage, delivery, and use of reclaimed water and to regulate facility upgrades, modifications, and operation of all sewer systems and associated on-site sewage system facilities that collect or treat wastewater, generate, and deliver, if appropriate, reclaimed water.
- **(b.)** Certify operators for facilities generating reclaimed water, when operator certification under chapter 246-292 is required in a reclaimed water permit.
- (c.) Incorporate Ecology-required permit conditions for environmental protection of waters of the state to permits it issues.

Health may:

- (a.) Require the generator or distributor to employ one or more operators, or a contractor, with any of the following certifications for:
 - (i.) Wastewater treatment, certified by Ecology for under chapter 173-230 WAC.
 - (ii.) Reclaimed water treatment, certified by a state agency with a reclaimed water certification program, and/or

- (iii.) Waterworks treatment, distribution, cross-connection control, or backflow assembly tester, certified by Health under chapter 246-292 WAC.
- (b.) Issue a reclaimed water permit as part of an on-site sewage permit or concurrently with it.

WAC 173-219-___ Permit required

No reclaimed water may be distributed or used without a reclaimed water permit issued pursuant to this chapter and 90.46 RCW.

(1.) Permit compliance.

The permittee must comply with all terms and conditions of this chapter, chapter <u>90.46 RCW</u>, and the reclaimed water permit issued under this chapter.

(a.) The generation, distribution, and/or use of reclaimed water in a manner not authorized by a reclaimed water permit or an approved generator agreement, or that violates the terms and conditions of a permit is prohibited.

(2.) Penalties for violating permit conditions or failing to obtain a permit.

Any person who is found guilty of willfully violating the terms and conditions of a reclaimed water permit is guilty of a crime, and upon conviction may be punished by a fine of up to ten thousand dollars per day for every violation and costs of prosecution, or by imprisonment at the discretion of the court. Each day upon which a willful violation occurs may be deemed a separate and additional violation.

- (a.) Any person who violates the terms and conditions of a reclaimed water 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.
 - (i.) 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.
- (b.) Any person who generates any reclaimed water for a use regulated under this chapter and distributes or uses that reclaimed water without a permit is in violation of this chapter and 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.
 - (i.) 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.

(3.) Compliance with other laws and statutes required.

Nothing in a reclaimed water permit excuses the permittee from complying with any applicable federal, state, or local statutes, ordinances, or regulations.

(4.) Exceptions.

- (a.) Already permited facilities existing on the effective date of this chapter to the extent provided under WAC 173-219- (Direct Enforcerablity).
- **(b.)** The capture and redirection of wastewater effluent or reclaimed water for facility and internal reuse purposes does not require a reclaimed water permit under this chapter, provided those uses are:
 - (i.) In restricted areas
 - (ii.) Not subject to public exposure.
 - (iii.) Under the direct control of the generator's or user's authorized maintenance personnel.
 - (iv.) Described within an approved operations and maintenance manual.

(5.) Eligibility to apply for a reclaimed water permit.

Only the person generating the reclaimed water is eligible to apply for a reclaimed water permit. A reclaimed water permit applicant must be one of the following:

(a.) A public entity. Nothing in this chapter precludes a public entity from contracting for operation and maintenance of the reclaimed water facility with the consent of the lead agency.

- **(b.)** A private utility as defined in <u>RCW 36.94.010</u> if the lead agency determines that the private utility meets the requirements in <u>WAC 173-219-</u>.
- (c.) Any person that meets (a) or (b), and currently holds an on-site sewage treatment permit under chapter 70.118B RCW or a permit or approval under Chapter 70.118A RCW.
- (d.) Any person currently holding an active waste discharge permit issued under chapter 90.48 RCW.

(6.) Changes requiring new or supplemental reclaimed water permit application.

- (a.) Any permittee permitted for Class B reclaimed water generation wishing to generate Class A reclaimed water must file a new or supplemental application for any Class A use of reclaimed water not specifically authorized in their existing reclaimed water permit. To do this, a permittee must:
 - (i.) Submit new or revised planning and construction documents described in this chapter as necessary to describe any modifications of the existing reclaimed water generation facility.
 - (A.) The lead agency may waive parts of the planning document requirements on a case-by-case basis for a facility modifications if they do not relate to the proposed upgrade
 - (ii.) Submit a copy of the new generator agreements or templates, unless the agreement for the new use is consistent with a standard agreement template that has been previously approved by the lead agency.

(7.) Requesting a reclaimed water permit transfer.

A permittee may make a request to the lead agency for, and the lead agency may grant, a transfer a reclaimed water permit provided that the existing permittee:

- (a.) Make the request in writing at least thirty days (30) before the proposed change takes place. Failure to do so will result in a complete permit fee charge to the new permittee.
- **(b.)** Provide a written agreement between the existing permittee and the proposed permittee that demonstrates the feasibility of the new owner as provided for under WAC 173-219-____.
- **(c.)** Specify the date for transfer of reclaimed water permit responsibility, coverage, and liability.
 - (i.) A transfer is effective on the date specified in the written agreement unless the lead agency notifies the parties of their intent to modify or revoke and reissue the reclaimed water permit.

(8.) Reclaimed water permit renewal.

Reclaimed water permits are issued for fixed terms, not to exceed five (5) years from the effective date. One-hundred and eighty (180) days before expiration of the reclaimed water permit, a permittee must submit a renewal application provided by the lead agency.

- (a.) As long as the permittee meets the renewal application requirements and deadlines for renewal, an expiring reclaimed water permit remains in effect and enforceable until the lead agency either denies the application or issues a replacement permit.
- **(b.)** If a permittee fails to meet the deadline or application requirements for renewal, coverage expires on the expiration date of the reclaimed water permit and reclaimed water must not be generated or delivered until a valid permit is issued by the lead agency.

WAC 173-219-___ Applying for a reclaimed water permit

The applicant must:

- (a.) Complete the reclaimed water facility planning process and receive lead agency approval on all required planning documents.
- **(b.)** Submit the reclaimed water permit application, as prescribed by the lead agency, no later than one hundred eighty (180) days before distributing reclaimed water for use.

The lead agency must, upon receipt of the application or renewal application for a reclaimed water permit assess the applications for completeness within ninety (90) days.

WAC 173-219-___ Water rights protection

(1.) Compliance with RCW 90.46.130

All persons applying to Ecology or Health for a reclaimed water permit, permit renewal, or permit modification under this chapter, must demonstrate compliance with <u>RCW 90.46.130</u>. Waivers from this statutory requirement are not allowed.

- (a.) Ecology's Water Resources Program is responsible for determining whether a proposed reclaimed water facility would comply with RCW 90.46.130. Ecology's determination shall be consistent with the provisions of Chapter 90.03 RCW, the state water code, Chapter 90.44 RCW, regulation of public groundwaters, RCW 90.46.130, and applicable case law.
- **(b.)** Existing water rights include any permits, claims, and certificates in existence when Ecology accepts a submitted water rights impairment analysis, instream flows established by rule pursuant to chapters 90.22 and 90.54 RCW, and all federally reserved water rights.
- (c.) The applicant must prepare and submit an impairment analysis of potentially impaired water rights as part of the Feasibility Analysis, under WAC 173-219-____, . The impairment analysis must include proposed compensation or mitigation as allowed under RCW 90.46.130.
- **(d.)** Ecology and the applicant will notify and consult with affected tribes and the Washington State Department of Fish and Wildlife (WDFW) before making a final determination.
- **(e.)** Ecology will make the final determination of impairment and adequacy of compensation or mitigationas part of decision on the reclaimed water permit required under WAC 173-219-xxx.
- (f.) The applicant may request assistance from Ecology through a cost reimbursement agreement, based on resource availability, during any stage of scoping or conducting an analysis to determine compliance with RCW 90.46.130. Cost reimbursement agreements must meet the requirements of RCW 43.21A.690. Ecology shall make the determination of agency resource adequacy.

WAC 173-219-___ Public access to information

The lead agency must make available for inspection and copying records relating to reclaimed water permits, in accordance with chapter 42.56 RCW.

- **(a.)** The lead agency may require a reasonable fee for copying of documents.
- **(b.)** Claims of confidentiality must be handled in accordance with the appropriate provisions of <u>Chapters 42.56 RCW</u>, <u>173-03 WAC</u>, and <u>RCW 43.21A.160</u>.
- (c.) For reclaimed water permits that are also subject to NPDES permit requirements, Ecology must disclose any information accorded confidential to the USEPA regional administrator if the USEPA requests this information.

WAC 173-219-___ Public notice

(1.) Public notice of application.

Notice must be published via electronic mail, posting on the lead agency's internet site, press release, or other appropriate means for any reclaimed water permit application when it is determined to be complete by the lead agency.

(2.) Public notice of draft permitting decision

Notice must be published via electronic mail, posting on the lead agency's internet site, press release, or other appropriate means for any draft decision to issue a permit. This public notice must state that a draft reclaimed water permit and is available for review and comment and at a minimum, include the following:

- (a.) The name, address, email, and phone number to contact the lead agency.
- (b.) The procedure for obtaining copies of the fact sheet and the draft reclaimed water permit(s).
- **(c.)** The types and location of the reclaimed water facility.
- **(d.)** The geographical area of the reclaimed water facility.
- (e.) Information about the reclaimed water quality, location, rate, and purpose of use.

- **(f.)** The procedures for finalizing the draft reclaimed water permit and the means by which interested persons may comment on the draft reclaimed water permit, including:
 - (i.) The length of the public comment period, consistent with WAC 173-219-
 - (ii.) How and by when to request a public hearing.
- **(3.)** Public notice when Health is lead agency.

If Health is the lead agency, it must require the applicant to provide the public notice details described in this section consistent with the requirements of <u>WAC 246-272B-02200</u> and <u>173-272B-2300</u> and <u>246-272B-02250</u>, regardless of the size of the reclaimed water and on-site sewage system(s).

WAC 173-219-___ Public comment period

A minimum of thirty (30) calendar days from the beginning of the public comment period must be provided for public input and comment on a draft permit. The lead agency must:

- (a.) Retain, consider, and respond to all comments received during the public comment period.
- **(b.)** Revise the draft reclaimed water permit as needed based on comments received.
- (c.) Notify the applicant, the non-lead agency, and all who commented on the draft reclaimed water permit, and others that indicated interest in the reclaimed water permit, when a final reclaimed water permit has been issued or denied. This notice must include:
- (d.) Response to the comments received and;
 - (i.) If issued, the lead agency must provide:
 - (A.) Final reclaimed water permit and fact sheet.
 - **(B.)** Effective date of the reclaimed water permit.
 - **(C.)** Expiration date of the reclaimed water permit.
 - (D.) Procedures for appealing the reclaimed water permit.
 - (ii.) If denied, the lead agency must provide:
 - (A.) An explanation of the denial and why it was necessary to protect public Health and the environment.
 - **(B.)** Procedures for appealing the denial.

WAC 173-219-___ Public meeting and hearing request

During the public comment period, any person may request a public meeting and/or hearing to review the draft reclaimed water permit and fact sheet and for the lead agency to accept verbal comments on the drafts. Any such request for a public meeting or hearing must be filed with the lead agency before the end of the public comment period.

- (a.) Notice of a public meeting or hearing must be published at least thirty days in advance of the meeting or hearing.
 - (i.) When Ecology is lead agency it must publish notice of the event at least as widely as the notice of the draft permitting decision.
 - (ii.) When Health is the lead agency, the applicant must publish the notice and provide proof of publication to Health.
- **(b.)** The notice must include the:
 - (i.) Name, address, and phone number of the lead agency contact person.
 - (ii.) Date, time, and location for the meeting and/or hearing.
 - (iii.) Nature and purpose of the meeting and/or hearing.
 - (iv.) Issues indicated by the person(s) requesting the meeting and/or hearing, or any appropriate issues thought to be of interest to the public.
 - (v.) A reference to the public notice provided under this section including the method of notice and date of issuance.
 - (vi.) Contacts and locations where interested persons may obtain more information.

WAC 173-219-___ Uses and discharges not subject to reclaimed water permits

The following are not subject to reclaimed water permits under this chapter:

- Greywater or treated greywater as defined in RCW 90.46.140 and chapter 246-274 WAC.
- Agricultural industrial process water as defined in <u>RCW 90.46.010</u>.
- Industrial reuse water as defined in <u>RCW 90.46.010</u>.
- Land treatment systems of wastewater regulated under chapter <u>90.48 RCW</u>.
- On-site sewage treatment systems under chapters <u>70.118</u> and <u>70.118B RCW</u> and chapters 246-272, 246-272A, 246-272B WAC.
- Treatment and non-potable reuse systems regulated under the most recent edition of the state plumbing code as adopted by the Washington State Building Code Council or a rule adopted by another state agency.

WAC 173-219-___ Relationship with other Ecology and Health permits

Permit requirements under this chapter, <u>173-216 WAC</u>, and NPDES permit requirements under the <u>Federal Water Pollution Control Act</u> will under normal circumstances, be contained in a single permit document issued by Ecology.

Permit requirements under this chapter, <u>173-216 WAC</u>, and on-site sewage system permit requirements under <u>RCW 70.118B.020</u> and <u>RCW 43.20.050</u>, shall under normal circumstances, be contained in a single permit document issued by Health.

The permitting authority may issue a separate reclaimed water permit with an associated permit on a case by case basis when determined by the permitting authority to improve implementation of this chapter.

WAC 173-219-___ Regulatory action for noncompliance

(1.) Immediate protection of public health or the environment.

When the immediate need is to protect public health or the environment, the lead agency may issue an appropriate order without the notification or determination requirements in subsection (2) of this section. The lead agency must:

(a.) Serve an order or directive issued pursuant to this sub-section by registered mail or personally, upon any person to whom it is directed and in the manner required by the lead agency's rules.

(2.) Notice of Violation.

Upon determination of a substantial potential to violate this chapter or <u>90.46 RCW</u> and except as provided for in subsection (1) of this section, the lead agency must:

- (a.) Provide notice of violation by registered mail to the responsible party.
- **(b.)** Provide thirty (30) days from receipt of the notice for the responsible party to submit a full report containing the steps taken or to be taken to comply with the violation determination.
- (c.) Issue an order, directive, or other enforcement action after the expiration of thirty days (30) days to the responsible party by registered mail or other appropriate method required by lead agency rules.

(3.) Compliance Schedules and Conditions.

The lead agency may establish schedules and conditions to achieve compliance through an administrative order or terms of a permit. A compliance schedule must:

- (a.) Set the shortest, most reasonable time, to achieve the specified requirements.
- **(b.)** Contain interim requirements and set dates for completion.
 - (i.) If the schedule has more than one year between interim requirement completion dates, the reclaimed water permit or administrative order must require and specify due dates for progress reports towards completion.
- (c.) The permittee must submit written notice to the lead agency within fourteen (14) days of:
 - (i.) Completion of each compliance item.
 - (ii.) Missed compliance requirements.

- (iii.) Reason for missed compliance.
- (iv.) Plan to achieve compliance.

(4.) Failure to comply.

Should the permittee fails to comply with conditions or interim requirements in the compliance schedule established under subsection (3.) of this section, the noncompliance is considered a continuing violation and the lead agency may modify or revoke the reclaimed water permit or take other direct enforcement actions as provided for in subsection (5.) of this section.

(5.) Enforcement authority.

The lead agency may:

- (a.) Modify, suspend, or revoke a reclaimed water permit in whole or in part during its term for cause, including, but not limited to:
 - (i.) Violation of any term or condition including, but not limited to, a repeated violation or event, such as inadequate performance, monitoring, and operation and maintenance, which threatens public health or the environment.
 - (ii.) It discovers that the permittee obtained the reclaimed water permit by misrepresentation or failure to disclose fully all relevant facts.
 - (iii.) A change in any condition that requires either a temporary or permanent reduction or cessation of generation, distribution, or use of the reclaimed water.
 - (iv.) A determination that the permitted activity endangers human health or the environment, or contributes to water quality standards violations.
 - (v.) Failure or refusal of the permittee to allow entry for reclaimed water permit compliance inspection.
 - (vi.) Nonpayment of assessed fees.
 - (vii.) An exceedance in the approved quantity or reduction in the quality or class of reclaimed water generated.
- **(b.)** Sue in court, with the assistance of the attorney general, if appropriate and necessary to order compliance of any substantial potential to violate, or continuing violations of reclaimed water permits—without first revoking the reclaimed water permit.
- **(c.)** Assess, or sue to recover in court civil fines, penalties, and other civil relief as may be appropriate for the violations of any of the following:
 - (i.) Reclaimed water standard or limitation.
 - (ii.) Reclaimed water permit, term, or condition.
 - (iii.) Filing requirement.
 - (iv.) Duty to allow or carry out inspection, entry, or monitoring activities.
 - (v.) Rule, regulations, or orders issued by the lead agency.
- (d.) Seek criminal sanctions against any person who knowingly makes any false statement, representation, or certification in any notice, report, or monitoring device, methodology, or data required by the terms and conditions of a reclaimed water permit.

WAC 173-219-___ Appeals.

(1.) Appealable actions.

Any person aggrieved by a decision, made in accordance with provisions of this chapter, may appeal that decision as provided by law applicable to the agency issuing the decision. This includes, but is not limited to, chapters $\underline{43.21B}$, $\underline{43.70}$, $\underline{34.05}$ RCW, and RCW $\underline{90.46.220(7)}$, $\underline{90.46.250}$, and $\underline{90.46.270}$.

- (a.) The request for an adjudicative proceeding must be made in the form and manner set forth in the lead agency's laws and regulations.
 - (i.) Health's procedural rules are set forth in <u>chapter 246-10 WAC</u>.
 - (ii.) Ecology's final agency actions are appealable through the pollution control hearings board (PCHB) in accordance with the PCHB's procedural rules under WAC 371-08-335.

WAC 173-219-___ Pre-planning and project application

(1.) Early consultation with lead and non-lead agencies.

Potential reclaimed water project proponents must arrange a pre-planning meeting with the lead and non-lead agency to to determine the scope of the feasibility analysis, as well as other planning, permitting, or technical matters related to their intention to generate, distribute, and use of reclaimed water.

(2.) Project Application.

When Health is the lead agency the project proponent must submit a project application and fee prior to Health reviewing any document submittals required under this chapter, consistent with chapters <u>246-272B</u> and <u>246-272 WAC</u>.

WAC 173-219-___ Feasibility analysis

(1.) Demonstrating long-term feasibility of reclaimed water generation, distribution, and use.

Development of the feasibility analysis is the first step in the planning process for a proposed reclaimed water production facility or for the expansion of an existing facility. The proponent of a reclaimed water project must engage with lead and non-lead agency early in the planning process to determine the scope of the required feasibility analysis, as well as for other regulatory, planning, and/or technical guidance. The feasibility analysis must be submitted to the lead agency for review and approval.

(a.) A feasibility analysis must demonstrate that the applicant has the long-term, technical, legal, and finanicial capacity to design, construct, operate, and maintain the reclaimed water facility and that distribution and end uses are feasible. It must also ensure that resources are sufficient to provide public health and the environmental protection for a planning period of 30 years, including capital and operational costs for the life of the project, in terms of total annual cost and present worth. Planning guidance is available in the Reclaimed Water Facility Manual (Purple Book) and in the review standards found in 173-219- WAC.

The full scope of the feasibility analysis must be determined by the lead agency, in consultation with the non-lead agency as needed, it must include the following:

- (i.) A brief, nontechnical description of the proposed reclaimed water facility and its customers. Include the:
 - (A.) Major components
 - **(B.)** Treatment type
 - (C.) Startup volume
 - (D.) Maximum treatment capacity
 - **(E.)** Planned beneficial uses
 - (F.) Duration of the demand
 - **(G.)** Long-term projection of the reliability of the source water.
- (ii.) A plan to identify and coordinate with owners or managers of neary public water supplies, which must be documented in design documents and the operations and maintenance manual for water source protection and cross-connection control program in 173-219- WAC.
- (iii.) A description of the administrative, managerial, operational, and technical capabilities of the utility that includes:
 - **(A.)** Type of ownership.
 - **(B.)** Responsible managerial officials, such as board members or corporate officers, and the individual(s) in charge of long-term capital planning, repair, and maintenance, and a brief description of their qualifications.
- (iv.) The certified primary operator and any other individual(s) directly responsible for achieving effective and reliable routine operations.
- (v.) A list of all subcontracted services such as engineering, legal, and accounting.
- (vi.) A description of the financial capabilities of the public utility that includes:
 - (A.) A summary of past income and expenses.

- **(B.)** A five-year balanced operational budget.
- (C.) A twenty-year projected operational budget in which revenues meet or exceed expenses.
- (D.) A twenty-year capital improvements plan.
- **(E.)** An explanation of:
 - a. Sources of revenue.
 - **b.** Implementation method to ensure collection of the revenue necessary to maintain cash flow stability.
 - c. Funding method that will be implemented for maintaining an operating cash reserve.
 - **d.** Funding for the capital improvement program and emergency repairs.
 - **e.** User fees that includes evaluation of affordability and the procedure and frequency for review to ensure adequate revenue.
- (ii.) A description of the community outreach and public involvement done, or planned for, over the course of project planning and development.
- (iii.) Demonstration of compliance with <u>RCW 90.46.130</u> including, but not limited to an approved compensation or mitigation agreement.
- **(b.)** The lead agency may require the utility to make changes, such as managerial or financial changes, before approving the feasibility analysis.
- (c.) The lead agency may disapproved the feasibility analysis based on a determination of inadequate technical, economic, legal, operation, and schedule ability or lack of sufficient information on which to make a determination.
- (d.) With the consent of the lead agency, a private utility may establish adequate capacity by entering into a management agreement with a qualified public entity acceptable to the lead agency to serve as the primary management entity or as a third-party guarantor. The management agreement must be binding on both parties to remain in force until the lead agency determines that the private utility has the technical, managerial, and financial capacity to qualify for a reclaimed water permit, or until the private utility enters into a management agreement with another qualified public entity.
- **(e.)** The applicant must plan for the reclaimed water project in coordination with other planning requirements in state law.

WAC 173-219-___ Document preparation, timing, and signature requirements

(1.) Timing.

The proponent is responsible for ensuring that there is sufficient time to meet funding, contractual, and other project deadlines.

- (a.) The lead agency may require an update to an approved engineering document to address changes in conditions, regulatory requirements, or engineering technology when two or more years have elapsed between agency approval of the documents and construction of the reclaimed water facility.
- **(b.)** If submittals are part of a reclaimed water permit or compliance schedule, the lead agency must receive the required submittals by the dead-line established in the permit or compliance schedule.

(2.) Reclaimed water project and permit application signature requirements

All reclaimed water project or permit applications, application renewals, or transfers must be signed as follows:

- (a.) Public agency; by either the principal executive officer or ranking elected official.
- **(b.)** Corporations; by a responsible corporate officer.
- **(c.)** Partnership; by a general partner.
- **(d.)** Sole proprietorship; by the proprietor.
- **(e.)** Private utility; by a responsible officer.
- **(3.)** Signature requirement on other required submittals.

All other required submittals must be signed either by the person in subsection (1) of this section or by their duly authorized representative.

- (a.) A person is a duly authorized representative only if the person described in subsection (1) of this section submits written authorization to the lead agency and specifies an individual or a position with responsibility for the overall operation of the regulated facility or activity.
- **(b.)** If an authorization under (a) of this subsection is no longer accurate, the person in subsection (1) of this section must submit a new authorization before or with the signed submittal.
- (c.) Any person signing a document under this rule must make the following certification, unless a different certification is applicable under another related section of this chapter:
 - "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 fines and imprisonment for violations."
- **(b.)** Engineering submittals must be prepared, stamped, signed and dated by a professional engineer who is licensed in Washington state, as directed in <u>chapter 18.43 RCW</u>.
- **(c.)** Geology and hydrogeology submittals must be prepared, stamped/sealed, signed, and dated by a geologist or hydrogeologist licensed in Washington state, as directed in <u>chapter 18.220 RCW</u>.

WAC 173-219- Plan review and review standards

(1.) Plan review required.

Before constructing or significantly modifying reclaimed water facilities, the permittee must submit all planning, design, and construction documents for approval and receive approval from the lead agency to proceed to construction, as required under WAC 173-219-____.

(2.) Review standards.

The lead agency and non-lead agency must, to the degree determined necessary, review all applications, plans, analyses, engineering reports, and operations and maintenance manuals to ensure they are reasonably consistent with the appropriate sections of the most recent edition of Ecology's "Criteria for sewage works design (Orange Book)" and Ecology and Health's *Reclaimed Water Facilities Manual (Purple Book)*. Additional review references may include, but are not limited to, the documents listed in <u>WAC 173-240-040</u>. The purpose of the review is to evaluate whether the proposed reclaimed water facilities:

- **(b.)** Meet state standards and other requirements for the generation, distribution, and use of reclaimed water under this chapter and 90.46 RCW.
- (c.) Meet applicable requirements of chapters <u>90.48</u> and <u>90.54</u> RCW necessary to prevent and control pollution of waters of the state.
- (d.) Meet applicable requirements of chapter <u>70.118</u>, <u>70.118A</u>, <u>70.118B</u>, <u>70.119</u>, <u>70.119A</u>, or <u>43.20</u> RCW with respect to on-site sewage systems or public water systems.
- (e.) And all other applicable regulations and authorities.

The lead agency will comment on, approve, or reject documents submitted for planning, design, and construction within ninety days (90) of receipt. If circumstances prevent adequate review within a ninety-day (90) period, the lead agency must notify the potential applicant of the reason for the delay and provide an estimated review completion date.

WAC 173-219-___ Engineering report

(1.) Submission of engineering report to lead agency.

The engineering report is the technical basis for the proposed reclaimed water facility. An applicant for a reclaimed water permit under this chapter must:

- (a.) Submit an engineering report as prescribed in subsection (2) of this section as part of the Reclaimed Water permit application.
- **(b.)** Include a section or stand-alone engineering report meeting the requirements of <u>WAC 173-240-060</u> for the wastewater treatment facility that will provide source water for the proposed reclaimed water facility.

(2.) Engineering report contents.

All engineering reports required under this chapter must reflect acceptable engineering practices and demonstrate the capacity of the generator to protect public health and the environment. Reports must also:

- (a.) Provide sufficient detail for a professional engineer to complete plans and specifications without substantial changes.
- **(b.)** Include the following content together with any other relevant data required by other rules of the leadagency, as identified by the report reviewers as needed to protect public health and the environment:
 - (i.) Name and contact information for the owner and the owner's authorized representative(s).
 - (ii.) A project description and a location map. The map must include:
 - **(A.)** Location of all wastewater treatment and reclaimed water generation facilities, as well as all reclaimed and off-spec water storage facilities under direct control of the applicant.
 - **(B.)** All additional facilities that may be under control of the applicant, such as for storage and distribution of reclaimed water
 - **(C.)** All public water supply sources and system facilities within the identified generation and storage area.
 - (iii.) Proposed quantity and quality of the reclaimed water generated by the reclaimed water facility including an assessment that the proposed water quality meets the requirements for the highest proposed beneficial use.
 - (iv.) Ecology's determination of an applicant's compliance with Chapter 90.46.130 RCW
 - (v.) Description of who will operate and maintain the reclaimed water facility.
 - (vi.) If applicable, separation distance between reclaimed water use area and public drinking water system intakes.
 - (vii.) Applicable requirements of the Uniform Plumbing Code amended for state of Washington, including pipe colors and labeling.
 - (viii.) Design of the reclaimed water distribution system directly under the control of the generator including meeting the requirements of WAC 173-219-____, and consistent with pressurized distribution sustems in the most recent edition of the Health's Water System Design Manual.
 - (ix.) The amount, characteristics, and strength of the source water to be treated, including BOD, DO, TSS, and nitrate levels, and the degree of treatment required to generate proposed reclaimed water quality, and other influencing factors.
 - (x.) Processes and diagrams of all reclaimed water unit processes, reliability features, and controls.
 - (xi.) Hydraulic, organic, and influent loading rates to the reclaimed water treatment facility.
 - (xii.) Reliability assessment of all major or otherwise significant equipment and components, individual unit processes, and complete treatment trains, meeting the requirements of this chapter.
- (c.) Summary of engineering design criteria for reclaimed water treatment processes including:
 - (i.) Aeration/anaerobic organic carbon reduction.
 - (ii.) Nutrient reduction (if required).
 - (iii.) Disinfection system selection meeting the requirements of WAC 173-219-
 - (iv.) Disinfectant reactor contact time.
 - (v.) Coagulation and filtration processes (if required).
 - (vi.) Reverse osmosis or comparable technology process (if required).
- (d.) A description of compliance with treatment reliability standards as provided for in WAC 173-219-
- **(e.)** A statement regarding compliance with:
 - (i.) State Environmental Protection Act (SEPA), State Environemental Review Process (SERP), or National Environmental Protection Act (NEPA).

- (ii.) Any applicable state or local water quality management plan or any plan adopted under the Federal Water Pollution Control Act as amended.
- (iii.) Protection of historical and archaeological artifacts.
- (f.) A template for the generator agreements as prescribed in WAC 173-219-____and plan for assessing compliance with the agreement(s).
- **(g.)** The lead agency may require a pilot reclaimed water facility study to evaluate the ability of the proposed facility to meet all reclaimed water quality requirements applicable to the project. The applicant must discuss and determine the need for a pilot study the engineering report and include the proposal for it, if required.
- **(h.) Wetlands.** If the use the reclaimed water is for a wetland, baseline information and background studies necessary to evaluate the proposed project, including:
 - (i.) The wetland-rating category, size, hydrogeomorphic class, and vegetation class of the existing and proposed wetlands.
 - (ii.) The beneficial uses of the existing and proposed wetland.
 - (iii.) The hydrologic regime of the existing and proposed wetland, including depth and duration of inundation, average monthly water level fluctuations, and annual loadings of reclaimed water to the wetlands.
 - (iv.) Demonstration that the proposed quality of reclaimed water meets the requirements for this beneficial use
 - (v.) Any studies conducted or additional information applicable to the specific project or site.
 - (vi.) Information to support a claim of net environmental benefit, if proposed. At a minimum, a claim of net environmental benefit must demonstrate that:
 - **(A.)** The use of reclaimed water provides full and uninterrupted protection of all significant beneficial uses existing in the wetland prior to the use of reclaimed water.
 - **(B.)** Creates new, or enhances the existing beneficial uses of the wetland.
- **(i.) Streamflow and surface water augmentation.** If the use of the reclaimed water is for stream flow and surface water augmentation, the following is also required as part of the reclaimed water engineering report:
 - (i.) The location and proposed augmentation uses of the reclaimed water.
 - (ii.) Demonstration of how the reclaimed water meets water quality standards at the point of discharge.
 - (iii.) Determination of adequate time of travel and distance between the reclaimed water discharge point and any affected downstream potable water intakes, based on protecting public health. Reclaimed water quality must not cause need for intake modifications or additional treatment requirements for the production of potable water.
- **(j.) Groundwater/aquifer recharge.** If the use of the reclaimed water is for aquifer recharge, the following is also required as part of the reclaimed water engineering report:
 - (i.) Information requested by the lead agency necessary to assess the specific treatment and use of reclaimed water for application to recharge groundwater.
 - (ii.) Site specific information presented in the following:
 - (A.) Project operation plan
 - (B.) Conceptual model of the Hydrogeologic system
 - **(C.)** Description of the legal framework
 - **(D.)** Environmental assessment and analysis of any potential adverse conditions or potential impacts to the surrounding ecosystem
 - (E.) Project mitigation plan
 - **(F.)** Project monitoring plan
 - (iii.) Pilot demonstration of project performance.
- **(k.)** Recovery of reclaimed water stored in an aquifer. Aquifer recover projects will be evaluated based on the information provided in the engineering report under (j.) using the following criteria:
 - (i.) Aquifer vulnerability and hydraulic continuity
 - (ii.) Aquifer boundaries and characteristics

- (iii.) Geotechnical impacts of project operation
- (iv.) Chemical compatibility of surface waters and groundwater
- (v.) Recharge and recovery treatment procedures
- (vi.) System operation
- (vii.) Potential impairment of existing water rights
- (viii.) Environmental impacts
- (ix.) Pilot demonstration project performance
- (I.) Land Application. If the use of the reclaimed water is for land application projects the following is also required as part of the reclaimed water engineering report:

	Class A Reclaimed Irrigation	Class B Reclaimed Irrigation
Type of crop irrigated	Not needed	Needed
Type of irrigation	Not needed	Needed
Description of site monitoring requirements	Not needed	Needed
Description of reliability features to minimized water quality impacts	Not needed	Needed
Description of BMPs to be used to encourage reclaimed water conservation	Needed	Needed

- (m.) On-site sewage treatment. If the applicant is or will be operating an on-site sewage treatment system, the applicant may reference an approved engineering report, but the following is also required in the reclaimed water engineering report:
 - (i.) The on-site sewage treatment system predesign report, site and environmental review, and engineering report as required under WAC 246 272B, Parts 3 and 4.
- **(n.) Conveyance in waters of state.** For projects, proposing conveyance in waters of the state, Ecology must approve the conveyance report portion of the engineering report.

WAC 173-219-___ Plans and specifications

- (1.) Approved construction plans and specifications.
 - **(a.)** The applicant must submit:
 - (i.) One complete set of paper plan drawings and specifications, and one complete set in an electronic format as allowed by the lead agency for review by the lead agency, or;
 - (ii.) Two complete sets of paper final plan drawings and specifications, and one complete set in an electronic format as allowed by the lead agency.
 - **(A.)** The lead agency will stamp one of the paper copies of the final plans "approved" and return them to the applicant to be used for bidding and construction.
 - **(b.)** The documents must:
 - (i.) Include or reference a list of the design criteria.
 - (ii.) Include a plan for interim operation of facilities during construction, if applicable.
 - (iii.) Identify all potential cross-connections and the device or assembly to be installed to prevent them as described in 173-219 -___ WAC. This information must also be included in the as-built drawings and final operations and maintenance manual under 173-219-___ WAC.
 - (iv.) Follow applicable requirements in:
 - (A.) WAC 173-240-070 for domestic wastewater facilities.
 - **(B.)** WAC 246-272B-04400 for on-site sewage systems.
 - **(c.)** The lead agency may waive the requirement for paper submittals.

WAC 173-219- Construction and declaration of construction

(1.) Construction of reclaimed water facilities.

Reclaimed water facilities must be constructed in accordance with this chapter and the construction plans and specifications approved by the lead agency prior to construction. When Health is the lead agency, no construction is permitted until Health issues a written approval to construct, under chapter 246-272B WAC.

(2.) Revisions to approved construction plans and specifications.

If during construction, the engineer determines a substantial change to the approved plans and specifications is necessary and affects the quality of the reclaimed water or has financial assistance implications, the proponent must submit revisions to the approved engineering plans and specifications to the lead agency for review and approval prior to continuing construction of the facility.

(3.) Declaration of construction.

The professional engineer responsible for the construction portion of the project must comply with <u>WAC 173-240-090</u> and submit a construction completion form provided for in <u>WAC 173-240-095</u> to the lead agency within thirty (30) days of acceptance by the owner of the constructed or modified reclaimed water facility.

WAC 173-219-___ Operations and maintenance

The permittee must at all times properly operate and maintain any facilities or systems of control installed by the permittee to achieve compliance with the terms and conditions of the permit. Where design criteria have been established, the permittee must not allow flows or waste loadings to exceed approved design criteria, or approved revisions thereto.

(1.) Operations and maintenance manual requirements.

A revised operation and maintenance manual must be submitted to the lead agency for review and approval prior to operation of the facility and must include, together with any other relevant data required by the lead agency, the following content with detail commensurate with the size and complexity of the generation facility:

- (a.) Sufficient detail to describe the operation and maintenance of the entire reclaimed water facility, storage, and as applicable the distribution system.
- **(b.)** A copy of the reclaimed water permit.
- **(c.)** Manufacturer's information on the reclaimed water facility equipment.
- (d.) Technical guidance for both normal and emergency operating conditions.
- (e.) A section containing the permittee's cross-connection control plan, in conformance with 173-219-___ WAC (Cross-connection control).
- (f.) A communication plan outlining notification of any potable water purveyors identified in WAC 173-219(Feasablility) and any other affected agencies regarding:
 - (i.) The initial reclaimed water project.
 - (ii.) Any planned modifications.
 - (iii.) Receipt of a new generator agreement or expanded agreement.
 - (iv.) Known or suspected backflow, spill, or exposure incidents that could affect a public potable water source or system.
- **(g.)** Roles and responsibilities for managerial and operational staff.
 - (i.) Include facility classification and the classification and certification requirements for treatment, distribution, and cross-connection control operators and personnel, if applicable.
 - (ii.) A discussion of provisions to provide a sufficient number of qualified personnel to operate the facility, storage, and distribution system to achieve the required level of treatment at the facility and reclaimed water quality delivered for the approved generator agreements at all times.
- **(h.)** Principal design criteria including:
 - (i.) A process description of each facility unit, including function, relationship to other facility units, and schematic diagrams.
 - (ii.) Details of each unit operations and various controls, recommended settings, fail-safe features, and other elements that ensure proper operation of equipment.
 - (iii.) Operation instructions for anticipated maintenance procedures, less than design loading conditions, overload conditions, and if applicable, initial loading on a system designed for substantial growth.

- (iv.) Information on any maintenance procedures that contribute to the generation of wastewater or residual solids and the proper handling of the wastewater and solids generated.
- (v.) A maintenance log and schedule that incorporates manufacturer's recommendations, preventative maintenance, and housekeeping schedules, and special tools and equipment used to ensure that all unit processes and equipment are in reliable operating condition at all times.
- (i.) Laboratory procedures, including sampling techniques, monitoring requirements, sample analysis and record keeping procedures, including sample and chain of custody forms.
- (i.) Safety.
- **(k.)** Spare parts inventory, address of local suppliers, equipment warranties, and appropriate equipment catalogues.
- (I.) Emergency plans and procedures including, but not limited to:
 - (i.) Facility shutdown and cleanup of a treatment process upset or failure.
 - (ii.) Response plan to ensure that no off-spec or inadequately treated reclaimed water is delivered to a reclaimed water user.
- (m.) If the generator is the distributor, include a section on the distribution system including, but not limited to:
 - (i.) Responsibilities for operation and maintenance.
 - (ii.) Operational controls, maintenance requirements, monitoring, and inspection.
- (n.) If the generator is the user, include a section on the reclaimed water use areas including, but not limited to:
 - (i.) Responsibilities for operation and maintenance.
 - (ii.) Operational controls, maintenance requirements, and monitoring and inspection.

(2.) Reclaimed water projects with funding from USEPA.

(a.) For projects receiving funding from USEPA, the operation and maintenance manual must also follow the requirements of the most recent edition of their EPA publication, <u>Considerations for Preparation of Operation and Maintenance Manuals.</u>

WAC 173-219-___ Monitoring, recording, and reporting

Any use, generation, distribution, or storage of reclaimed water, authorized by a permit may be subject to such monitoring requirements as may be reasonably required by the lead agency, including the installation, use and maintenance of monitoring equipment or methods (including, where appropriate, biological monitoring methods). These monitoring requirements would normally include:

(1.) Monitoring schedules.

A detailed self-monitoring and testing schedule for water quality limits, other substances, or parameters, required to demonstrate that the reclaimed water is protective of human health and the environment.

(2.) Monitoring parameters.

Parameters, sample types, locations, and frequencies must include any minimum requirements established in the technical standards in this chapter for the permitted use(s). The lead agency may base requirements on:

- (a.) Available guidance or model permits.
- **(b.)** Quantity, quality, and variability of the reclaimed water.
- (c.) Treatment methods.
- (d.) Significance of the pollutants.
- **(e.)** Availability of appropriate indicator or surrogate parameters.
- (f.) Cost of monitoring.
- **(g.)** Past compliance history.
- **(h.)** The lead agency may increase monitoring parameters or frequency for cause, including, but not limited to, significant, recurrent reclaimed water permit violations or where determined necessary to protect public health or the environment.

(3.) Source water monitoring.

If the influent to the reclaimed water facility is effluent from a wastewater facility, the permittee may use monitoring data collected for the wastewater discharge permit to fulfill all or part of influent monitoring requirements. Minimum requirements include:

- (a.) Flow.
- **(b.)** Five-day biochemical oxygen demand (BOD5).
- (c.) Total suspended solids.
- (d.) pH.

(4.) Assessment of pollutants.

The lead or non-lead agency may require monitoring for emerging pollutants in the reclaimed water, the surface, or groundwater environments augmented by reclaimed water, or both.

(a.) The lead agency may use data for the purpose of evaluating or estimating the nature, extent, and detected compounds for the protection of public health and the environment.

(5.) Representative sampling and analysis.

In addition to the standard requirements, the lead or non-lead agency may establish specific conditions to assure that sampling and measurements accurately represent the volume and nature of the parameters monitored.

(6.) Monitoring equipment maintenance and calibration.

The lead and/or non-lead agency must establish requirements based on manufacturer's requirements and accepted scientific field practices for the appropriate installation, use, calibration, and maintenance of monitoring equipment for flow, and continuous monitoring devices and methods.

(7.) Sampling and analytical procedures.

Sampling and analytical methods must conform to:

- (b.) The <u>Guidelines Establishing Test Procedures for the Analysis of Pollutants contained in 40 C.F.R. Part 136.</u>
- (c.) <u>Standard Methods for the Examination of Water and Wastewater</u> (APHA) in effect at time of permit issuance or renewal.
- **(d.)** The lead agency may require, in a reclaimed water permit, other sampling and analytical methods as needed and on a case-by-case basis.
- **(e.)** A laboratory registered or accredited under the provisions of chapter <u>173-50 WAC</u> (Accreditation of environmental laboratories) must conduct the analysis of all monitored data required by the reclaimed water permit.
 - (i.) Field measurements such as flow, temperature, settleable solids, conductivity, pH, turbidity, and internal process control parameters are exempt from (e) above, unless the laboratory is on site and must obtain accreditation for other parameters.

(8.) Recordkeeping and reporting.

The lead and/or non-lead agency must:

- **(f.)** Specify the requirements for recordkeeping for each measurement or sample taken including, but not limited to:
 - (i.) The date, the exact place, and time of sampling, and the individual who performed the sampling or measurement.
 - (ii.) The dates the laboratory performed the analyses and the individual who performed the analyses.
 - (iii.) The analytical techniques or methods used and the results of all analyses.
- **(g.)** Specify the reporting requirements for routine compliance monitoring including the content and forms, reporting frequency (monthly, quarterly, annually), the beginning and ending of reporting periods and due dates, whether reporting is required when the permittee is not generating reclaimed water, and where and how to send reports to the lead agency.
- **(h.)** Establish requirements for recordkeeping and reporting of other operational records such as preventative maintenance activities and corrective actions.

- (i.) Specify the content of the reclaimed water summary report, including but not limited to:
 - (i.) Frequency and date(s) of submission of a reclaimed water generation summary report.
 - (ii.) Total volume of reclaimed water generated, distributed, and used since the last report.
 - (iii.) The lead agency may provide and require a reporting form for this requirement.

(9.) Records retention.

The minimum retention period is three years for all monitoring records. The lead and/or non-lead agency may establish requirements that extend the period of retention for some or all records during the course of any unresolved litigation. The lead agency may specify other records retained by the permittee. These include but are not limited to:

- (a.) Calibration and maintenance records.
- **(b.)** Original recordings for continuous monitoring instrumentation.
- (c.) Copies of all reports required by the permit.
- (d.) Records of all data used to complete the application for the permit.

WAC 173-219-___ Reclaimed water permit terms and conditions

The reclaimed water permit must identify terms and conditions determined to be necessary by the lead agency, for the protection of public health, the environment, and to implement this chapter and chapters 90.46, 90.48, 70.118 A and 70.118B RCW as applicable. These conditions, include but are not limited to the following, and must assure compliance with the technical standards in this chapter and the approved engineering report(s). The reclaimed water permit may establish additional conditions on a case by case basis specific to the types of distribution systems and uses authorized through a generator agreement.

(1.) Regulatory entry and access.

For assessing compliance, the permittee must allow the lead and non-lead agencies the right to:

- (a.) Enter the permitted reclaimed water facilities and premises where the permittee keeps records.
- **(b.)** Inspect any records that the permit requires the permittee to keep under the conditions of the reclaimed water permit. Inspect any facility, equipment, practice, or operation permitted or required by the reclaimed water permit.
- (c.) Sample or monitor any substance or any parameter at the reclaimed water facility.
- (d.) Copy, at reasonable cost, any records required by the terms and conditions of the reclaimed water permit.

(2.) Duty to provide information.

The falsification of information submitted to the lead agency constitutes a violation of the terms and conditions of the reclaimed water permit. The permittee must submit:

- (a.) All the information requested to determine if cause exists for modifying, revoking, reissuing, or terminating the reclaimed water permit, or to determine compliance with the permit or this chapter.
- **(b.)** Copies of records required by this chapter.

(3.) Reporting planned changes.

The permittee must provide advance notice to the lead agency of any reclaimed water facility modifications, production increases, or other planned changes, such as maintenance activities or process modifications that may result in short-term noncompliance with permit limits or conditions.

(4.) Noncompliance action required.

The permittee must:

- (a.) Take immediate action to stop, contain, and clean up unauthorized generation, distribution, or use of reclaimed water.
- **(b.)** Stop, as soon as possible any unauthorized discharges and violations of the permit.
- (c.) Immediately identify and report any issue that threatens public health or the environment.
- (d.) Correct the problem.

- (e.) Notify the lead agency of a failure to comply with reclaimed water permit requirements.
- (f.) Submit a written report to the lead agency within thirty days of any noncompliance that threatens public health or the environment that describes the following:
 - (i.) The noncompliance and its cause, if known.
 - (ii.) The period of noncompliance including times and dates, to the extent possible, and if the compliance has not been corrected, the anticipated date and time it is expected to be corrected.
 - (iii.) The corrective actions taken.
 - (iv.) Steps planned to reduce or eliminate recurrence.
 - (v.) Any other pertinent information.

(5.) Reclaimed water quality limits.

The lead agency must:

- (a.) Specify enforceable limits on the quality of reclaimed water distributed for use. The enforceable limits must:
 - (i.) Verify that the required treatment processes at the reclaimed water facility are functioning correctly.
 - (ii.) Verify that the facility is reliably achieving the required technology-based and use-based standards.
- **(b.)** List:
 - (i.) Each required parameter.
 - (ii.) Regulatory limits.
 - (iii.) Sample type, method, and point of compliance.
 - (iv.) Establish action required when permittee is exceeding a limit.

(6.) Facility loading.

The lead agency must establish conditions to assure that the facility operates within the approved design capacity. The reclaimed water permit may specify design limits that the facility must not exceed, periodic assessments, reporting of flow and loadings, and warning levels that trigger requirements to maintain adequate capacity.

(7.) Authorized uses.

The lead agency must:

- (a.) Require the permittee to maintain generator agreements with distributors and users receiving reclaimed water.
- **(b.)** Limit the distribution and use of reclaimed water to those uses and locations established by a signed generator agreement.
- **(c.)** Establish water quality limits that qualify reclaimed water for distribution, and for shutoff in case of treatment system malfunction or failure.
- (d.) Specify conditions that require distribution of reclaimed water to be terminated.
- (e.) Prohibit the release or distribution of inadequately or incompletely treated reclaimed water.

(8.) Adding new users or uses.

The lead agency may authorize the addition of new users or similar uses without reopening the permit based on submission and approval of the new user's agreement to the lead agency or prior approval of a generator agreement as prescribed in 173-219- WAC.

(9.) Use specific permit conditions.

The reclaimed water permit must include appropriate conditions authorizing and controlling the storage, generation, distribution, recovery, and permitted uses of the reclaimed water as prescribed in 173-219-___WAC and in a manner that protects public health.

(10.) Water rights impairment analysis

The lead agency must provide the final determination of impairment and adequacy of compensation or mitigation, and enforceable provisions to ensure compensation or mitigation is implemented by the permittee.

WAC 173-219- Fact sheet

The lead agency must prepare a fact sheet with the reclaimed water permit. The fact sheet establishes the basis for the terms and conditions in the reclaimed water permit including, but are not limited to:

- (a.) Nature of the source water to the reclaimed water facility.
- **(b.)** Chemical, biological, physical characteristics of the reclaimed water generated.
- (c.) Size of the reclaimed water facility, the approved facility design, reliability features, and methods of operation.
- (d.) Methods of distribution.
- (e.) Types of uses covered under the reclaimed water permit.
- **(f.)** For existing reclaimed water treatment facilities, the compliance history of the reclaimed water facility and the need for monitoring and recordkeeping to document compliance.
- **(g.)** Legal considerations relative to land use, water rights, local wellhead protection regulations, and the public interest.
- **(h.)** Requirements from other local, state, and federal agencies.
- (i.) The fact sheet must, at a minimum summarize the:
 - (i.) Type and location of all proposed reclaimed water facilities.
 - (ii.) Reclaimed water quality and purpose of the proposed uses.
 - (iii.) Legal and technical basis for the reclaimed water permit terms and conditions.
 - (iv.) Procedures for public review and comment.

WAC 173-219-___ Generator agreements and templates

The generator agreement and/or template **must** include:

- (a.) User/distributor name and contact information
- (b.) Required class of reclaimed water
- (c.) Types of uses to be authorized
- (d.) Locations and areas of authorized uses
- (e.) Responsibilities of the generator, distributor(s), and user(s) of the reclaimed water.
- **(f.)** Best management practices.
- (g.) Requirements for evaluation of suitability of proposed uses such as proximity to waters of the state.
- **(h.)** Identification of any specific requirements for monitoring.
- (i.) Any limitations on availability or suitability of the reclaimed water for the proposed use.
- (j.) Any operator certification, such as under <u>chapter 246-292 WAC</u>, provided or required for operation of the distribution system and storage of reclaimed water to protect public health.
- (k.) Any operator training provided or required for distribution or use of the reclaimed water.
- (I.) Provisions included in ordinances and generator agreements relevant to the collection, treatment, storage, distribution, and use of the reclaimed water.
- (m.) Any proposed modification of existing pipes or related infrastructure to convey reclaimed water.
- (n.) Identification and location of nearby public water supply sources and facilities, as defined in WAC 173-219and 173-219-
 - (i.) Plans to notify and coordinate with the owners of these facilities in advance of proposed modifications to use, treatment, storage, and distribution facilities at the use site.
- (o.) If Class B Reclaimed irrigation water, include reliability features and other site controls used to minimize the potential for human contact or improper use of the reclaimed water.
- **(p.)** Any cross-connection control protection, per <u>WAC 246-290-490</u> needed due to anticipated uses, to protect higher quality water from lower quality water
- (q.) Provisions for safe filling and use of reclaimed water as provided for in WAC 173-219-_____
- (r.) Requirements to report results of air-gap and cross-connection control devices and assemblies inspections to be required in chapter 173-219- WAC (Cross-connection Control).
- (s.) Authority of the lead agency, generator, or distributor to revoke an authorization for cause.

(t.) Any other information determined to be necessary by the lead agency.

WAC 173-219-___ Source control and pretreatment requirements

Source water controls must prevent the presence of substances that may affect the reclaimed water quality or the ability to generate reclaimed water.

Source water to reclaimed water facilities must comply with the applicable requirements for:

- (a.) Pretreatment of industrial wastewater under 40 C.F.R. Part 403, Sections 307(b) and 308 in the Federal Water Pollution Control Act, and chapter 90.48 RCW.
- **(b.)** Discharge restrictions and prohibitions for dangerous waste under chapter <u>173-303 WAC</u> and <u>WAC 173-216-060</u>.
- (c.) Restrictions and prohibitions of certain substances entering an on-site sewage system under <u>WAC 246-272B-06000</u>, <u>246-272B-07050</u>, and <u>246-272A-0270</u>.

Conditions for source control and pretreatment appropriate to the type and size of the reclaimed water facility may include, but are not limited to:

- (a.) Specific prohibitions.
- **(b.)** Pretreatment requirements.
- (c.) Industrial user surveys.
- (d.) Establishment of local ordinances.
- **(e.)** Maintenance of the storage and delivery system to ensure no degradation of the reclaimed ater quality delivered to the user.
- (f.) Inspections.
- (g.) Public education requirements.
- **(h.)** Other source control measures such as pollution prevention plans.

WAC 173-219- Cross-connection control

All reclaimed water generators and distributors must comply with the cross-connection control requirements specified in this section. The purpose of cross-connection controls for reclaimed water are to protect potable water systems, as defined in WAC 246-290-020, from contamination via cross-connections, and reclaimed water systems from contamination via cross-connections with lower quality water. The generator's responsibility ends at the property line of the end user. Under the provisions of this section, reclaimed water distributors are not responsible for eliminating or controlling cross-connections on the end user's property.

(1.) Proctection of potable and reclaimed water distribution systems.

The local potable water purveyor is responsible for protecting the potable water distribution system from cross-connections.

- (a.) Reclaimed water distributors must:
 - (i.) Provide the local water purveyor written notification prior to providing reclaimed water service to any property in their service area to ensure compliance with WAC 246-290-490.
- **(b.)** The reclaimed water generator must:
 - (i.) Protect reclaimed water from lower quality water via cross-connection control for its facilities:
 - (A.) Generation facility, including all treatment stages
 - **(B.)** Reclaimed water storage, and
 - **(C.)** Distribution facilities.
 - (ii.) Protect the potable supply at, on, or in its facilities from cross-connections.
- **(c.)** The reclaimed water generators and distributors must:
 - (i.) Use a Health-certified Cross-connection Control Specialist to prepare or review written cross-connection control programs following the principles of WAC 246-290-490 to protect higher quality water from lower quality water..

- (ii.) Ensure that good engineering practices, such as are included in the most recent versions of the Ecology Criteria for Sewage Works Design and in Health's Water System Design Manual, are used in the facilities design, and development and implementation of the programs.
- (iii.) Take appropriate corrective action if a cross-connection or potential cross-connection that is not controlled by the installation of an approved backflow preventer is found, or a backflow incident occurs.
- (iv.) Ensure their program includes:
 - (A.) All locations, under the control of the reclaimed water generator and/or distributor, with potential cross-connection control issues.
 - **(B.)** Location, annual inspection and testing dates of all installed backflow prevention devices under the control of the generator.
 - **(C.)** Person(s) or positions(s) responsible for coordination, compliance, inspection, testing, reporting, maintenance, repair, and replacement of backflow preventers, under the direct control of the generator, and their certification(s).
 - **(D.)** Any public potable water purveyors with facilities within the reclaimed water, storage, distribution and use areas, a notification procedure in case of a backflow incident, and relevant contact information for each purveyor.

(2.) Inspections, tests, and repairs or replacements.

Inspections, tests, and repairs or replacements of approved air gaps and approved backflow assemblies installed to protect the reclaimed water system must be conducted in a timely manner. A Health-certified Backflow Assembly Tester must perform air gap and approved assembly inspections and tests.

(3.) Cross-connection control records.

Reclaimed water distributors shall keep cross-connection control records for the time frames and in the detail identified in WAC 246-290-490.

(4.) Backflow prevention.

All backflow prevention assemblies relied upon to protect the reclaimed water facilities must be models that appear on the current approved backflow prevention assemblies list developed by the University of Southern California Foundation for Cross-Connection Control and Hydraulic Research. The reclaimed water generators and distributors must:

- (a.) Ensure that approved backflow preventers are installed in the orientation and for the use for which they are approved.
- **(b.)** Ensure that a Health-certified cross-connection control specialist determines the appropriate method of backflow protection to protect the reclaimed water distribution system.

WAC 173-219-___ Class A and B reclaimed water

Reclaimed water must meet the minimum technology-based treatment and reliability standards required for either Class A or Class B reclaimed water under this chapter before being distributed for permitted beneficial use(s).

(1.) Allowable treatment methods.

All reclaimed water must meet one of the minimum technology-based treatment methods and all applicable performance standards established in Table 1 of this section to meet the treatment requirements for either Class A or Class B reclaimed water.

- (a.) Class B reclaimed water must also meet the following treatment process train requirements:
 - (i.) Biological oxidation, followed by coagulation, and disinfection.
- (b.) Class A reclaimed water must also meet one of the following treatment process train requirements:
 - (i.) Biological oxidation, followed by coagulation, filtration, and disinfection,
 - (ii.) Biological oxidation followed by membrane filtration, and disinfection,
 - (iii.) Combination of biological oxidation and membrane filtration via a membrane bioreactor followed by disinfection, or

- (A.) A treatment facility may meet the biological oxidation performance standard provided the source water meets or exceeds the minimum secondary treatment requirements in <u>WAC</u> 173-221-040.
- (c.) An alternative treatment method demonstrates, to the satisfaction of the lead agency, that it provides for equivalent treatment and reliability.
 - (i.) Minimum performance standards for an equivalent process or treatment must demonstrate that to assure reclaimed water quality limits are consistently achieved through proper design, operation, and maintenance of each of the treatment units in the proposed alternative treatment process.

WAC 173-219-___ Technology based performance standards

(1.) Reclaimed water performance standards.

All Class A and Class B reclaimed water must meet the performance standards in Table 1 Class A and B Technology erformance Standards. The reclaimed water permit may specify alternative monitoring locations and effluent limits to ensure consistent achievement of the performance standards in Table 1.

Table 1. Class A and B Technology Performance Standards

Process	Parameter ¹	Class A		Class B	
	Dissolved				
	Oxygen	Must be measurably preser		Must be measurably present	
	BOD	Monthly Average	Weekly Average	Monthly Average	Weekly Average
Biological Oxidation	(CBOD may be used as an alternative to BOD)	30 mg/L	45 mg/L	30 mg/L	45 mg/L
Oxidation	TSS	30 mg/L	45 mg/L	30 mg/L	45 mg/L
		Minimum	Maximum	Minimum	Maximum
	рН	6 s.u.	9 s.u.	6 s.u.	9 s.u.
	<i>pH</i> (Groundwater recharge)	6.5 s.u.	8.5 s.u.	Not applicable	Not applicable
	Turbidity ²	Monthly Average	Sample Maximum		
Coagulation/ Filtration		2 NTU	5 NTU	Not Applicable	Not Applicable
Membrane	Turbidity ²				
Filtration		0.2 NTU	0.5 NTU	Not Applicable	Not Applicable
	Total Coliform	7-Day Median	Sample Maximum	7-Day Median	Sample Maxi- mum
Chlorine Disinfection		2.2 MPN/100 mL or CFU/100 mL	23 MPN/mL or CFU/mL	23 MPN/mL or CFU/mL	240 MPN/mL or CFU/mL
	Virus Removal				
Ultraviolet (UV)		See disinfection standards in WAC173-219		Not applicable	Not Applicable
Denitrification		Monthly Average	Weekly Average		
(Not applicable for beneficial uses1-14 listed on <u>Table 2: Use-Based Requirements</u>)	Total Nitrogen	10 mg/L	15 mg/L	Not Applicable	Not Applicable
		Monthly Average	Weekly Average	Monthly Average	Weekly Average

¹ The parameter must be measured at the end of the unit process
² Sample maximum for turbidity is the highest value for the day that lasts longer than five minutes
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WAC 173-219-___ Disinfection process standards

(1.) Disinfection process: Class A and Class B reclaimed water.

The required engineering report must demonstrate, to the satisfaction of the lead agency that the proposed method consistently provides the required level of adequate and reliable disinfection for virus removal or inactivation and to help preserve water quality delivered to the use site. Class A disinfection performance standards are in WAC 173-219
The disinfection process may use any or all of the following:

- (a.) Chlorine. Where chlorine is used as the disinfectant in the treatment process a minimum chlorine residual of at least 1 mg/L after a contact time of at least thirty (30) minutes is required.
 - (i.) The lead agency may require additional protections including defined concentration (C), time (T), or chlorine concentration multiplied by (CT) values as needed to protect public health.
- **(b.) Ultraviolet light**. The permittee must design and install the ultraviolet light disinfection processes that conform to recognized standards and engineering practices developed for use in reclaimed water facilities. Acceptable methods include the criteria in the most recent edition of:
 - (i.) <u>Ultraviolet Disinfection, Guidelines for Drinking Water and Water Reuse, published by the National Water Research Institute</u> (NWRI) in collaboration with the American Water Works Association Research Foundation.
 - (ii.) State of Washington, department of Ecology and Health Reclaimed Water Facilities Manual (Purple Book).
 - (iii.) WEF MOP-8 Design of Municipal Wastewater Treatment Plants.
- **(c.) Other disinfection methods.** Any other system process approved by the lead agency that meets the performance standard must:
 - (i.) Be in accordance with the most recent edition of the Ecology and Health *Reclaimed Water Facilities Manual (Purple Book)* and chapter 173-219- WAC.
 - (ii.) Demonstrate that the proposed process is equivalent to chlorination or ultraviolet light.
- **(d.)** Field commission plans and tests. The permittee must test and validate the disinfection processes and facilities prior to distributing and using reclaimed water. The permittee must:
 - (i.) Obtain approval from the lead agency for a field commissioning test plan.
 - (A.) The plan must be consistent with the most recent edition of the Ecology and Health *Reclaimed Water Facilities Manual (Purple Book)* and the review standards provided in chapter 173-219-120 WAC.
 - (ii.) Conduct field commission tests in conformance with an approved field commissioning test plan.
 - **(B.)** The field-commissioning test must include all processes, equipment, and reactors used in the production of reclaimed water.
 - (iii.) Address adequate procedures and acceptable field commissioning tests during the design of the disinfection facilities. Virus inactivation performance of the proposed disinfection reactor must be validated by using one of the following:
 - **(C.)** Field validation of chemical disinfection processes by:
 - A challenge study or pilot facility demonstration specific to the project conditions.
 - An acceptable third-party challenge study or equipment verification study acceptable to the lead agency.
 - Design and operation limits from other regulatory programs applied to the production of reclaimed or recycled water equivalent to Class A reclaimed water as deemed acceptable by the lead agency.
 - **(D.)** Field validation of ultraviolet disinfection processes by an acceptable bioassay study conforming to the most recent edition of the <a href="https://www.nware.nummer.numm
 - (iv.) Existing reclaimed water facilities are exempt from the field commission test requirement unless a disinfection system is updated or must be replaced.

WAC 173-219-___ Treatment reliability standards.

(1.) Operational reliability requirements.

Permittees must design and operate all reclaimed water facilities to assure operational reliability at all times and meet the reliability requirements in this section. Release or distribution of inadequately or incompletely treated reclaimed water as demonstrated by meeting generation permit limits is strictly prohibited. The permittee must get approval from the lead agency for the methods and criteria to demonstrate reliability as part of the engineering report and the operation and maintenance manual. At a minimum, the following apply:

- (a.) Proper operation and maintenance of the reclaimed water facility, based on the technical standards established in this chapter, good engineering practices, the approved engineering report(s), approved operation and maintenance manual(s) and reclaimed water permit.
- **(b.)** Site presence and the required level(s) of certified operator(s) as defined in <u>WAC 173-219-010</u> for all reclaimed water facilities covered under the reclaimed water permit. Chapter <u>173-230 WAC</u> establishes required levels of operator certification for operators of tertiary wastewater treatment plants.
- **(c.)** Submission to the lead agency of any proposed contract for the operation of any reclaimed water facility covered by this permit.

(2.) Bypassing prohibited.

The permittee must not bypass off-spec, untreated, or inadequately treated wastewater from the approved and permitted reclaimed water facility to the distribution system or to the point of use. Reclaimed water facilities must either store off-spec, untreated, or inadequately treated wastewater for additional treatment or have authorization to discharge the wastewater to an NPDES outfall, or another permitted disposal location in accordance with a wastewater discharge permit issued under chapter 90.48 RCW, 70.118 RCW, or 70.118B RCW. The lead agency may:

- **(a.)** Require a reclaimed water generator to maintain both storage and disposal options for off-spec untreated, or inadequately treated wastewater.
- **(b.)** Specify when and how the reclaimed water facility must cease or otherwise control the generation, distribution, and use of reclaimed water including, but not limited to, the reduction, loss, failure, or bypass of any unit processes of the reclaimed water facility.
- **(c.)** Specify procedures to establish when the treatment processes are sufficiently restored to allow the generation, distribution, or use of the reclaimed water.
- (d.) Prohibit bypassing of off-spec, untreated or inadequately treated wastewater from the approved reclaimed water facility to the distribution system or to the point of use.

(3.) Removed Substances.

The generator must not re-suspend or reintroduce collected screenings, grit, solids, sludge, filter backwash, or other pollutants removed during treatment to the reclaimed water process or to the effluent release.

(4.) Storage.

Storage used for treatment reliability must:

- (a.) Be reserved for the intended purposes.
- (b.) Include all the necessary diversion works, conduits, and pumping and pump back equipment.
- **(c.)** Provide a power supply independent of the primary power supply or a standby source for all diversion equipment. An uninterruptable power supply backup is acceptable.
- (d.) Demonstrate adequate capacity for failure of multiple treatment trains or standby replacement equipment acceptable to the lead agency.

(5.) Discharge.

Discharge locations used for treatment reliability must:

(a.) Include all the necessary diversion works, conduits, and pumping and pump back equipment.

(b.) Provide a power supply independent of the primary power supply or a standby power source for all diversion equipment.

(6.) Automated diversions.

Automated diversions used for treatment reliability must be capable of autonomously diverting all flow to the approved location based on input from appropriate process sensors and alarms. The reset the process must be manually monitored to confirm performance standards are being met.

(7.) Alarms required.

All reclaimed water systems must have and use alarm systems to assure reliability. Alarm systems used as treatment reliability must:

- **(a.)** Provide alarm warning of all of the following:
 - (i.) Loss of power from the primary power supply.
 - (ii.) Failure of required treatment units.
 - (iii.) Interruption of required chemical feeds.
 - (iv.) Other events as required by the lead agency.
- **(b.)** Be capable of continuous operations when there is a loss of primary power supply to the facility.
- (c.) Sound at an attended location or through an automated notification system that will alert the responsible operator in charge or designee available to take immediate corrective action.

WAC 173-219-___ Operational Storage and Distribution requirements.

This section applies only to the storage or diversion facilities for Class A and Class B reclaimed water.

(1.) Operational storage or diversion.

The stored reclaimed water must meet the provisions of WAC 173-219-___ and 173-219-___, unless waived by the lead agency.

(2.) Notice of facility location(s).

The applicant for a reclaimed water permit must locate, identify, and provide notice of proposed reclaimed water storage facilities to all owners of potable water supplies with sources located within:

- (a.) One thousand feet; or
- **(b.)** An area determined by the lead agency, based on the hydrogeology and soil type of the storage facility area.
- **(3.)** Distance to public water supply, surface water, or designated groundwater under the influence of surface water intake.

The minimum horizontal distance between reclaimed water operational storage and public source water intakes must be determined in the reclaimed water engineering report prepared under WAC 173-219-___and reclaimed water permit conditions must specify:

- (a.) The distance and time interval between discharge and potable water diversion.
- **(b.)** The distance and time interval between the reclaimed water discharge and any potentially affected potable supply intakes.
- (c.) Requirements for an enforceable contract with each person distributing or using the conveyed reclaimed water that protects human health and the environment.
- (d.) Measurement and recording of the location, rate, frequency, timing, and duration of each diversion.
- (e.) Recordkeeping and reporting of requested data to the lead agency.
- **(f.)** Circumstances requiring cessation of discharge, conveyance or diversion.
- (4.) Distribution or use by persons other than the permittee.

Unless expressly stated otherwise in enforceable ordinances or contracts, the permittee is responsible for all reclaimed water facilities and activities inherent to the generation and delivery of the reclaimed water.

- (a.) The permittee must coordinate with all potable water system purveyors in whose service areas the permittee operates or owns facilities for treatment, storage and distribution, and/or reclaimed water uses as required under 173-219- WAC (feasibility section).
- **(b.)** Coordination must include, but is not limited to, cross-connection control requirements under 173-219-WAC, pipe installation, storage and other facility construction, re-claimed water uses, wellhead protection, and any changes to these to assure protection of public health. The reclaimed water permit may include conditions authorizing the distribution or use of reclaimed water by persons other than the permittee via the generator agreement if enforceable provisions are in place ensuring construction, operation, maintenance, and use meet all the requirements of the reclaimed water permit and this chapter.
- (c.) The reclaimed water permit may include conditions requiring the permittee to obtain lead agency review and approval of individual agreements or may specify terms and conditions allowing the use of a standardized agreement language or local ordinances for all or some distributors, uses, or users.

WAC 173-219-___ Maintenance of chlorine residual

The generator/permittee and distributor must maintain a chlorine residual as follows:

(1.) Chlorine residual in the distribution system.

A minimum chlorine residual of 0.2 mg/L free chlorine or 0.5 mg/L combined or total chlorine is required in pipeline distribution systems conveying the reclaimed water from the facility to the point of use to prevent biological growth, prevent deterioration of reclaimed water quality, or to protect public health.

- (a.) The lead agency may waive or modify the requirements for maintaining a chlorine residual during storage or conveyance to the point of use, if the applicant demonstrates a benefit from reducing or eliminating the chlorine residual.
- (2.) Chlorine residual for use areas.

A chlorine residual is **not** required in reclaimed water impoundments, storage ponds, and storage tanks at the point of use, or for conveyance along natural streams, lakes, or surface waters of the state.

WAC 173-219-___ Distribution system requirements

(1.) Labeling.

The generator, distributor, and user must:

 Label or use color coded purple (Pantone 512, 522 or other shade approved in the engineering report) for all new reclaimed water piping, valves, outlets, storage facilities and other appurtenances.

(2.) Pipe separation.

Reclaimed water distribution systems must provide adequate separation between the underground-reclaimed water lines and sanitary sewer lines, storm sewer lines, potable water lines, and potable water wells.

(a.) The engineering report must provide pipeline separation distances proposed, both horizontal and vertical, consistent with the most recent edition of <u>Pipeline Separation Design and Installation Reference Guide</u> by Ecology and Health in order to assure adequate access for repair and replacement, trench stability, to minimize impacts to nearby utility pipes, and protect public health.

(3.) Notice of facility location.

The generator must provide distribution system information as described in the operations and maintenance manual, as described in WAC 173-219
).

(4.) Cross-connection control.

Potential cross-connections between the reclaimed water and potable water and between the reclaimed water and wastewater, storm water, or other systems of lower water quality must be managed as described in WAC 173-219-____(Cross-connection).

(5.) Other design requirements.

Reclaimed water distribution pipe material, valves, valve covers, hydrants, and associated components must comply with the most recent edition of <u>Planning for the Distribution of Reclaimed Water - M24</u> American Water Works Association manual or other recognized standard engineering practices for water distribution systems such as the most recent edition of the <u>Department of Health Water System Design Manual</u>.

(6.) Conversion of existing pipe systems for reclaimed water use.

In addition to the requirements in this section, the permittee must apply for and receive approval from the lead agency prior to converting existing storage and pipe systems to reclaimed water storage or distribution. The lead agency may require field commission plans and tests in accordance with WAC 173-219-____ prior to approval.

(a.) If the lead agency approves the conversion of existing storage and pipe systems for reclaimed water use the generator must identify the water conveyed as non-potable reclaimed water, and in conformance with the most recent version of the Uniform Plumbing Code as adopted by the Washington State Building Code Council, where applicable.

WAC 173-219-___ Distribution by transport vehicles

The lead agency may allow distribution of reclaimed water using tank trucks or similar transport vehicles to distribute reclaimed water provided:

(1.) Identification.

Vehicles are clearly identified with reclaimed water advisory signs such as "non-potable water".

(2.) Hazardous and dangerous waste.

Vehicles used for transporting hazardous or dangerous waste are **not** used to transport reclaimed water.

(3.) Inclusion in operation and maintenance manual.

The operation and maintenance manual and the generator agreements must include provisions for safe filling of transport vehicles.

(4.) Exclusivity.

Vehicles transporting reclaimed water are not used to transport potable water.

WAC 173-219-___ General use-based requirements

(1.) General requirements.

In addition to the Class A or Class B requirements in , the use-based requirements apply on a case by case basis.

- (a.) The labeling, pipeline separation, cross-connection control, and other design requirements of WAC 173-219-720- apply to all uses unless otherwise specified by the lead agency.
- (2.) Cross-connection requirements.

Where the generator, distributor, user, or site owner use both reclaimed water and potable water in a use area, the generator or the site owner must follow the cross connection requirements in section 173-219- WAC.

(3.) Signage or advisory notification.

The permittee, distributor, or user must notify the public and employees at the use site of the use of reclaimed water in all use areas by the posting of advisory signs, distribution of written advisory notices, or both.

- (a.) Signage must be clearly visible, emphasize the color purple, and read "Reclaimed Water Do Not drink," or other language acceptable to Health or required by the most recent edition of the Uniform Plumbing Code modified and adopted by Washington state, when applicable.
- **(b.)** Health may approve other methods of notification that provide equivalent public health protection.

(4.) Confined to site.

Generator, distributor, and user must confine Class B reclaimed water, including runoff and spray, to the generator agreement use area.

(5.) Restricted operation.

Generator, distributor, and user must limit operation of all reclaimed water valves and outlets to authorized personnel. They must control or restrict access to hose bibs on reclaimed water lines.

WAC 173-219-___ Specific Use-based requirements

Other uses not listed here may be considered on a case-by case basis and approved by the lead agency.

(1.) Aquifer storage and recovery.

The reclaimed water permit must:

- (a.) Include the recovery period of the reclaimed water based on the hydrogeologist report.
- **(b.)** Require the permittee to meet the standards of <u>chapter 173-157 WAC</u> for permitting of this use option.
- (c.) Ecology may modify or ask Health to modify the reclaimed water permit and the recovery time based on later, supplemental documentation.

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Table 2: Use-Based Performance Standards

Beneficial Use	Minimum Reclaimed Water Class Requirements 3	Additional Requirements
(1.) Reclaimed Water Facility Maintenance	No reclaimed water permit required; use exempted by rule in section 173-219-030	Must be under the operator's direct control and be used on-site
Con	mmercial, Industrial and Institutional	Uses
(2.) Commercial, industrial and institutional uses with public contact	Class A	
(3.) Commercial, industrial and institutional uses with environmental contact	Class B	Must minimize adverse impacts to the environment and dependent beneficial uses
(4.) Commercial, industrial and institutional uses with restricted access	Class B	 Contact limited to qualified personnel Little potential for health impacts
(5.) Public Contact (public water features)	Class A	
	Irrigation	
(6.) Landscape Irrigation with direct or indirect public access	Class A	
(7.) Landscape Irrigation with restricted access and contact	Class B	Contact limited to qualified personnel
(8.) Irrigation of food crops	Class A	
(9.) Frost protection of orchard crops	Class B	 Must not apply within 15 days of harvest 50 foot setback from public access
(10.) Irrigation of nonfood crops	Class B	50 foot setback from public access
(11.) Irrigation of orchards or vineyards	Class B	50 foot setback from public access
(12.) Irrigation of process food crops	Class B	50 foot setback from public access
(13.) Irrigation of trees, fodder, fiber, or seed crops in pastures not accessed by milking animals	Class B	50 foot setback from public access
(14.) Irrigation of trees, fodder, fiber, or seed crops in pastures accessed by milking animals	Class A	
	Wetland Recharge	
(15.) Category I wetlands	No use of reclaimed water	
(16.) Category II wetlands with special characteristics	No use of reclaimed water	
(17.) Category II wetlands without special characteristics	Class A	Unless it can be demonstrated that no existing significant wetlands functions will be decreased and overall net environmental benefits will result from the discharge it must not exceed on average annual basis: • 20mg/L BOD, 20 mg/L TSS, 3mg/L TKN, and 1 mg/l phosphorous • Annual Hydraulic load ≤ 2 cm/day
(18.) Category III or IV wetlands	Class A	Unless it can be demonstrated that no existing significant wetlands functions will be decreased and overall net environmental benefits will result from the discharge it must not exceed on average annual basis:

³ All Class B uses can be replaced with Class A water with no additional requirements, except surface and groundwater recharge which must also meet applicable Additional Requirements in Table 2. 3/17/2017 RW-RAC Working Draft [40]

		20mg/l BOD, 20 mg/l TSS, 3mg/l N TKN, and 1 mg/l phosphorous
		Annual Hydraulic load ≤ 3 cm/day
(19.) Depressional wetlands	Class A	Maximum increase of 10 cm above the natural average monthly water level
(20.) Constructed treatment beneficial wetlands with public access	Class A	
(21.) Constructed treatment beneficial wetlands with no public access	Class B	
	Surface Water Re	charge
(22) Indirect recharge to surface water	Class B	Criteria established on a case-by-case basis to protect existing beneficial uses (recreational, environ-
(22.) Indirect recharge to surface water		mental or other).
(via groundwater or bank infiltration)		
(23.) Direct recharge into non-potable surface water	Class B	Criteria established on a case-by-case basis to protect existing beneficial uses (recreational, environmental or other).
(24) Diverse week area into conference water wood on retable water course	Class A	Criteria established on a case-by-case basis.
(24.) Direct recharge into surface water used as potable water source		Must meet applicable requirements of:
(impoundments, rivers, reservoirs or lakes)		 Chapter 173-201A WAC (Surface Water Standards)
		 Chapter 246-290-310 WAC (Drinking Water Maximum Contaminant Levels)
	Groundwater Red	charge
(25.) Indirect recharge to non-potable groundwater	Class B	Must meet applicable requirements of:
, ,		 Chapter 173-200 WAC (Groundwater Standards)
(surface percolation, subsurface percolation or vadose wells)		 Chapter 173-218 WAC (Underground Injection Control(UIC) Program) when using a UIC well.
(26.) Indirect recharge to potable groundwater	Class A	Criteria established on a case by case basis.
(surface percolation, subsurface percolation or vadose wells)		Must meet applicable requirements of:
(surface percolation, substitute percolation of vadose wells)		Chapter 173-200 WAC (Groundwater Standards)
		 Chapter 173-218 WAC (Underground Injection Control Program) when using a UIC well
		Chapter 246-290-310 WAC (Drinking Water Maximum Contaminant Levels in finished reclaimed)
		water product or at alternative point of compliance)
		Physical setback and sanitary control zone requirements around water supply wells as outlined in Chap-
	Class P	ter 246-290-135 WAC.
(27.) Direct recharge to non-potable groundwater (aquifer recharge)	Class B	Must meet applicable requirements of:
		 Chapter 173-200 WAC (Groundwater Standards) Chapter 173-218 WAC (UIC Program)
	Class A	Criteria established on a case by case basis.
(28.) Direct recharge to potable groundwater (aquifer recharge)	Class A	Must meet applicable requirements of:
		Chapter 173-200 WAC (Groundwater Standards)
		Chapter 173-218 WAC (UIC Program)
		 Chapter 246-290 -310 WAC: Primary MCLs in finished reclaimed water product or at alternative
		point of compliance
		Physical setback and sanitary control zone requirements around water supply wells as outlined in Chap-
		ter 246-290- 135 WAC.
(29.) Aquifer recovery	Class A or B	The effects of recovering reclaimed water sotred from an aquifer must be demonstrated using the crite-
(25.) Addition recovery		ria presented in the engineering report, not to negatively impact groundwater quality, the surrounding
		environment, or water rights holders.
	Direct Potable R	
(30.) Direct Potable Reuse	Class A+	Criteria established on a case by case basis. All direct potable reuse project must:
		Meet the wavier criteria for Group A public water systems as defined in Chapter 246-290-060 RCW Reapproved by the State Board of Health
		Be approved by the State Board of Health.