

Chapter 173-219 WAC
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Part I – General

Subpart A General Information

WAC 173-219-005 Purpose and Scope

- (1) The purpose of this chapter is to provide consistent, predictable, and efficient regulatory reviews, permitting processes and technical standards that encourage the generation and beneficial use of reclaimed water while preserving and protecting public health, the environment, and existing water rights.
- (2) The requirements in this chapter apply to all aspects of the use of reclaimed water in the state of Washington, including the authority to generate, store, and distribute reclaimed water, and the sanctions for failing to comply with state requirements in statute or rule.

WAC 173-219-010 Applicability

- (1) This rule applies only to the use of reclaimed water as defined in RCW 90.46.010. Reclaimed water means water derived in any part from a wastewater with a domestic wastewater component that has been adequately and reliably treated, so that it can be used for beneficial purposes. Reclaimed water is not considered a wastewater.
- (2) This rule does not apply to the following:
 - (a) The capture and redirection of wastewater effluent for treatment plant purposes when under the direct control of the operator in responsible charge of the facility.
 - (b) The capture and redirection of used process water back to process uses within the bounds of an industrial facility.
 - (c) The use of greywater as defined in RCW 90.46.010.
 - (d) The use of agricultural industrial process water permitted as defined in RCW 90.46.010.
 - (e) The use of industrial reuse water permitted as defined in RCW 90.46.010.
 - (f) Land treatment of wastewater under chapter 90.48 RCW.
 - (g) Wastewater effluent discharges under chapter 90.48 RCW.
 - (h) Onsite sewage disposal systems under chapter 70.118 and chapter 70.118B RCW.
- (3) **Severability.** If any provision of this chapter or the application thereof to any person or circumstance is held invalid, such invalidity shall not affect other provisions or applications of this chapter that can be given effect without the invalid provision or application.

WAC 173-219-015 Generator Responsibilities

- (1) **Applicant.** The person proposing to generate reclaimed water has the following responsibilities:
 - (a) Submitting the required information to address water right considerations to the department of ecology (ecology) for review and approval.
 - (b) Submitting the required documents for construction of new or modified reclaimed water facilities to the departments of ecology and health (DOH) for review and lead agency approval.
 - (c) Obtaining an operating permit from the lead agency prior to distribution or use of the reclaimed water in accordance with the requirements of this chapter.
- (2) **Permittee.** As permittee, the generator must:
 - (a) Ensure that all applicable requirements of this chapter and the permit issued under this chapter are met.
 - (b) Maintain control over, and be responsible for all facilities and activities inherent to the generation of reclaimed water.
- (3) **Distribution or use by others.** Generators authorizing distribution or use of reclaimed water by others are responsible to:
 - (a) Ensure through enforceable contracts or ordinances approved by the lead agency that all applicable requirements in this chapter and the permit issued under this chapter are met.
 - (b) Provide the distributor(s) and user(s) with a copy of all applicable permit requirements.

WAC 173-219-020 Distributor Responsibilities

- (1) A person may distribute reclaimed water only in accordance with the requirements of this chapter and of the operating permit issued to the generator.
- (2) The distributor is directly responsible for all facilities and activities inherent to their distribution of the reclaimed water including the construction, operation, maintenance and monitoring systems, storage facilities, transport vehicles and any other means of conveyance.
- (3) **Use by others.** Distributors providing reclaimed water for use by others, are responsible to:
 - (a) Ensure that enforceable contracts or ordinances acceptable to the generator and lead agency are in place.
 - (b) Provide the user(s) with a copy of all applicable permit requirements.

WAC 173-219-025 User Responsibilities

- (1) A person may use reclaimed water only in accordance with the requirements of this chapter and of the operating permit issued to the generator.
- (2) The user is directly responsible for all facilities and activities inherent to their use of the reclaimed water including the construction, operation, maintenance, monitoring systems, and use of any on-site storage facilities.

WAC 173-219-030 Guidance Available

Ecology and DOH provide a comprehensive Reclaimed Water Facilities Manual, date, publication number and other guidance documents to help comply with requirements for various aspects of reclaimed water generation, distribution and use. Guidance documents are available at the agency websites.

WAC 173-219-040 Compliance Deadlines

- (1) **Direct enforceability.** Except as allowed under subsection 2 of this section, all persons and facilities subject to the requirements of this chapter must comply on the effective date of this chapter, regardless of whether or not a permit has been issued under this chapter.
- (2) **Facilities existing prior to the effective date of this rule.** Any person permitted to generate reclaimed water under a permit issued before this rule is effective:
 - (a) May continue to operate subject to the terms and conditions of the existing permit until the reissuance of the existing permit.
 - (b) Is not required to reapply for an operating permit under this chapter until the application for the permit renewal is due under WAC 173-219-270.
 - (c) Is not required to submit an evaluation for water right impairment for the existing facility.
 - (d) May request a reasonable period of time to obtain compliance with any newly applicable requirements. The lead agency may issue a schedule of compliance in the new operating permit.

WAC 173-219-050 Regulatory Agency Responsibilities

- (1) **Designation of lead agency.** Either ecology or DOH is the lead agency and the other agency is the nonlead agency under this chapter.
- (2) **Lead agency responsibilities.** The lead agency is responsible for the coordination, review, issuance and enforcement of a reclaimed water permit under chapter 90.46 RCW. Specifically the lead agency:
 - (a) Convenes meetings with the applicant, nonlead agency and other agencies with regulatory interest.
 - (b) Notifies the nonlead agency of receipt of permit applications, coordinates application review for completeness, and accepts those applications that meet requirements.

- (c) Notifies the nonlead agency of receipt of required construction review documents, coordinates the review, responds to applicant, and approves submittals that meet requirements.
 - (d) Issues or denies permits and coverage under general permits.
 - (e) Assesses and collects fees as authorized by Part I, section 173-219-060 Fees.
 - (f) Monitors compliance, conducts compliance inspections and takes corrective actions as needed.
 - (g) Reports violations and coordinates permit compliance with the nonlead agency.
 - (h) Conducts formal enforcement actions as needed.
- (3) **Nonlead agency responsibilities.** The nonlead agency:
- (a) Participates in meetings convened by the lead agency as appropriate.
 - (b) Determines the scope of nonlead review for all reclaimed water documents and notifies the lead agency.
 - (c) Submits review comments and recommend permit conditions to the lead agency.
 - (d) Assesses and collects fees as authorized by Part I, section 173-219-060 Fees.
 - (e) Assists the lead agency with permit appeals, compliance and enforcement actions as needed.
- (4) **Department of Ecology responsibilities.** Ecology:
- (a) Serves as the lead agency in projects where:
 - (i) The reclaimed water generator is a water pollution control facility permitted or funded by ecology.
 - (ii) The uses of reclaimed water include discharge to water bodies that are regulated under the federal Clean Water Act.
 - (iii) The uses of reclaimed water require special permit conditions to protect waters of the state under chapter 90.48 RCW.
 - (iv) Both agencies agree that for environmental protection or water right administration reasons, ecology should be the lead agency for a specific project or use.
 - (b) Develops permit requirements as necessary to ensure adequate:
 - (i) Design, construction, and operation of all sewerage systems and associated water pollution control facilities that collect or treat wastewater and generate reclaimed water, except as exempted under RCW 90.48.110.
 - (ii) Protection of waters of the state.

(c) Assures appropriate certification of operators for water pollution control facilities generating reclaimed water.

(d) Adds public health permit conditions as required by DOH.

(e) Provides all regulatory decisions related to water rights.

(5) Department of Health responsibilities. DOH:

(a) Serves as the lead agency in projects where:

(i) There is no discharge of reclaimed water to the environment except where wastewater treatment or reclaimed water generation at the site is also permitted as a large on-site sewage system per chapter 70.118B RCW.

(ii) Both agencies agree that for public health protection reasons, DOH should be the lead agency for a specific project or use.

(b) Develops permit requirements as necessary to ensure adequate public health protection in the use of reclaimed water.

(c) Assures adequate public health related reliability provisions in reclaimed water production, storage, distribution and use.

(d) Adds environmental protection and water right related permit conditions required by ecology.

WAC 173-219-060 Fees

(1) The applicant or permittee must pay the applicable review and permit fees assessed by the lead and nonlead agencies to recover the costs of administering the program.

(2) Ecology fees are established under Chapter 173-224 WAC; except that ecology may enter into a cost-reimbursement agreement, under RCW 43.21A.690, with a project applicant to recover reasonable costs incurred by ecology in carrying out the requirements of WAC 173-219-105, and relevant provisions.

(3) DOH may establish fees under RCW 90.46.030, and may require fees appropriate for review and consultation, pursuant to RCW 43.70.250.

(4) Each agency prepares and administers all review fee notices and collection directly with the applicant or permittee.

WAC 173-219-065 Enforcement Authority

(1) Any violation of this chapter or any permit issued under this chapter may be subject to the enforcement provisions of applicable laws, including but not limited to, chapters 43.21A, 43.70, 43.05, 90.46 and 90.48 RCW.

(2) Enforcement of a permit issued under this chapter shall be at the sole discretion of the lead agency issuing the permit.

(3) The enforcement of other laws, regulations, and ordinances is the responsibility of the agency with jurisdiction.

WAC 173-219-070 Regulatory Action for Noncompliance

- (1) **Notification.** When the lead agency determines a person violates or creates a substantial potential to violate chapter 90.46 RCW, the lead agency must notify the person of its determination by registered mail. This determination does not constitute an appealable order or directive. Within thirty days from the receipt of notice of such determination, the person must file with the lead agency a full report stating what steps have been and are being taken to comply with the determination of the lead agency.
- (2) **Issuance of Order or Directive.** After the full report is filed or after the thirty days have elapsed, the lead agency may issue an order or directive, as it deems appropriate under the circumstances. The agency must notify the person by registered mail, and must inform the person of the process for requesting an adjudicative hearing.
- (3) **Compliance Schedules.** The lead agency may establish schedules and conditions to achieve compliance with applicable requirements.
 - (a) Schedules of compliance must set forth the shortest, reasonable period of time, to achieve the specified requirements.
 - (b) When schedules for compliance exceed one year, the schedule must be specified within a permit, and provide interim requirements and the dates for their achievement, with no more than one year between interim dates. If the time necessary for completion of the interim requirement (such as construction of a treatment facility) is more than one year and not readily divided into stages of completion, interim dates must be specified for the submission of reports of progress toward completion of the interim requirement.
 - (c) Within fourteen days following each date to achieve compliance within the schedule, the person to whom the compliance schedule was issued must provide the lead agency with written notice of their compliance or noncompliance with the requirement.
 - (d) If the person fails or refuses to comply with an interim or final requirement in the compliance schedule, the noncompliance is considered a violation and the lead agency may modify or revoke the permit or take direct enforcement action.
- (4) **Formal enforcement procedures.**
 - (a) The lead agency, with the assistance of the attorney general, may sue in courts of competent jurisdiction to enjoin any threatened or continuing violations of any permits or conditions thereof without the necessity of a prior revocation of the permit.
 - (b) The lead agency may assess, or with the assistance of the attorney general, sue to recover in court, such civil fines, penalties, and other civil relief as may be appropriate for the violation by any person of any:
 - (i) Reclaimed water standards and limitations.
 - (ii) Permit or term or condition thereof.

- (iii) Filing requirements.
 - (iv) Duty to allow or carry out inspection, entry, or monitoring activities.
 - (v) Rules, regulations, or orders issued by the lead agency.
- (c) The lead agency may request the prosecuting attorney to seek criminal sanctions for the violation by such persons of any:
- (i) Water quality standards.
 - (ii) Permits or term or condition thereof.
 - (iii) Filing requirements.
- (d) The lead agency, with the assistance of the prosecuting attorney, may seek criminal sanctions against any person who knowingly makes any false statement, representation, or certification in any form or any notice or report required by the terms and conditions of any issued permit or knowingly renders inaccurate any monitoring device or method required to be maintained by the lead agency.

WAC 173-219-080 Appeals

Any person aggrieved by a decision, made in accordance with provisions of this chapter, may appeal that decision only as provided by law applicable to the agency that issued the decision, including, but not limited to, chapter 43.21B RCW and chapters 34.05 and 90.46 RCW.

Subpart B Definitions

WAC 173-219-090 Definitions

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

(1) Statutory definitions. The following terms are defined in RCW 90.46.010.

- Constructed beneficial use wetland
- Constructed treatment wetland
- Direct groundwater recharge
- Domestic wastewater
- Greywater
- Land application
- Lead agency
- Nonlead agency
- Person
- Planned groundwater recharge project
- Reclaimed water

State drinking water contaminant criteria
Streamflow or surface water augmentation
Surface percolation
User
Wastewater
Wetland or wetlands

(2) The following terms are defined below:

"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.

"Agronomic rate" refers to a specific rate of hydraulic loading and nutrient loading that meets the agricultural crop or landscape plant requirements while avoiding over application.

"AKART" is an acronym for all known, available, and reasonable methods of prevention, control, and treatment. The term has the same meaning as it is defined in WAC 173-201A-020.

"Alarm" means an instrument, or device, that continuously monitors a specific function or process and automatically gives warning of an unsafe condition by means of visual, or audible signals, or both.

"Approval" means written approval.

"Applicant" means any person applying for an operating permit or submitting a document for approval of ecology or DOH.

"Artificial wetlands" means wetlands constructed on nonwetland sites for purposes other than wetland mitigation.

"Beneficial purpose" or **"beneficial use"** means the uses of reclaimed water for domestic, stock watering, industrial, commercial, agricultural, irrigation, hydroelectric power production, mining, fish and wildlife maintenance and enhancement, recreational, and thermal power production purposes, and for preservation of environmental and aesthetic values, and for all other uses purposes compatible with the enjoyment of the public waters of the state. Beneficial purpose or beneficial use of reclaimed water includes all uses authorized under chapter 90.46 RCW.

"Class A reclaimed water" means reclaimed water that, at a minimum, meets the requirements of section 320 of this rule.

"Class B reclaimed water" means reclaimed water that, at a minimum, meets the requirements of section 325 of this rule.

"Commercial industrial and institutional use" means nonpotable uses of water to produce private sector or institutional products or provide goods and services. The term does not include land application.

"Contaminant" means any chemical, physical, biological, or radiological substance or matter that has an adverse effect on air, water, or soil.

"Distributor" means the permittee or a person authorized by the permittee to distribute or supply reclaimed water to users.

"DOH" means the Washington State department of health.

"Ecology" means the department of ecology.

"Emerging contaminants" means substances that have been detected in water and require further study to determine potential impacts to human health and the environment. Emerging contaminants include, but are not limited to, pharmaceutical products, endocrine disrupting compounds, personal care products and household cleaning products.

"Engineering report" means a document that thoroughly examines the engineering and administrative aspects of a particular reclaimed water generating plant or facility, as required under this rule.

"Food crops" mean any crops intended for human consumption.

"Generator" means any person reclaiming or proposing to reclaim water who is eligible to receive an operating permit under this rule.

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

"Master generator" means a generator that owns or otherwise provides overall management and operational responsibilities for multiple plants reclaiming water under one operating permit.

"Mitigation" see "wetland mitigation" and "Water right mitigation"

"Natural wetlands" means those wetlands that occur due to natural causes other than construction by human activities. Natural wetlands are typically classified as "waters of the state."

"Nonwetland sites" means uplands and lowland areas that are not deep-water aquatic habitats, wetlands, or other special aquatic sites. They are seldom or never inundated, or if frequently inundated, they have saturated soils for only brief periods during the growing season, and, if vegetated, they normally support a prevalence of vegetation typically adapted for life only in aerobic soil conditions.

"Peak hourly flow" means the greatest volume of water passing through the system during any one hour in a day.

"Permittee" means any person who is issued a reclaimed water operating permit.

"Plans and specifications" means the detailed drawings and specifications used in the construction or modification of reclaimed water generating plants and reclaimed water systems. Except as otherwise allowed, plans and specifications are preceded by an approved engineering report.

"Potable water or drinking water" means water intended for human consumption.

"Primary contact recreation" means activities where a person would have direct contact with water to the point of complete submergence. The term has the same meaning as it is defined in WAC 173-201A-020.

"Reclaimed water permit" means an operating permit issued to a generator of reclaimed water under Part III of this rule.

"Reclaimed water plant or generating plant" means an arrangement of devices, structures, equipment, processes, and controls that treat wastewater or wastewater effluent to generate reclaimed water.

"Reclaimed water facility" means the plant, equipment, storage, conveyance devices, and dedicated sites for reclaimed water generation and management. It may include wastewater collection systems and reclaimed water distribution or use sites.

"Reclaimed water use" means the deliberate application of reclaimed water for a beneficial use.

"Reliability" means the ability of a system or component(s) thereof to perform a required function under stated conditions for a stated period of time.

"Reliability assessment" means a formal determination and review of the reliability of reclaimed water system components and equipment.

"Secondary contact recreation" means activities where a person's water contact would be limited to the extent that bacterial infections would normally be avoided. The term has the same meaning as it is defined in WAC 173-201A-020.

"Short term storage or disposal" means storing or disposing of untreated or partially treated wastewater for at least a 24 hour period.

"Spray irrigation" means application of water from finely divided water droplets to land using artificial means.

"Surface irrigation" means application of water to the land as a broad stream or down furrows by means other than spraying.

"Third party guarantor" means an entity approved by the lead agency to provide stand-by management services if a private management permittee does not operate a reclaimed water system in compliance with this chapter.

"Unit process" means an individual stage in the wastewater treatment or reclaimed water generating sequence that performs a major single treatment operation.

"Use area" means any facility, building, or area approved for reclaimed water use and permitted by the lead agency.

"Vadose zone" means the unsaturated zone between the land surface and the regional water table, not including the base of the capillary fringe where pores are filled with water due to tension saturation, or to localized perched groundwater.

“Water of the state” refers to 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. Term used is the same as defined in WAC 173-221-030.

“Water right impairment” means an interruption or interference in the availability of water, or degradation of the quality of water, caused by decreasing or ceasing a wastewater discharge in order to reclaim the water, that would:

- (a) Prevent an existing water right holder from partially or fully beneficially using the water right or
- (b) Require an existing water right holder to make significant modifications in order to beneficially use the water right or
- (c) For an in-stream flow water right established by rule or otherwise, cause the flow of the stream to fall below the in-stream flow more frequently, for a longer duration, or by a greater amount than was previously the case.

“Water right mitigation” means avoiding, minimizing or compensating for any impairment to water rights.

“Wetland enhancement” means actions taken to intentionally improve the wetland functions, processes and values of existing wetlands.

“Wetland mitigation” means a sequence of steps or actions implemented in order 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 the manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural or historic functions and processes to a former or degraded wetland.

Part II –Planning, Design and Construction

Subpart A Water Right Considerations

WAC 173-219-100 Exclusive Right

The owner of a wastewater treatment facility that is reclaiming water with a permit issued under this chapter has the exclusive right to any reclaimed water generated by the treatment facility. The applicant must identify existing and proposed uses including their intent to retain the exclusive right to the water or plan to change the use at a future date in the documents submitted for ecology review and approval. If no intent is specified, the water will have the same status relative to further appropriation as a wastewater effluent discharge from that facility.

WAC 173-219-105 Evaluation of Potential Impairment of Existing Water Rights

- (1) **Purpose.** This section describes the requirements to address the potential for water right impairment. Under chapter 90.46.130 RCW, facilities that reclaim water shall not impair any existing water right downstream from any freshwater discharge points of such facilities unless compensation or mitigation for such impairment is agreed to by the holder of the affected water right.
- (2) **Applicability.** This section applies to any reclaimed water facilities permitted under chapter 90.46 RCW where there are water rights downstream of any freshwater discharge point of those facilities.
- (3) **Existing water rights.** Existing water rights includes any rights in existence when the reclaimed water permit is issued. Existing water rights include in-stream flows established by rule.
- (4) **Cost reimbursement agreements.** Ecology may enter into a cost-reimbursement agreement with the applicant under RCW 43.21A.690 at any stage of the impairment scoping and evaluation process.
- (5) **Evaluation process.**
 - (a) Applicant responsibilities:
 - (i) Request a pre-evaluation meeting(s) with ecology, if desired, to obtain information about the impairment evaluation process or discuss possible project approaches.
 - (ii) Invite to meetings, or otherwise work with affected persons, tribes, and WDFW, if desired, during the initial development of the project.

- (iii) Submit a written request to ecology to begin the impairment evaluation process. The request must include the following content together with any other relevant data requested by ecology:
 - (A) Who will own, operate and maintain the reclaimed water facilities.
 - (B) Existing and proposed uses of the reclaimed water. Uses not considered may require a separate evaluation and impairment determination as described in WAC 173-219-105(8).
 - (C) An estimate of the annual or seasonal volumes of both the reclaimed water generated and the projected consumptive use.
 - (D) A description of the areas where reclaimed water is or may be distributed and used.
 - (E) Whether the applicant intends to conduct the evaluation or requests ecology to conduct the evaluation.
- (iv) If the applicant completes the evaluation, the applicant may make a recommendation to ecology on whether or not there is impairment to existing water rights.

(b) Ecology responsibilities:

- (i) Notify affected tribes and the Department of Fish and Wildlife (WDFW) within 15 working days of receipt of an impairment evaluation request.
- (ii) Determine the appropriate scope of the impairment evaluation and necessary information submittals after discussion with the applicant. The scope must include existing ground water and surface water rights downstream from any freshwater discharge point of the facility.
- (iii) Complete or determine the adequacy of an evaluation completed by others of the potential for impairment of existing water rights.
- (iv) Provide for adequate public notice and opportunity for review and comment on the completed evaluation. Methods for providing notice may include electronic mail, posting on the lead agency's internet site, publication in a local newspaper, press releases, mailings, or other means of notification that ecology determines appropriate.
- (v) Consult with WDFW, and any affected tribe, prior to making a preliminary determination on the potential for impairment of existing water rights.
- (vi) Promptly take action to make a preliminary determination on impairment within 180 days of receipt of the completed evaluation. If circumstances prevent review within a 180-day period, ecology must notify the applicant of the reason for the delay and an estimated decision time.
- (vii) Notify the applicant, affected water right holders, affected tribes, WDFW, and other parties that submitted comment during the public notice of the preliminary determination.

- (viii) If ecology has made a preliminary determination that existing water rights may be impaired, notify the applicant of their option to negotiate compensation or mitigation with the holders of water rights ecology has identified as potentially impaired.

(6) Compensation or mitigation of potential impairment.

(a) The applicant may:

- (i) Choose to negotiate compensation or mitigation with the holder(s) of any water rights identified by ecology as potentially impaired.
- (ii) Request that ecology participate in the negotiations. Ecology's participation, as a third party, in any negotiation is at the agency's discretion.
- (iii) Abandon the project.
- (iv) Consider other legal options.

(b) If the applicant decides to negotiate with water right holders the applicant must:

- (i) Submit documentation to ecology that the holder(s) of the affected water right(s) have agreed to compensation or mitigation. The applicant may submit that documentation at any stage of the permitting process, but no later than approval of the engineering report unless ecology grants an extension of the deadline under 6vi of this section.
- (ii) Upon request, ecology may extend the deadline for submittal if it appears to ecology that the negotiation has a high likelihood of success. In no case will ecology extend the deadline beyond submittal of plans and specifications.
- (iii) Where ecology accepts mitigation for an impaired in-stream flow right, ecology may condition the reclaimed water permit as appropriate to ensure that mitigation is in place for the life of the permit.

(7) **Appeal.** Formal opportunity to appeal ecology's impairment determination shall be in accordance with WAC 173-219-080 when the final permit decision is made.

(8) **Permit modification and renewals.** A supplemental impairment evaluation and determination are required if the permittee elects to modify the project in such a way that the original evaluation does not match the proposed modification or operation. If required, the supplemental evaluation and determination apply only to the proposed changes.

WAC 173-219-110 Use of Reclaimed Water for Water Right Mitigation

(1) Applicability.

- (a) This section applies to the use of reclaimed water for mitigation of new surface or groundwater water rights and changes to existing surface or groundwater water rights.
- (b) The generator of reclaimed water with a permit under this chapter may use or supply reclaimed water for mitigation for a new water right or for a change to an existing water right.

(2) Minimum requirements.

- (a) The use of reclaimed water to mitigate for the effects of a water right must be as described in an approved plan and engineering report
- (b) The use of reclaimed water for water right mitigation must have been included in an approved impairment evaluation and determination under WAC 173-219-105.
- (c) If use of reclaimed water for water right mitigation is approved by ecology, the use must be included in a reclaimed water permit under Chapter 90.46 RCW.
- (d) The water right applicant must also prepare a mitigation plan and submit it in conjunction with a separate water right application.
- (e) Ecology must approve the mitigation plan and permit the new water right or change under RCW 90.03 or RCW 90.44. Ecology must condition the water right or change to ensure the availability of mitigation water for the life of the water right.
- (f) The reclaimed water generator or water right permittee may change the mitigation water to another type of use if;
 - (i) A replacement source of water is provided,
 - (ii) The reclaimed water permit is modified, and
 - (iii) A water right change is approved by ecology

Subpart B Construction of Reclaimed Water Facilities

WAC 173-219-120 Submission of Documents for Review and Approval Required

(1) Submission required.

Before constructing or modifying reclaimed water facilities, reclaimed water plans, engineering reports, construction plans and specifications, and operation and maintenance manuals applicable to the project must be submitted to the lead agency for review and approval. Two copies of each document must be submitted to the lead agency and one copy to the nonlead agency for review. The nonlead agency may waive the requirement for submission of their copies of documents.

(2) Required signatures on submittals.

- (a) All documents or a transmittal letter accompanying the submittal must be signed by the applicant in accordance with the signatory requirements under WAC 173-219-225(2).
- (b) All technical documents related to the construction or modification of facilities regulated under this rule must be prepared under the supervision of a professional engineer licensed in accordance with chapter 18.43 RCW. All copies of these documents submitted to the departments for review must include the signed and dated seal/stamp of the professional engineer under whose supervision they were prepared.
- (c) Supplemental technical documents such as hydrogeological reports may be prepared, approved, and stamped by other appropriately licensed professionals.

(3) Project development schedule.

- (a) The applicant is responsible for assuring that there is sufficient time to meet funding, contractual and other project deadlines. Agency standards for submittal review are included under WAC 173-219-130.
- (b) If submittals are part of a permit or compliance schedule, the lead agency must receive the required submittals by the deadline established in the permit or compliance schedule.
- (c) Where two or more years have elapsed since approval of either the engineering report or construction plans and specifications, the lead agency may require updates to address changes in water quality conditions, regulatory requirements, or engineering technology.

WAC 173-219-130 Agency Review Standards

- (1) Coordination of review. The lead agency coordinates regulatory reviews with the nonlead agency in accordance with WAC 173-219-050.
- (2) Purpose. The purpose of the review is to evaluate whether the proposed facilities:
 - (a) Meet state standards and other requirements for the generation, distribution and use of reclaimed water under this rule and under chapter 90.46 RCW.
 - (b) Meet applicable requirements of chapters 90.48 RCW and 90.54 RCW necessary to prevent and control pollution of waters of the state.
 - (c) Meet applicable requirements of RCW 43.20.050, necessary to protect public health and potable drinking water supplies.
 - (d) Meet standard engineering criteria and practices used in the planning, design and construction of all reclaimed water facilities, such as those set out in the most current edition of the:
 - (i) "Reclaimed Water Facilities Manual, September 2010", a comprehensive guidance manual for reclaimed water systems published by ecology and DOH.
 - (ii) "Pipeline Separation Design and Installation Reference Guide, Version 9" published by ecology and DOH.
 - (iii) "Guidelines for Water Reuse" published by the United States Environmental Protection Agency.
 - (iv) Standard specifications of the Water Environment Federation, American Public Works Association, the American Society of Civil Engineers, American Water Works Association, or the American Society for Testing and Materials, as applicable to reclaimed water.
 - (v) "State of Washington Irrigation Guide" and "State of Washington Irrigation Management Practices to Protect Groundwater and Surface Water Quality".
 - (vi) "Water Quality in Agriculture, FAO #29" published by the Food and Agricultural Organization of the United Nations.

- (vii) International Building Code (IBC), the Uniform Plumbing Code (UPC), and other national model codes adopted by the state of Washington.
 - (viii) Design criteria contained in college texts, professional journals, or other standard engineering practices for reclaimed water acceptable to the review agencies.
- (3) **Review period.** Both lead and nonlead agencies must promptly take action to comment on, approve, or reject a submittal within 90 days of receipt except for water right impairment reviews under WAC 173-219-105. If circumstances prevent review within a 90-day period, the lead agency must notify the applicant of the reason for the delay and an estimated review time.
- (4) **Exceptions.** The reviewing agency(ies) may consider requests for exceptions to the requirements in this chapter on a case-by-case basis. Any allowed exceptions must be approved in writing. Before granting an exception, the agency(ies) must determine that the proposed exception adequately protects the proposed use, public health and the environment.
- (5) **Additional requirements.** The lead agency may establish additional requirements on a case-by-case basis where determined necessary to adequately protect the use, public health and the environment.

WAC 173-219-140 Reclaimed Water Planning

- (1) **Planning documents.** Reclaimed water planning is the basic planning effort required for the entire reclaimed water facility. Planning may be conducted at multiple levels depending on the scale and scope of the proposal. Since opportunities for reclaimed water must be considered or coordinated under other planning requirements in state law, relevant planning documents may be submitted to meet all or part of the requirements of this section. Documents approved for other purposes may require amendments or additions to meet these requirements. Acceptable planning documents include, but are not limited to any combination of the following:
- (a) General sewer plans for domestic wastewater facilities under RCW 90.48.110, RCW 90.48.112, or WAC 173-240-050.
 - (b) Water system plans under chapter 43.20 RCW, 70.116 RCW or WAC 246-290-100.
 - (c) Water supply plans under chapter 90.44 RCW or 90.82 RCW.
 - (d) A regional water supply plan or plans addressing potable water supply service by multiple water purveyors under RCW 90.46.120.
 - (e) Comprehensive reclaimed water plans under RCW 57.16.010.
 - (f) A stand alone or supplemental reclaimed water plan.
- (2) **Content.** Reclaimed water planning documents must provide sufficient detail for a professional engineer to complete the design engineering report consistent with the information in the approved planning document(s). The plan(s) must include the following content together with any other relevant data requested by the lead or nonlead agency:
- (a) Explain who will own, operate, and maintain the reclaimed water system.

- (b) For private utilities, provide a capacity assessment under WAC 173-219-145.
- (c) Identify existing and proposed uses of the reclaimed water.
- (d) Describe the proposed level of water quality, treatment and reliability and how existing and planned facilities intend to meet the minimum requirements for water quality, treatment and reliability for the proposed uses.
- (e) Estimate the annual or seasonal volumes of reclaimed water required, proposed and available. Describe plans for storage or discharge of the excess reclaimed water.
- (f) Describe the contingency plan for reversion to domestic wastewater facilities if reclaimed water production is discontinued for any reason.
- (g) Describe the existing, if any, and proposed storage and distribution system to areas of reclaimed water use. Provide a map showing proposed routes for pipelines to provide reclaimed water to the uses identified.
- (h) Identify existing or proposed interlocal or interagency agreements, if any, with local governments or local potable water utilities within the area of existing or proposed distribution and use of reclaimed water.
- (i) Provide a planning level estimate of capital and operational costs for the treatment, storage and distribution. Include any use areas under the direct control of the generator.
- (j) Discuss compliance with the State Environmental Policy Act (SEPA) and the National Environmental Policy Act (NEPA), where applicable.

WAC 173-219-145 Private Utility Capacity Assessment

- (1) A private utility must submit adequate information to the lead agency to determine if the entity has the technical, managerial, administrative, operational and financial capacity for issuance of a permit.
- (2) The lead agency may require that changes be made such as managerial or financial changes, before issuance of a permit.
- (3) **Content.** Information that may be required includes:
 - (a) A brief, nontechnical description of the proposed reclaimed water system and its customers, including major components, treatment type, volume at startup and maximum treatment capacity, and beneficial uses to which the reclaimed water will be put.
 - (b) A description of the administrative, managerial, operational and technical capabilities of the entity that includes:
 - (i) Type of ownership
 - (ii) Responsible managerial officials, such as board members or corporate officers, and the individual(s) in charge of long-term capital planning and capital repair and maintenance and a brief description of their qualifications;

- (iii) The certified primary operator and any other individual(s) directly responsible for achieving effective and reliable routine operations; and
 - (iv) A list of all subcontracted services such as engineering, legal and accounting.
- (c) A description of the financial capabilities of the entity that includes:
- (i) A summary of past income and expenses;
 - (ii) A five-year balanced operational budget;
 - (iii) A twenty-year projected operational budget in which revenues meet or exceed expenses;
 - (iv) A twenty-year capital improvements plan;
 - (v) An explanation of the sources of revenue and the method that will be implemented to insure collection of the revenue necessary to maintain cash flow stability;
 - (vi) An explanation of funding method that will be implemented for maintaining an operating cash reserve;
 - (vii) An explanation of the funding for the capital improvement program and emergency repairs; and
 - (viii) An explanation of user fees that includes evaluation of affordability and the procedure and frequency for review to ensure adequate revenue.
 - (ix) Summary of the state of Washington Utilities and Trade Commission rates and rate setting process, as applicable.
 - (x) Any other information specifically requested by the lead agency that it may reasonably require to make a decision on issuance of a permit.
- (4) If the lead agency declines to issue a permit based on a determination of inadequate technical, managerial or financial capacity, or lack of sufficient information on which to make a determination, the private utility may establish adequate capacity by entering into an agreement with a public entity to serve as the primary management entity or as a third party guarantor. Said management 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 an operating permit, or until the entity enters into an agreement with another public entity.

WAC 173-219-160 Engineering Report

- (1) The engineering report is the design document for the entire reclaimed water facility including the collection, treatment, storage, distribution, and use areas. If portions of an existing domestic wastewater facility, for example the collection component, are not being expanded or modified, the engineering report may reference and does not need to readdress that portion of the facility.
- (2) The engineering report must provide sufficient detail for a professional engineer to complete plans and specifications consistent with the information within the approved document.

- (3) The engineering report must include or reference approved documents on file with the lead agency that include the following content:
 - (a) WAC 173-240-060 requirements for an engineering report for domestic wastewater facilities, where applicable.
 - (b) A statement regarding compliance with the State Environmental Policy Act (SEPA) and the National Environmental Policy Act (NEPA), if applicable.
 - (c) A statement regarding compliance with any applicable state or local water quality management plan or any plan adopted under the Federal Water Pollution Control Act as amended.
- (4) The engineering report must include the following content with any other relevant data requested by the lead or nonlead agency.
 - (a) A summary checklist, on a form provided by the lead agency, of how the facility intends to comply with the standards and requirements specified under this chapter.
 - (b) The name, address, and telephone number of the owner of the existing and proposed facilities, and of the owner's authorized representative.
 - (c) A project description that includes a location map and a map of the present and proposed areas for reclaimed water distribution and use.
 - (d) The proposed quantity, quality and uses of the reclaimed water generated by the facility.
 - (e) A description of who will operate, and maintain the facility, the proposed methods of operation and maintenance, staffing levels, qualifications, experience, and responsibilities, and testing requirements.
 - (f) The specific responsibilities of the reclaimed water generator, distributors and users, if different. Describe how the generator will provide information to existing or proposed distributors or users regarding:
 - (i) Responsibilities of the distributor and users for permit compliance.
 - (ii) Implementation of required best management practices.
 - (iii) The quality of the reclaimed water provided.
 - (iv) Any limitations on availability or suitability of the water for the use.
 - (v) Any training provided or required for distribution or use of the water.
 - (vi) Provisions included in ordinances and user agreements.
 - (g) The degree of treatment required to generate reclaimed water for the proposed uses based upon applicable technical standards in this chapter, the amount, characteristics and strength of the wastewater to be treated, and other influencing factors.
 - (h) Processes and diagrams of all reclaimed water unit processes, reliability features and controls.

- (i) The basis for design. Reference requirements within this chapter, published design standards, pilot plant results and site-specific data.
 - (j) The reliability assessment of all major or otherwise significant equipment and components, individual unit processes and complete treatment trains. Include:
 - (i) Flexibility of design
 - (ii) Power supply
 - (iii) Unit processes
 - (iv) Alarms
 - (v) Automated diversions
 - (vi) Storage
 - (vii) Provisions for disposal or alternative uses
 - (k) The engineering design calculations for the reclaimed water process. Include:
 - (i) Aeration / organic carbon reduction
 - (ii) Nutrient reduction (if required)
 - (iii) Disinfection system selection
 - (iv) Disinfectant reactor contact time
 - (v) Coagulation and filtration processes (if required)
 - (vi) Reverse osmosis process (if required)
 - (vii) Pumping, piping and control valve systems
 - (l) A description of the contingency plan assuring that untreated or inadequately treated wastewater will not be delivered to the use area.
 - (m) A cross connection control plan identifying any cross-connection control issues in the treatment system, distribution, or use area. Identify who is responsible for compliance and testing of cross-connection control assemblies. Include details of any water purveyor's program for cross-connection control in the reclaimed water service area, if applicable.
 - (n) An estimate of the costs and expenses of the proposed system and the method of assessing costs and expenses. The total amount shall include both capital costs and also operation and maintenance costs for the life of the project, and must be presented in terms of total annual cost and present worth.
- (5) **Site management plan.** The engineering report or a supplement thereof must include a plan for management of the use site(s). The site management plan must:
- (a) Include or reference any supplemental reports by qualified soil scientists, professional geologists, professional engineers, or other qualified individuals used as a basis for site management.

(b) Include the following content, unless not applicable to the use, together with any other relevant data requested by the lead or nonlead agency:

- (i) The types of uses proposed and whether the reclaimed water provides essential services such as fire protection that cannot be disrupted.
- (ii) Any proposed modification of existing pipes or related infrastructure to convey reclaimed water.
- (iii) Any on-site treatment, controls or storage facilities.
- (iv) The percentage of reclaimed water in the nonpotable water supply and the procedures for blending with other water supplies, if any.
- (v) Reliability features and other site controls used to minimize the potential for human contact or improper use of the water, such as hours of use, methods of use, protection of any drinking fountains, picnic tables, food establishments or other eating areas, and training of personnel.
- (vi) Measures to reduce risk to human health from cross connections or improper use of the reclaimed water.
- (vii) Measures to reduce the risk of environmental impact.
- (viii) Procedures for notification of employees and the public.

(c) For irrigation uses, the following additional information:

- (i) The types of crops or vegetation irrigated.
- (ii) The types of irrigation systems(s).
- (iii) The soils, climate, salinity, nutrient demand and other nutrient sources and procedures used to calculate and assure application is limited to agronomic rates.
- (iv) Parameters to be monitored to assure water quality is within acceptable limits for agricultural use.
- (v) Reliability features and other controls used to confine the water to the use area and minimize the potential for runoff, ponding, overspray or excessive application.
- (vi) Reliability features and other controls used to minimize the potential for movement of contaminants to the groundwater and to avoid groundwater degradation.
- (vii) Methods to maximize water efficiency such as metering, soil moisture sensors, irrigation schedules and other controls.

(6) Pilot plant study.

(a) A pilot plant study may be required to evaluate the ability of the proposed facility to reliably meet all reclaimed water quality requirements applicable to the project.

(b) When required, a study protocol must be submitted for agency review and approval prior to the pilot plant start-up. The protocol must provide a description of all equipment and facilities to be used during the study, treatment capacity of the pilot plant, the operation

and maintenance procedures, the parameters to be monitored, monitoring frequency, sampling techniques, analytical methods, the length of the study, and steps taken to protect both public health and the environment if any discharge of reclaimed water is anticipated during the study.

WAC 173-219-170 Construction Plans and Specifications

- (1) The plans and specifications for a reclaimed water facility are part of the detailed construction documents by which the owner or his or her contractor bid and construct the facility approved in WAC 173-219-160.
- (2) The content and format of the plans and specifications must be reasonably consistent with the state of Washington "Reclaimed Water Facilities Manual" or other accepted standard engineering practices for reclaimed water.
- (3) Plans and specifications must include or reference a list of the design criteria and a plan for interim operation of facilities during construction, where required.

WAC 173-219-180 Operations and Maintenance Manual

- (1) The operation and maintenance manual must provide sufficient detail to describe the operation and maintenance of the entire reclaimed water facility.
- (2) The operation and maintenance manual must include:
 - (a) A copy of the operating permit.
 - (b) Manufacturer's information on equipment.
 - (c) Technical guidance for both normal and emergency operating conditions.
 - (d) The following information:
 - (i) The assignment of managerial and operational responsibilities, including plant classification and classification of required operators.
 - (ii) A description of plant type, flow pattern, operation, and efficiency expected.
 - (iii) The principal design criteria.
 - (iv) A process description of each plant unit, including function, relationship to other plant units, and schematic diagrams.
 - (v) A discussion of the detailed operation of each unit and description of various controls, recommended settings, fail-safe features, and other elements that ensure proper operation of equipment.
 - (vi) A discussion of how the generating plant is to be operated during anticipated maintenance procedures, and under less than design loading conditions, and overload conditions, if applicable, such as initial loading on a system designed for substantial growth.

- (vii) Information on any maintenance procedures that contribute to the generation of wastewater or residual solids and the proper handling of the wastewater or solids generated.
 - (viii) A discussion of provisions to provide a sufficient number of qualified personnel to operate the plant effectively to achieve the required level of treatment at all times.
 - (ix) A section on laboratory procedures, including sampling techniques, monitoring requirements, and sample analysis.
 - (x) Recordkeeping procedures and sample forms to be used.
 - (xi) A maintenance program and schedule that incorporates manufacturer's recommendations, preventative maintenance and housekeeping schedules, and special tools and equipment usage to ensure that all unit processes and equipment are kept in reliable operating condition.
 - (xii) A section on safety.
 - (xiii) A section that lists the spare parts inventory, address of local suppliers, equipment warranties, and appropriate equipment catalogues.
 - (xiv) Emergency plans and procedures including, but not limited to:
 - (A) Plant shutdown and cleanup in the event of a treatment process upset or failure.
 - (B) An alarm condition response plan to ensure that no untreated or inadequately treated wastewater will be delivered to reclaimed water use areas.
 - (xv) A section on the distribution system including, but not limited to:
 - (A) Responsibilities for operation and maintenance.
 - (B) Operational controls, maintenance requirements, monitoring and inspection.
 - (C) Cross-connection control and inspection program(s) including compliance and testing of control devices.
 - (xvi) A section on the reclaimed water use areas including, but not limited to:
 - (A) Responsibilities for operation and maintenance.
 - (B) Operational controls, maintenance requirements, monitoring and inspection.
 - (xvii) Other relevant data requested by the lead and nonlead agencies.
- (3) For those projects funded by the U.S. Environmental Protection Agency, the operation and maintenance manual shall also follow the requirements of the EPA publication, Considerations for Preparation of Operation and Maintenance Manuals.

WAC 173-219-190 Construction Quality Assurances

- (1) All facilities subject to the provisions of this rule must be constructed in accordance with the plans and specifications approved by the lead agency.
- (2) Any contemplated changes during construction that are significant deviations from the approved plans, must first be submitted to the lead agency for approval.
- (3) Within thirty days after acceptance by the owner of the construction or modification of a reclaimed water facility, the professional engineer in responsible charge of inspection of the project shall submit a declaration of construction to the lead agency.
 - (a) The declaration of construction must include:
 - (b) Name and brief description of project.
 - (c) Name and address of owner.
 - (d) Date completed.
 - (e) Date of approval of plans and specifications.
 - (f) One complete set of record drawings.
 - (g) The following statement:

I hereby declare that I am the project engineer of the above identified project and that the project was reviewed and observed by me or my authorized agent. I further declare that the project was, to the best of my knowledge and information, constructed and completed in accordance with the plans and specifications and major change orders approved by the lead agency and as shown on the owner's record drawings.
 - (h) Signature, date and seal/stamp of a professional engineer.

Part III Operating Permits

Subpart A Permit Application and Procedures

WAC 173-219- 200 Permit and Application Required

- (1) Any person proposing to generate reclaimed water for distribution or use must apply to the lead agency for and obtain one of the following types of operating permits before distributing or using the reclaimed water:
 - (a) An individual permit under WAC 173-219-210.
 - (b) A master generator permit, if eligible, under WAC 173-219-215.
 - (c) Coverage under a general permit issued under WAC 173-219-220.
- (2) The lead agency develops and provides the required application forms. The application forms must include provisions for sufficient information about the water quality, volume generated,

purposes of use, locations and other relevant factors for the lead agency to make a draft determination to issue or deny the operating permit.

(3) Any person permitted to generate reclaimed water must file a new or supplemental application for any use of reclaimed water not specifically authorized in the operating permit.

(4) **Exceptions.**

(a) The use of reclaimed water for treatment plant and wastewater conveyance purposes does not require an operating permit under this chapter, provided these uses are in restricted areas, are not subject to public exposure, are under the direct control of authorized maintenance personnel, and are described within an approved operations and maintenance manual.

(b) Facilities existing on the effective date of this chapter as allowed under WAC 173-219-040.

WAC 173-219-205 Eligibility to Apply for an Operating Permit - Permittee

(1) State law, RCW 90.46.220, allows the lead agency to issue an operating permit only to the person generating the reclaimed water.

(2) A permittee 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 facility.

(b) A private utility as defined in RCW 36.94.010 provided the lead agency determines that the private utility meets the requirements for financial and other resources to ensure the reliability, continuity, and supervision of the reclaimed water facility as specified in WAC 173-219-145 of this chapter.

(c) Any entity, public or private, currently holding an active wastewater discharge permit issued under chapter 90.48 RCW. For new facilities, the lead agency may issue the wastewater discharge permit under chapter 90.48 RCW concurrently with the operating permit. The lead agency may require the information specified in WAC 173-219-145 of this rule to assure that a private entity has sufficient capacity to provide reliability, continuity, and supervision of the reclaimed water facility.

WAC 173-219-210 Individual Permit Application

(1) Any reclaimed water generator eligible for a permit may apply for an individual permit on the forms provided by the lead agency.

(2) Upon receipt and review of a complete and accurate application, the lead agency makes a draft determination to issue or deny the operating permit and prepares a fact sheet or statement of basis under WAC 173-219-230.

(3) When a reclaimed water operating permit is dependent on a wastewater discharge permit under chapter 90.48 RCW for required treatment, reliability or use, ecology issues the individual operating permit concurrently with the wastewater discharge permit unless it is not

administratively feasible to do so. The two permits may be combined in a single permit document.

WAC 173-219-215 Master Generator Permit Application

- (1) The lead agency may issue a master generator permit to a person that:
 - (a) Provides overall management and operational responsibilities for multiple facilities generating reclaimed water.
 - (b) Owns or otherwise demonstrates direct control over all facilities included under one operating permit. The facilities do not have to be physically connected with each other.
- (2) Upon receipt and review of a complete and accurate application, the lead agency makes a draft determination to issue or deny a permit and prepares a fact sheet or statement of basis, under WAC 173-219-230 of this chapter.

WAC 173-219- 220 General Permits and Application for Coverage

- (1) The lead agency may issue a general permit to regulate a number of different permittees that have the same or substantially similar
 - (a) Water quality requirements,
 - (b) Uses of reclaimed water,
 - (c) Types of treatment,
 - (d) Reliability features,
 - (e) Operating conditions,
 - (f) Best management practices, and
 - (g) Monitoring, recordkeeping and reporting requirements.
- (2) Interested persons may also petition the lead agency requesting that any category of reclaimed water listed in subsection (1) of this section be considered for the development of a general permit. The lead agency must respond to such a petition within ninety days of receipt.
- (3) Whenever the lead agency decides to issue a general permit, the lead agency must:
 - (a) Develop an application form to apply for coverage under that general permit. In developing the application form, the lead agency must consider:
 - (i) The type, category or size of the facilities covered under the general permit.
 - (ii) The process to evaluate and determine the potential for water rights impairment.
 - (iii) Any additional required information pertaining to the water quality, location, rate or purpose of use.
 - (b) Make the application form available to the public during the public notice and comment period for the draft general permit.
 - (c) Prepare a statement of basis or fact sheet in accordance with section 230 of this chapter.

- (d) Prepare an economic impact statement intended to directly impact small businesses as required.
- (4) After the lead agency issues a general permit, an applicant may request coverage under the general permit by filing a complete and accurate application for coverage on the application form described under subsection (3) of this section.
- (5) If the lead agency determines that an applicant should not be covered under a general permit, the lead agency must respond in writing within sixty days of receipt of the application for coverage. The response must state the reason(s) why coverage cannot become effective and any actions needed to be taken by the applicant to obtain coverage under the general permit or to apply for an individual permit under WAC 173-219-210.
- (6) Coverage under a general permit commences on the date established by the lead agency.
- (7) If the person requesting coverage under a general permit is covered under an individual permit, the lead agency shall revoke or modify that individual permit on the date that coverage commences under the general permit.

WAC 173-219- 225 Signature Requirements

- (1) **Signature on Application.** All permit application forms must be signed as follows:
 - (a) Corporations; by a responsible corporate officer.
 - (b) Partnership; by a general partner.
 - (c) Sole proprietorship; by the proprietor.
 - (d) Public agency; by either the principal executive officer or ranking elected official.
- (2) **Signature on Other Submittals.** All other required submittals must be signed by the person described under subsection 1 of this section, or by their duly authorized representative.
 - (a) Duly Authorized Representative. 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 specifying an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters.
 - (b) Changes to authorization. If an authorization under (2)(a) of this section is no longer accurate, a new authorization satisfying the requirements of (2)(a) of this section must be submitted to the department prior to or together with any reports or other information.
- (3) **Certification.** 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 rule:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, 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 fine and imprisonment for knowing violations.

WAC 173-219-230 Statement of Basis or Fact Sheet

- (1) The statement of basis or fact sheet must, at a minimum, summarize the following:
 - (a) Type and location of all proposed facilities.
 - (b) Reclaimed water quality and purpose of use.
 - (c) Legal and technical basis for the permit terms and conditions.
 - (d) Procedures for public review and comment.
- (2) Fact sheets for permits combined with NPDES permits must also include the additional information required under WAC 173-220-060.

WAC 173-219-250 Notifications, Comments and Procedures

- (1) **Pre-notice review.** Before notifying the public of a draft determination to issue an operating permit, the lead agency must:
 - (a) Allow the nonlead agency at least ten working days to review and submit written comments on or objections to the proposed draft permit and fact sheet or statement of basis.
 - (b) Provide the applicant with a copy of the proposed draft permit and statement of basis or fact sheet and allow at least ten working days for the applicant to make factual corrections to the information contained therein.
- (2) **Public Notice.** The lead agency must notify the public by an appropriate means such as electronic mail, posting on the lead agency's internet site, publication in a local newspaper, press releases or other means that:
 - (a) Conveys the lead agency's draft determination to issue or deny an operating permit under this chapter.
 - (b) Informs interested and potentially affected persons of the proposed reclaimed water quality, location, rate and purpose of use.
 - (c) Informs the public living within the geographical boundaries of the proposed project or service area.
 - (d) Notifies other affected federal, state, county or local government agencies and Indian tribes of the draft determination. For permits subject to NPDES requirements, notify all government agencies as required under WAC 173-220-070.
 - (e) Notifies any other parties that requested notification.

- (f) For general permits, the notice must also request comments as to whether a general reclaimed water permit is appropriate for the proposed category or whether individual permits are necessary.

(3) **Contents of public notice.** The public notice must, at a minimum, include:

- (a) The name, address, and phone number of the lead agency issuing the public notice.
- (b) Copies of the statement of basis or fact sheet and the draft permits.
- (c) The types and locations of facilities, activities and uses covered under the permit.
- (d) The geographical area covered by the permit.
- (e) The draft determination to issue or deny the permit.
- (f) The procedures for the formulation of final decisions, including the thirty-day public notice and comment period and any other means by which interested persons may comment upon those decisions.
- (g) The address and phone number of the state premises at which interested persons may obtain further information.
- (h) For individual and master generator permits, the following additional information:
 - (i) The name and address of each applicant, and if different, of the facility or activity to be regulated.
 - (ii) Whether this is a new or existing facility, activity or use.
 - (iii) The actual or proposed reclaimed water quality.
 - (iv) The actual or proposed locations, uses, and quantity of reclaimed water required.
 - (v) The potential for impairment of existing downstream water rights and any compensation or mitigation proposed for such impairment.
 - (vi) The criteria and process to add new facilities, users, or uses under the permit.
- (i) For general permits, the following additional information:
 - (i) A copy of the application to apply for coverage under the general permit.
 - (ii) The criteria and process to approve applications for coverage including the process to address potential for impairment of existing downstream water rights.
 - (iii) A summary of the economic impact analysis, if required.

(4) **Comment Period.** The lead agency must:

- (a) Provide a period of not less than thirty days following the date of the public notice during which time interested persons may submit their written views on a draft Determination.
- (b) Retain and consider all written comments submitted during the comment period in the formulation of the lead agency's final decision with respect to the permit. The period for comment may be extended at the discretion of the lead agency.

(5) Public access to information.

- (a) In accordance with chapter 42.17 RCW, the lead agency must make records relating to permits available to the public for inspection and copying. The lead agency may require a reasonable fee for copying of documents.
- (b) Claims of confidentiality must be handled in accordance with the provisions of chapter 42.17 RCW, chapter 173-03 WAC, and RCW 43.21A.160.
- (c) For reclaimed water permits that are also subject to NPDES permit requirements, any information accorded confidential status must be disclosed to the USEPA regional administrator if the USEPA requests this information.

(6) Public workshops or hearings. The applicant or any interested agency or person may request a public workshop or hearing with respect to a draft determination.

- (a) Any such request for a public workshop or hearing must:
 - (i) Be filed with the lead agency within the public comment period.
 - (ii) Indicate the interest of the party filing such request.
 - (iii) Indicate the reasons why a workshop or hearing is needed.
- (b) The lead agency may hold a workshop or hearing if it determines there is a significant public interest.
- (c) The lead agency determines the time and place to hold the workshop or hearing.
- (d) At least thirty days in advance of the workshop or hearing, the lead agency must publish notice of the event at least as widely as the public notice of the draft determination. The notice must include the:
 - (i) Name, address, and phone number of the agency holding the public workshop or hearing.
 - (ii) Time and location for the workshop or hearing.
 - (iii) Nature and purpose of the workshop or hearing.
 - (iv) Issues indicated by the persons requesting the workshop or hearing, and any other 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.

(7) Notification of Final Permit Decision. The lead agency must notify the applicant, the nonlead agency, and all persons who have submitted written comments or requested notice of the final permit decision. This notice must include a response to comments received, the final decision, a copy of any permit issued and the procedures for contesting the decision.

(8) Appeal. Any person may appeal a final permit decision as provided in 173-219-080 provided the appeal is made within thirty days following notification of the lead agency decision.

WAC 173-219-260 Transfer of a Permit

- (1) A permit may be automatically transferred provided a written agreement between the old and new owners of the reclaimed water generation plant and the permittees, if different, is submitted to the lead agency at least thirty days before the proposed change takes place. The agreement must specify the date for transfer of permit responsibility, coverage and liability.
- (2) The 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 permit.
- (3) Permits that are not automatically transferred under subsection (1) of this section may be transferred only if modified or revoked and reissued by the lead agency.

WAC 173-219-270 Renewal of a Permit or of Coverage Under a General Permit

(1) Individual and master generator permits.

- (a) A permit is issued for a fixed term, not to exceed 5 years from the effective date on the cover of the permit.
- (b) The permittee must file for renewal of their permit at least 180 days before the permit expiration date stated on the cover of the permit. The renewal application must be on a form provided by the lead agency.
- (c) The lead agency shall review the renewal application sufficiently to determine whether:
 - (i) The permittee is in substantial compliance with all of the terms, conditions, requirements and schedules of compliance of the expiring permit.
 - (ii) The application information is up-to-date.
- (d) The reclaimed water quality is consistent with the applicable water quality standards, and limitations and other legally acceptable requirements.
- (e) As long as the permittee meets the application requirements and deadlines for renewal, an expiring permit remains in effect and enforceable until the lead agency either denies the application or issues a replacement permit. If a permittee fails to meet the deadline or application requirements for renewal, coverage expires on the expiration date of the permit.
- (f) For each draft replacement permit, the lead agency shall provide for adequate public notice and opportunity for public review and comment in accordance with the process established under WAC 173-219-240.

(2) General Permits.

- (a) A general permit is issued for a fixed term not to exceed 5 years from the effective date on the cover of the general permit.
- (b) All permittees covered under a general permit must submit a new application for coverage under the general permit or alternatively, an application for an individual or master

generator permit, at least one hundred eighty days prior to the expiration date of the general permit under which the permittee is covered.

- (c) The lead agency must review the renewal application for coverage sufficiently to determine if:
 - (i) The permittee is in substantial compliance with all of the terms, conditions, requirements and schedules of compliance of the expiring permit.
 - (ii) The department has up-to-date information.
 - (iii) The reclaimed water quality is consistent with the water quality standards limitations and other conditions of the general permit.
- (d) As long as the permittee meets the application requirements and deadlines for renewal:
 - (i) Coverage under an expiring general permit remains in effect and enforceable until the lead agency either denies the application, reauthorizes the existing general permit without change, issues a new general permit, or cancels the expired general permit. If a permittee fails to meet the application requirements or deadlines for renewal, coverage under the general permit expires on the expiration date of the general permit.
 - (ii) The permittee is automatically covered on the effective date of a new or reauthorized general permit issued to replace an expiring general permit unless the lead agency notifies the permittee otherwise.
- (e) If a permittee does not meet the application requirements or deadlines for renewal or the lead agency otherwise notifies the permittee, the permittee is not automatically covered under a new or reauthorized general permit.

WAC 173-219-280 Permit Modification or Revocation

The lead agency may modify or revoke an operating permit in whole or in part during its term for cause including, but not limited to:

- (1) Violation of any term or condition of the permit.
- (2) A permit was obtained by misrepresentation or failure to disclose fully all relevant facts.
- (3) A change in any condition that requires either a temporary or permanent reduction or cessation of generation, distribution or use of the reclaimed water.
- (4) A determination that the permitted activity endangers human health or the environment, or contributes to water quality standards violations.
- (5) Failure or refusal of the permittee to allow entry for permit compliance inspection.
- (6) Nonpayment of assessed permit fees.

Subpart B Permit terms and conditions

WAC 173-219-290 Standard Permit Conditions.

The following conditions apply to and must be included in all operating permits issued under this chapter.

- (1) **Compliance Required.** The permittee must comply with all terms and conditions of the permit. The distribution or use of reclaimed water not authorized by the permit is prohibited.
- (2) **Signatory Requirements.** All applications, reports, or information submitted to lead agency must be signed as required under WAC 173-219-225.
- (3) **Removed substances.** Collected screenings, grit, solids, sludges, filter backwash, or other pollutants removed in the course of treatment shall not be resuspended or reintroduced to the reclaimed water or to an effluent stream discharging to state waters.
- (4) **Sampling and Analytical Procedures.** Sampling and analytical methods must conform to the latest revision of the Guidelines Establishing Test Procedures for the Analysis of Pollutants contained in 40 CFR Part 136 or to the latest revision of Standard Methods for the Examination of Water and Wastewater (APHA), unless otherwise specified in the permit.
- (5) **Accreditation of Environmental Laboratories.** A laboratory registered or accredited under the provisions of Chapter 173-50 WAC, Accreditation of Environmental Laboratories, must prepare all monitoring data required by the permit. Flow, temperature, settleable solids, conductivity, pH, turbidity, and internal process control parameters are exempt from this requirement.
- (6) **Plan Review Required.** Prior to constructing or modifying reclaimed water facilities, the permittee must submit planning, design, construction and operational documents for approval in accordance with sections 100, 120, 130,140, 160, 170 and 180 of this chapter. Facilities must be constructed and operated in accordance with the approved plans.
- (7) **Regulatory entry and access.** For the purpose of assessing compliance, the permittee shall allow the lead agency the right to
 - (a) Enter the permitted facilities and premises where records are kept;
 - (b) Inspect any records that must be kept under the conditions of the permit;
 - (c) Inspect any facility, equipment, practice, or operation permitted or required by the permit;
 - (d) Sample or monitor any substance or any parameter at the facility; and
 - (e) Copy, at reasonable cost, any records required to be kept under the terms and conditions of the permit.
- (8) **Duty to provide information.** Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application, or in any report to the lead agency, it shall promptly submit such facts or

information. The permittee shall furnish to the lead agency within a reasonable time, any information including copies of records, construction submittals or new permit applications, which may be requested by the lead agency to determine whether cause exists for modifying, revoking, re-issuing, or terminating the permit, or to determine compliance with the permit or this chapter. The falsification of information submitted to the lead agency constitutes a violation of the terms and conditions of the operating permit.

- (9) **Reporting planned changes.** The Permittee must provide advance notice to the lead agency of any facility expansions, production increases, or other planned changes, such as maintenance activities or process modifications that may result in noncompliance with permit limits or conditions.
- (10) **Noncompliance action required.** The permittee must take immediate action to stop, contain, and cleanup unauthorized discharges or otherwise stop the violation, and correct the problem and to notify the lead agency of a failure to comply with permit requirements. Unless requested earlier, the permittee must submit a written report to the lead agency within thirty days:
 - (a) Describing the noncompliance and its cause.
 - (b) The period of noncompliance including to the extent possible, times and dates and, if the compliance has not been corrected, the anticipated time it is expected to continue, and
 - (c) The corrective actions taken.
 - (d) Steps planned to reduce or eliminate recurrence and
 - (e) any other pertinent information.
- (11) **Transfer of the permit.** In the event of any change in control or ownership of facilities from which the authorized reclaimed water production emanates, the Permittee must notify the succeeding owner or controller of the existence of this permit by letter, a copy of which must be forwarded to lead agency.
- (12) **Renewal responsibilities.** If the permittee intends to continue operation of the permitted facility after the expiration of an existing permit, the permittee shall apply for a new permit in accordance with this chapter.
- (13) **Cause for modification, suspension or termination.** This permit is subject to modification, suspension, or termination, in whole or in part by the lead agency for:
 - (a) violation of any permit term or condition;
 - (b) obtaining a permit by misrepresentation or failure to disclose all relevant facts;
 - (c) a material change in the quantity or type of reclaimed water generated;
 - (d) a material change in the condition of the waters of the state; or nonpayment of fees.
- (14) **Other reasons for permit modification.** The lead agency may also modify this permit, including the schedule of compliance or other conditions, if it determines good and valid cause exists, such as promulgation or revisions of regulations or new information.

(15) **Payment of fees.** The permittee must submit payment of fees associated with this permit as assessed under WAC 173-219-060.

(16) **Penalties for violating permit conditions.**

- (a) Any person who is found guilty of willfully violating the terms and conditions of this permit is guilty of a crime, and upon conviction thereof may be punished by a fine of up to ten thousand dollars and costs of prosecution, or by imprisonment in the discretion of the court. Each day upon which a willful violation occurs may be deemed a separate and additional violation.
- (b) 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. 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.

(17) **Compliance with other laws and statutes required.** Nothing in the permit excuses the permittee from compliance with any applicable federal, state, or local statutes, ordinances, or regulations.

WAC 173-219- 295 Specific Permits Conditions

The permit must include specific conditions necessary for the protection of public health and the environment that may differ from facility to facility because of characteristics specific to the permitted facilities.

- (1) **Basis for specific conditions.** Characteristics specific to the permitted facilities include, but are not limited to, the nature of the source water to the reclaimed water plant, the chemical, biological, physical characteristics of the reclaimed water generated, the size of the facility, the approved facility design, reliability features and methods of operation, the locations and types of uses covered under the permit, the methods uses for distribution of reclaimed water, the geological and climatic nature of the area covered by the permit, the proximity to population centers, the proximity and sensitivity of waters of the state, the compliance history of the facility, the need for monitoring and recordkeeping to document compliance, legal considerations relative to land use and water rights, and the public interest.
- (2) **Permit duration.** Permits may be issued for up to five years. The permit must specify the dates of issuance, effectiveness and expiration of the permit.
- (3) **Compliance Schedules.** The permit may establish a compliance schedule for existing facilities as part of the permit conditions including
 - (a) the specific steps or actions to be taken by the permittee to achieve compliance with interim and final requirements or permit conditions; and
 - (b) the dates by which those steps or action are to be taken.

- (4) **Source control and pretreatment.** The permit must specify conditions for source control and pretreatment appropriate to the type and size of the reclaimed water plant. Conditions may include specific prohibitions, pretreatment requirements, industrial user surveys, establishment of local ordinances, inspections, public education requirements or other source control measures such as pollution prevention plans.
- (5) **Reclaimed water quality limits.** The permit must specify enforceable water quality limits to verify that the required treatment processes at the reclaimed water plant are functioning correctly and that the facility is reliably achieving the required technology- based and use-based standards established for the proposed use(s). The water quality limits must specify the required parameters, the regulatory limits, the sample type, method, and location for determining compliance, and when exceeding the limits is considered a permit violation. Requirements must include any minimum requirements established in technical standards in this chapter for the permitted use(s).
- (6) **Monitoring Schedules.** The permit must establish a detailed self-monitoring and testing schedule for water quality limits and other substances or parameters to be monitored in the reclaimed water or in waters of the state. Specified monitoring parameters, sample types, locations and frequencies must include any minimum requirements established in the technical standards in this chapter for the permitted use(s). Permit writers should base requirements on available guidance or model permits, the quantity, quality and variability of the reclaimed water, the treatment methods, significance of the pollutants, the availability of appropriate indicator or surrogate parameters, the cost of monitoring, and past compliance history. The permit must allow the lead agency to increase monitoring parameters or frequency for cause including but not limited to significant, recurrent permit violations or where determined necessary to protect public health and the environment.
- (7) **Influent monitoring.** The permit must specify the requirements for the monitoring of influent to the reclaimed water plant. Minimum requirements include flow, biochemical oxygen demand (BOD5), total suspended solids and pH. Reclaimed water plants required to reduce nitrogen concentrations across the treatment processes must monitor influent nitrogen levels. If the influent to the reclaimed water treatment plant is effluent from a wastewater treatment plant, the Permittee may use monitoring data collected for the wastewater discharge permit to fulfill all or part of influent monitoring requirements.
- (8) **Assessment of emerging contaminants of interest.** The lead agency may establish monitoring conditions in the reclaimed water or receiving environment to evaluate or estimate the nature, extent, and significance of emerging contaminants when necessary to protect beneficial uses of reclaimed water. The lead and nonlead agencies must consider relevant scientific studies regarding the laboratory methodologies for detecting very small amounts of a contaminant, fate and transport of the contaminant within the environment, and potential impacts to human and aquatic health in making decisions to require additional monitoring.
- (9) **Representative Sampling and Analysis.** In addition to the standard requirements, the permit may establish specific conditions to assure that sampling and measurements are representative of the volume and nature of the parameters including representative sampling of any unusual reclaimed water generation or generation condition, such as bypasses of the

reclaimed water unit processes, upsets, and maintenance-related conditions affecting reclaimed water quality.

- (10) **Field Instrumentation Measurement, Accuracy, and Calibration.** The permit must establish requirements based on manufacturer's requirements and accepted scientific practices for the appropriate installation, use, calibration and maintenance of monitoring equipment for flow, field measurements and continuous monitoring devices and methods.
- (11) **Recordkeeping and reporting.** Permit conditions must specify the requirements for recordkeeping for each measurement or sample taken including:
 - (a) The date, the exact place and time of sampling, and the individual who performed the sampling or measurement;
 - (b) The dates the analyses were performed and the individual who performed the analyses; and
 - (c) The analytical techniques or methods used and the results of all analyses. Permit conditions must 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 to send reports.
- (12) **Records retention.**
 - (a) The permit must specify the requirements for retention of all monitoring records at specified locations for a minimum period of time of not less than three years. Permit conditions may specify other records that must be retained such as calibration and maintenance records, original recordings for continuous monitoring instrumentation, copies of all reports required by the permit, and records of all data used to complete the application for this permit. The permit may establish requirements that extend the period of retention for some or all records during the course of any unresolved litigation or when requested by the lead agency.
 - (b) The permit may establish requirements for recordkeeping and reporting of operational records such as preventative maintenance activities and corrective actions.
- (13) **Facility loading.** The permit must establish conditions to assure that the facility operates within the approved design capacity. The permit may specify design limits that may not be exceeded, periodic assessments and reporting of flow and loadings, and warning levels that trigger requirements for planning or other actions to maintain adequate capacity.
- (14) **Operational reliability.** The permit must establish appropriate conditions to assure operational reliability at all times:
 - (a) The permit must specify conditions requiring the permittee to properly maintain and operate all structures, systems, and equipment for treatment, control and monitoring, which are installed or used by the permittee to achieve compliance with the permit. Conditions must be based on the technical standards established in this chapter, the approved engineering report(s) and the approved operation and maintenance manual(s).

The permit may require compliance with the procedures established in the approved operations and maintenance manual.

- (b) Required levels of operator certification are established under chapter 173-230 WAC for operators of reclaimed water plants. Permit conditions must specify the specific requirements for site presence and the required level(s) of operator certification for the reclaimed water facilities covered under the permit. The permit may require submission to the lead agency of any proposed contract for the operation of any reclaimed water facility covered by this permit where necessary to ensure consistency with the requirements of this chapter.
- (15) **Actions to avoid bypass of treatment.** The permit must prohibit the generation, distribution or use of reclaimed water under certain conditions. Permit conditions must 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 plant. Permit conditions may specify procedures to establish when the treatment processes are sufficiently restored to allow the generation, distribution or use of the reclaimed water.
- (16) **Authorized uses and locations.** The distribution or use of reclaimed water not authorized by the permit is prohibited. The permit must include conditions specifying the authorized uses of reclaimed water and the water quality, rates, and locations of each use authorized under the permit. The permit must include conditions addressing requirements for site management. The permit may list specific authorizations, require a summary plan or reference the approved engineering report and site management plan.
- (17) **Summary plan.** The permit must specify the frequency and date(s) of submission of a summary plan. The lead agency must specify content and may provide a reporting form for the summary plan. The plan must be submitted at least annually and must provide a summary of the total volume of reclaimed water generated, distributed and used since the last report. The plan may require:
- (a) A description of the reclaimed water distribution system,
 - (b) Identification of all distributors, users purposes and locations of use,
 - (c) A description of the method(s) used to measure the rate and volume of reclaimed water for each use,
 - (d) Identification of any specific requirements for sight management.
- (18) **Adding new users or uses.** The permit may include conditions authorizing the addition of certain types of new users or uses without reopening the permit. The permit must specify:
- (a) The types of uses authorized,
 - (b) Locations where uses may be authorized,
 - (c) The required reclaimed water quality,

- (d) Requirements for evaluation of suitability of proposed uses such as application rates, water balances, and proximity to waters of the state,
 - (e) The methods and frequency for reporting to the lead agency, and
 - (f) The authority of the lead agency to revoke an authorization for cause.
 - (g) The distribution or use of reclaimed water not authorized by the permit is prohibited.
- (19) **Distribution or use by persons other than the permittee.** Unless expressly stated otherwise in enforceable ordinances or contracts, the permittee is considered responsible for all facilities and activities inherent to the production, distribution and use of the reclaimed water.
- (a) The permit may include conditions authorizing the distribution or use of reclaimed water by persons other than the permittee provided that enforceable provisions are in place that
 - (i) Ensure that construction, operation, maintenance, and use meets all requirements of the permit and this chapter and
 - (ii) Allow the permittee or their authorized distributor to regulate distribution, enter and inspect the site and terminate service of reclaimed water to users violating the terms and conditions of the permit and this chapter.
 - (b) The permit may require the lead agency to review and approve individual contracts or may specify terms and conditions allowing the use of a standardized contract or local ordinances for all or some distributors, uses, or users.
- (20) **Water right considerations.** The permit must include conditions necessary to address any water right considerations regulated under the permit such as impairment mitigation, conveyance in surface waters, or mitigation for new appropriative rights.
- (21) **Additional permit conditions.** The permit may establish additional conditions specific to the types of distribution systems and uses authorized within the permit. The permit conditions must assure compliance with the technical standards in this chapter and the approved engineering report

Part IV – Technical Standards

Subpart A Technology-Based Treatment Requirements

WAC 173-219-300 Minimum Requirements

Reclaimed water must meet the minimum technology-based treatment and reliability standards required for the use authorized under this chapter.

WAC 173-219-310 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. To assure adequate and reliable treatment, source water to reclaimed water generating plants must comply with requirements for the pretreatment of industrial wastewater under 40 CFR Part 403 and sections 307(b) and 308 in the Federal Water Pollution Control Act, and chapter 90.48 RCW, the Washington Water Pollution Control Act and with the discharge restrictions and prohibitions of dangerous waste regulations, chapter 173-303 WAC and WAC 173-216-060.

WAC 173-219- 320 Class A Reclaimed Water

Reclaimed water achieving one of the minimum technology-based treatment methods and all applicable performance standards established in this section meets the treatment requirements for Class A.

(1) Treatment methods.

- (a) The traditional method consists of unit processes for biological oxidation, followed by coagulation, filtration and disinfection.
- (b) The membrane filtration method consists of biological oxidation, followed by membrane filtration or a membrane bioreactor combining the biological oxidation and membrane filtration processes. Either process is followed by disinfection.
- (c) Another method demonstrated as an equivalent treatment process in a reclaimed water engineering report approved under WAC 173-219-160. Minimum performance standards for an equivalent process must meet the concentrations consistently achievable through proper operation and maintenance of each of the treatment units in that process.

(2) Biological oxidation performance standards.

- (a) A reclaimed water plant receiving effluent from a domestic wastewater treatment plant is considered to meet the biological oxidation performance standard provided the effluent received meets or exceeds the minimum secondary treatment requirements in WAC 173-221-040.
- (b) A reclaimed water plant receiving untreated or partially treated wastewater must meet the following performance standards for biological oxidation at a sampling point prior to filtration:
 - (i) Dissolved oxygen must be measured within the biological oxidation process and must be present in all samples.
 - (ii) Five-day Biochemical Oxygen Demand (BOD5) must be measured as a 24-hour composite sample in the effluent from the biological oxidation process. BOD5 must not exceed a monthly average of 30 milligrams per liter (mg/L) BOD or a weekly average of 45 mg/L.

(iii) Total Suspended Solids (TSS) must be measured as a 24-hour composite sample in the effluent from the biological oxidation process. TSS must not exceed a monthly average of 30 mg/L or a weekly average of 45 mg/L TSS.

(iv) pH must be measured in the effluent from the biological oxidation process. The pH must be between 6 and 9 standard units unless (a) inorganic chemicals are not added to the waste stream as part of the treatment process and (b) contributions from industrial sources are not the cause of the pH less than 6.0 or greater than 9.0.

(3) Coagulation/filtration performance standards.

(a) Turbidity must be continuously measured following filtration and must not exceed a monthly average of 2 NTU or exceed 5 NTU at any time.

(b) The lead agency may require BOD₅ to be measured as a 24-hour composite sample in the effluent from the filtration processes. BOD₅ measured after filtration must not exceed a monthly average of 10 mg/L.

(4) Membrane filtration performance standards.

(a) Turbidity must be continuously measured following filtration and must not exceed a monthly average of 0.2 NTU or exceed 0.5 NTU at any time.

(b) If the BOD₅ cannot be measured prior to membrane filtration, the lead agency may require BOD₅ to be measured as a 24-hour composite sample in the effluent from the filtration processes. BOD₅ measured after filtration must not exceed a monthly average of 10 mg/L.

(5) Total coliform performance standards. Total coliform must be measured in the final, disinfected reclaimed water prior to distribution. Grab samples must not exceed a 7-day median reported as 2.2 MPN/100mL or a sample maximum of 23 reported as MPN/100mL. The lead agency may approve other standard methods and criteria that are equivalent to these MPN values.

(6) Virus study. As part of engineering design a challenge study must be conducted for the proposed reclaimed water disinfection method or the lead agency may accept an equivalent existing third party challenge study. The study must demonstrate that the disinfection method is consistently capable of an acceptable level of virus removal or inactivation. Minimum requirements are:

(a) 5-log virus removal or inactivation following filtration or,

(b) 4-log virus removal or inactivation following filtration if preceded by coagulation, flocculation and sedimentation unit processes or,

(c) 4-log removal or inactivation following MF or UF membrane processes.

WAC 173-219-325 Class B Reclaimed Water

Reclaimed water achieving the minimum technology-based treatment methods and all applicable performance standards established in this section meets the treatment requirements for Class B.

(1) Class B reclaimed water requires biological oxidation followed by disinfection.

- (2) Biological oxidation performance standards are the same as in WAC 173-219-320 except that the performance standard may be measured in the final Class B reclaimed water.
- (3) Disinfection performance standards are that total coliform must be measured in the final, disinfected reclaimed water prior to distribution. Grab samples must not exceed a 7-day median reported as 23 MPN/100mL or a sample maximum of 240 reported as MPN/100mL. The lead agency may approve other standard methods and criteria.

WAC 173-219- 340 Disinfection Process Standards

- (1) The disinfection process may be chlorination, ultraviolet light, or any other system approved by the lead agency in accordance with the state of Washington Reclaimed Water Facilities Manual or other accepted standard engineering practices for reclaimed water disinfection. The engineering report required in WAC 173-219-160 must demonstrate, to the satisfaction of the lead agency, that the proposed method consistently provides the required level of adequate and reliable disinfection.
- (2) **Chlorine.** Chlorination disinfection processes must at a minimum meet a disinfectant concentration (C) of 1 mg/L measured as free chlorine, a disinfectant contact time (T) of 30 minutes measured, as “t10” at peak hourly flow, and a combined CT value of 30 mg-min per liter.
 - (a) The lead agency may specify a higher minimum “C”, “T”, or CT value where needed to assure adequate pathogen reduction.
 - (b) The lead agency may approve an alternative CT measurement and disinfection process including, but not limited to, “C” values based on total chlorine residual at peak hourly flow. The alternative must demonstrate, to the satisfaction of the lead agency, that it consistently provides an equivalent degree of public health and environmental protection.
 - (c) The proposed CT and method of measurement must be addressed within the engineering report. The CT calculations must consider the effects of temperature and pH on the ability to consistently meet the required minimum CT value.
 - (d) Pipelines or other facilities proposed or used to meet a minimum required T value must be considered as part of the reclaimed water plant’s disinfection unit process. Reliability requirements must be included in the WAC 173-219-160 engineering report.
- (3) **Ultraviolet light.** Ultraviolet light disinfection processes must be designed and installed to conform to recognized standards and engineering practices developed for use in reclaimed water plants.
 - (a) Acceptable methods include the criteria in:
 - (i) Ultraviolet Disinfection, Guidelines for Drinking Water and Water Reuse, Second Edition published by the National Water Research Institute (NWRI) in collaboration with the American Water Works Association Research Foundation, May 2003, as amended.
 - (ii) State of Washington, Reclaimed Water Facilities Manual, 2010, as amended.

- (b) Another method demonstrated as an equivalent disinfection process and approved by the lead agency in the engineering report.

WAC 173-219-350 Treatment Reliability

- (1) All reclaimed water plants must be designed and operated to meet the reliability requirements in this section. The methods and criteria must be approved by the lead agency as part of the engineering report and the operation and maintenance manual.
- (2) **Bypassing prohibited.** Bypassing of untreated or partially treated wastewater from the approved reclaimed water plant to the distribution system or to the point of use is prohibited. Reclaimed water plants must store inadequately treated wastewater for additional treatment; have authorization to discharge the wastewater to another permitted site, or both.
- (3) **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.
 - (d) Provide adequate capacity that may include multiple treatment trains or standby replacement equipment acceptable to the lead agency.
- (4) **Discharge.** Discharge locations used for treatment reliability must:
 - (a) Obtain all required authorization and permits for the discharge location.
 - (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 power source for all diversion equipment.
- (5) **Automated diversions.** Automated diversions used for treatment reliability must provide all necessary sensors, instruments, valves, and other devices to enable fully automatic diversion to the approved location. The reset process must be manually operated to prevent automatic restart.
- (6) **Alarms required.** Alarm systems are required reliability features at all reclaimed water plants. Alarm systems used as treatment reliability features must:
 - (a) Provide alarm systems warning of:
 - (i) Loss of power from the primary power supply,
 - (ii) Failure of required treatment units,
 - (iii) Interruption of required chemical feeds,
 - (iv) Other features as required in the approved engineering report.

- (b) Be independent of the primary power supply of the reclaimed water plant.
- (c) Sound at an attended location that will alert the operator in responsible charge or designee available to take immediate corrective action.

Subpart B Operational Storage and Distribution

WAC 173-219-400 Operational Storage of Reclaimed Water

- (1) **Operational storage or diversion.** Whenever reclaimed water is generated that cannot be used as permitted, the permittee or person maintaining control must store the reclaimed water until it can be used, divert it to a different use, or discharge it to a permitted wastewater discharge location. The provisions of WAC 173-219-410 and 420 apply, unless waived by the lead agency.
- (2) **Storage design.** Storage capacity design calculations must be reasonably consistent with methods provided in the state of Washington Reclaimed Water Facilities Manual and consider all of the following:
 - (a) Types of use.
 - (b) Supply, demand and operating requirements and agreements.
 - (c) Potential for impact to human health and the environment.
 - (d) Frequency and duration of adverse weather conditions such as precipitation or frozen ground that would preclude use.
 - (e) Shut down for system maintenance and repair.
 - (f) Other factors that may limit or prevent the planned use of reclaimed water.
- (3) **Distance to potable water well.** The minimum horizontal distance between a potable water supply well and storage facilities such as impoundments or ponds, must comply with restrictions for the sanitary control area established under WAC 246-290-135 for Group A public water supplies and WAC 246-291-100 for all other potable water supplies. The public water purveyor must provide written acceptance of a reclaimed water storage component within an established wellhead protection area established under WAC 246-290-135 for Group A public water supplies and WAC 246-291-100 for Group B public water systems.

WAC 173-219-410 Maintenance of Chlorine Residual

- (1) **Chlorine residual.** 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 generating plant directly to the point of use, except under subsection 2 below.
- (2) **Chlorine residual waiver.** Maintenance of a chlorine residual may be waived for reclaimed water impoundments, storage ponds, and storage tanks unless the type of beneficial use or distribution system following storage requires a chlorine residual to prevent biological growth, prevent deterioration of water quality, or is necessary to protect public health.

WAC 173-219-420 Distribution System Requirements

- (1) **Labeling.** All new reclaimed water piping, valves, outlets, storage facilities and other appurtenances must be labeled and color-coded purple (Pantone 512, 522 or other shade approved in the engineering report), identified with purple tape, or otherwise marked to clearly identify the water conveyed as nonpotable reclaimed water. For conversion of existing storage and distribution systems to reclaimed water use, all accessible points must be labeled as reclaimed water at the time of conversion and any inaccessible locations must be labeled at the time of repair or replacement.
- (2) **Pipe Separation.** Reclaimed water distribution systems must provide adequate separation between reclaimed water lines, sanitary sewer lines, storm sewer lines, potable water lines, and potable water wells in order to protect public health. The engineering report must provide:
 - (a) The rationale for all pipeline separation distances proposed, both horizontal and vertical.
 - (b) Reasonable consistency with the state of Washington "Reclaimed Water Facilities Manual".
- (3) **Cross- connection control.** There shall be no cross-connections between the reclaimed water and potable water or between the reclaimed water and wastewater, stormwater or other systems of lower water quality. The distributor must coordinate cross-connection control with the water supplier that provides potable water to the use area.
- (4) **Other Design Requirements.** Reclaimed water distribution pipe material, valves, valve covers, hydrants, and associated components shall comply with the most recent American Water Works Association Manual M24 standards or other recognized standard engineering practices for reclaimed water distribution systems.

WAC 173-219-430 Distribution by Tank Trucks.

Tank trucks (and similar equipment) may be used to distribute reclaimed water provided the tank truck is clearly identified with reclaimed water advisory signs and hazardous or dangerous waste or water of lower quality is not present in the tank.

WAC 173-219-435 Conveying Reclaimed Water in Surface Waters of the State

- (1) **Applicability.** The following additional requirements apply to reclaimed water conveyed from the point of production to the point of withdrawal along any of the natural streams, lakes, or other surface waters of the state in accordance with RCW 90.03.030. Water withdrawn must be for beneficial use. The conveyance of the reclaimed water shall be as described in an approved plan and engineering report.
- (2) **NPDES permit required.** Reclaimed water conveyed through any surface water of the state must meet all applicable requirements of the federal water pollution control act and chapter 90.48 RCW and must be issued an NPDES permit in accordance with the requirements of chapter 173-220 WAC and this chapter.

- (3) **Water resource protection.** The approved engineering report must include a conveyance report addressing how the following requirements are met:
 - (a) The quantity of water withdrawn for beneficial use must equal the amount discharged minus evaporation, seepage, and other losses as determined by ecology.
 - (b) Ecology shall also specify the time period between discharge and withdrawal.
 - (c) The total volume of water discharged and conveyed must not raise the intervening surface water body above the ordinary high water mark of that body of water.
- (4) **Monitoring.** The generator is responsible for any monitoring in the surface water necessary to demonstrate that the requirements of the permit are being met and shall provide that data to ecology upon request.
- (5) **Permit conditions.** The generator must:
 - (a) Have a written contract in effect with each person diverting or using the conveyed reclaimed water.
 - (b) Measure and record the location, rate, frequency, timing and duration of each diversion, and provide the data to ecology upon request.
 - (c) Require each person diverting or using reclaimed water to discontinue use of the reclaimed water when conditions of the permit are not met.

Subpart C Use Based Requirements

WAC 173-219-500 General Use Area Requirements

- (1) **General requirements.** The labeling, pipeline separation, cross-connection control, and other design requirements of WAC 173-219-420 apply to all general use areas.
- (2) **Other cross-connection requirements.** Where both reclaimed water and potable water are supplied to any use area:
 - (a) Backflow and/or back pressure assemblies commensurate with the hazard level posed by a potential cross-connection are required. The cross-connection control assembly must be installed at the potable water service connection to the use area in accordance with WAC 246-290-490 or the locally adopted plumbing code, or ordinance, whichever is more stringent.
 - (b) If a potable water source is blended with reclaimed water at a use site, there must be an air gap separation. The air gap separation must be approved and inspected, as directed by the potable water supplier's cross-connection control plan, and or the locally adopted plumbing code or ordinance, whichever is more stringent.
- (3) **Signage or advisory notification.** Notification of the public and employees of the use of reclaimed water is required in all use areas by the posting of advisory signs, distribution of written advisory notices, or both. Signage must be clearly visible, emphasize the color purple and read "Reclaimed Water – Not For Drinking", or other language acceptable to DOH. The department of health may approve other methods of notification that provide equivalent protection.

- (4) **Confine to site.** Reclaimed water, including runoff and spray, must be confined to the designated and approved use area.
- (5) **Restricted operation.** All reclaimed water valves and outlets shall be of a type, or secured in a manner, that permits operation only by authorized personnel. Access to hose bibs on reclaimed water lines must be controlled or restricted.

WAC 173-219-520 Plant Maintenance Uses

When under the direct control of responsible maintenance personnel, reclaimed water may be used without an operating permit:

- (1) Within the bounds of the reclaimed water plant for treatment plant purposes such as process water, wash down water, yard hydrants, and highly restricted site irrigation and
- (2) At other restricted locations within the sanitary sewer collection system for flushing of the sanitary sewers and pump station maintenance.

WAC 173-219-540 Commercial, Industrial and Institutional Uses

- (1) **Applicability.** Reclaimed water use for commercial and industrial or institutional purposes is subject to the following additional requirements.
- (2) **Uses with public contact.** The Class A technology-based standards apply to all uses where public or general employee contact is likely. These uses include, but are not limited to, toilet and urinal flushing, street washing, decorative fountains and similar water features, cooling water that produces mists or aerosols, fire control hydrants and indoor sprinkler systems, and industrial process water with worker exposure.
- (3) **Uses or storage with environmental impact.** The Class A technology-based standards apply to all uses with significant potential for site runoff or seepage. Uses must minimize the potential for adverse impacts to the environment including aesthetics, algal growth, runoff, and discharges to waters of the state. Ponds or other water features that are not lined or sealed to prevent seepage may be approved in the engineering report provided the report demonstrates how the groundwater protection standards in chapter 173-200 WAC are met. All outlets flowing from reclaimed water storage or use sites to surface waters must meet all applicable requirements of the federal water pollution control act and chapter 90.48 RCW.
- (4) **Uses with restricted access.** The Class B technology-based standards apply to uses with restricted access where contact is limited to qualified personnel and there is little potential for environmental impact. These uses include, but are not limited to emergency dumping from aircraft for fire fighting, damp sweeping, noncontact cooling water with mist or aerosol suppression, noncontact process water, and ship ballast water.

- (5) **Water quality characterization.** In addition to the minimum technology based standards, the quality of the reclaimed water must be characterized sufficiently to assure that it is appropriate for the approved uses. Characterization must include the parameters listed in standard manuals of practice applicable to the types of use. Where approved:
 - (a) Reclaimed water may be blended with potable or other nonpotable water supplies or
 - (b) Additional treatment may be provided at the use site to meet required water quality.
- (6) **Site management plan.** A site management plan or supplement thereof as required in WAC 173-219-160(5).

WAC 173-219-560 Land Applications – Landscape Irrigation

- (1) **Applicability.** Reclaimed water use for landscape irrigation purposes is subject to the following additional requirements.
- (2) **Uses with public contact.** The Class A technology-based standards apply to all uses where public or general employee contact is likely. These uses include, but are not limited to, public uses areas such as parks, playgrounds, golf courses, common areas and private property including individual residences.
- (3) **Uses with restricted access and contact.** The Class B technology-based standards apply to uses with restricted access and contact limited to specialized personnel. These uses include, but are not limited to, highway medians and fenced industrial properties. The minimum setback distance between the area subject to spray or surface irrigation and any public use area is 50 feet.
- (4) **Uses or storage with environmental impact.** The Class A technology-based standards apply to all uses with significant potential for site runoff or seepage. Uses must minimize the potential for adverse impacts to the environment including aesthetics, algal growth, runoff, and discharges to waters of the state. Ponds or other water features that are not lined or sealed to prevent seepage may be approved in the WAC 173-219-160 engineering report provided the report demonstrates how the groundwater protection standards in chapter 173-200 WAC are met. All outlets flowing from reclaimed water storage or use sites to surface waters must meet all applicable requirements of the federal water pollution control act and chapter 90.48 RCW.
- (5) **Agronomic rates and water quality characterization.** The application of irrigation water is limited to methods and agronomic rates established in standard manuals of practice appropriate to the type of landscape irrigated. In addition to the minimum technology-based standards, the quality of the reclaimed water must be characterized sufficiently to assure it is appropriate for the uses approved in the engineering report. Constituents such as salts, nutrients, organic and inorganic compounds may adversely affect soil or plants when applied for irrigation. Characterization must include the parameters listed in standard industry manuals of practice applicable to the types of vegetation and irrigation methods. Where approved:

- (a) Reclaimed water may be blended with potable or other nonpotable water supplies,
 - (b) Additional treatment may be provided at the use site, or
 - (c) Additional restrictions may apply to meet the required water quality for a specific use.
- (6) **Site management plan.** A site management plan or supplement thereof as required in WAC 173-219-160(5).

WAC 173-219-580 Land Application - Agricultural Irrigation

- (1) **Applicability.** Reclaimed water use for agricultural irrigation purposes is subject to the following additional requirements.
- (2) **Uses with public contact.** The Class A technology-based standards apply to all uses where public contact is likely.
- (3) **Food crops.** The Class A technology-based standards apply to all uses of reclaimed water for food crop production except where otherwise specified in this section.
- (4) **Frost protection of orchard crops.** The Class B technology-based standards under WAC 173-219-325 apply to reclaimed water use for frost protection of orchard crops provided the crops are not harvested for at least 15 days. The minimum setback distance between the area subject to spray or surface irrigation and any public use area is 50 feet.
- (5) **Surface irrigation of orchards or vineyards.** The Class B technology-based standards, excepting the total coliform standard, apply to irrigation uses where the fruit does not contact the irrigation water or the ground. The total coliform standard is 240 MPN/100ml as a 7-day median. The minimum setback distance between the area subject to spray or surface irrigation and any public use area is 100 feet.
- (6) **Processed food crops.** The Class B technology-based standards, excepting the total coliform standard, apply to irrigation uses for food crops that are processed by physical or chemical methods sufficient to destroy all pathogenic agents prior to distribution, sale, or use. The total coliform standard is 240 MPN/100ml as a 7-day median. The minimum setback distance between the area subject to spray or surface irrigation and any public use area is 100 feet.
- (7) **Nonfood crops.** The Class B technology-based standards apply to all non-food crop production where public access is restricted except for trees, fodder, fiber or seed crops in pastures not accessed by milking animals. The minimum setback distance between the area subject to spray or surface irrigation and any public use area is 50 feet.
- (8) **Trees, fodder, fiber or seed crops in pastures not accessed by milking animals.** The Class B technology-based standards under WAC 173-219-325, excepting the total coliform standard, apply to irrigation uses on trees, fodder, fiber or seed crops in pastures not accessed by milking animals. The reclaimed water meets a 7-day median total coliform limit of 240 MPN/100ml. The minimum setback distance between the area subject to spray or surface irrigation and any public use area is 100 feet.
- (9) **Agronomic rates and water quality characterization.** The application of irrigation water is limited to methods and agronomic rates established in standard manuals of practice

appropriate to the type of crop irrigated. In addition to the minimum technology-based standards, the quality of the reclaimed water must be characterized sufficiently to assure it is appropriate for the uses approved in the WAC 173-219-160 engineering report. Constituents such as salts, nutrients, organic and inorganic compounds may adversely affect soil or plants when applied for irrigation. Characterization must include the parameters listed in standard industry manuals of practice applicable to the crops and irrigation methods. Where approved:

- (a) Reclaimed water may be blended with potable or other nonpotable water supplies,
 - (b) Additional treatment may be provided at the use site, or
 - (c) Additional restrictions may apply to meet the required water quality for a specific use.
- (10) **Site management plan.** A site management plan or supplement thereto as required in WAC 173-219-160(5).

WAC 173-219-600 Natural Wetlands

- (1) **Applicability.** Reclaimed water use in natural wetlands is subject to the following additional requirements. "Natural wetlands" means swamps, marshes, bogs, and similar areas inundated or saturated by naturally occurring surface water or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted to life in saturated soil conditions.
- (2) **Other applicable laws.** Any use of reclaimed water in wetlands must be consistent with the applicable requirements of the state Water Pollution Control Act chapter 90.48.RCW, the Shoreline Management Act of 1971 (chapter 90.58 RCW), local government adopted Critical Areas Ordinances, Water Quality Standards for Groundwaters (chapter 173-200 WAC, and Water Quality Standards for Surface Waters (chapter 173-201A).
- (3) **General requirements for all allowable uses in natural wetlands.**
 - (a) The Class A technology-based standards apply.
 - (b) Reclaimed water must not exceed 20 mg/L BOD5, 20 mg/L TSS, 3 mg/L - N total Kjeldahl nitrogen, and 1 mg/L-P measured as annual average concentrations.
 - (c) Un-ionized ammonia concentrations must comply with the Washington chronic toxicity standards in chapter 173-201A WAC for freshwater systems.
 - (d) Metal concentrations in reclaimed water must comply with the surface water quality standards in chapter 173-201A WAC, unless acute whole effluent toxicity testing using daphnids demonstrates absence of toxicity.
- (4) **Use in Category I wetlands and Category II wetlands with special characteristics.** In order to protect sensitive wetland functions and values, the use of reclaimed water is generally not allowed in wetlands designated as Category I or Category II with special characteristics under the state of Washington Wetland Rating System. Reclaimed water may only be used when a net environmental benefit to the wetland has been clearly demonstrated in the approved engineering report.

- (5) **Use in all other Category II and in Category III or IV wetlands.** Reclaimed water is encouraged for the restoration or enhancement in wetlands designated as Category II, III, or IV under the state of Washington Wetland Rating System.
- (a) Reclaimed water may only be used at an annual hydraulic load > 2 cm/day in Category II wetlands or > 3 cm/day in Category III or IV wetlands when a net environmental benefit to the wetland has been clearly demonstrated in the approved engineering report.
 - (b) For depressional wetlands, reclaimed water use is limited to an increase of 10 cm above the natural average monthly water level unless it has been clearly demonstrated in the approved engineering report that a higher increase in water level provides a net environmental benefit to the wetland.
- (6) **Monitoring requirements.** Monitoring requirements must be sufficient to document the protection or enhancement of the beneficial uses and biological criteria established for the wetland, public health and the environment such as groundwater and surface water impacts.
- (7) **Engineering report for wetlands uses.** The following baseline information and background studies, when necessary to evaluate the proposed project, must be included in the engineering report.
- (a) The wetland rating category, size, hydrogeomorphic class and vegetation class of the existing and proposed wetlands.
 - (b) The beneficial uses of the existing and proposed wetland.
 - (c) 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.
 - (d) Characterization of the quality of reclaimed water to be used.
 - (e) The assimilative capacity of the wetland, the anticipated or actual changes in the timing, quantity and quality of the water leaving the wetland, and the potential for degradation of existing groundwater or surface water quality from the use of reclaimed water.
 - (f) Any studies conducted or additional information applicable to the specific project or site.
 - (g) Information to support a claim of net environmental benefit, if proposed. At a minimum, a claim of net environmental benefit must demonstrate that 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 and creates new or enhances the existing beneficial uses of the wetland.

WAC 173-219-620 Mitigation Wetlands

- (1) **Applicability.** Reclaimed water use for wetland mitigation is subject to the following additional requirements.

- (2) **Other applicable laws.** All wetlands constructed to provide compensatory mitigation for natural wetlands must be consistent with the requirements established in ecology-approved wetland mitigation plan. Use of reclaimed water for mitigation to impacts of federal jurisdictional wetlands requires additional approvals and permits from the Corps of Engineers or the USEPA. Guidance is available to assist in site selection and preparation of wetland mitigation plans.
- (3) **Use to establish vegetation for mitigation wetlands.** Class A reclaimed water may be used to establish wetland vegetation during construction of a mitigation wetland.
- (4) **Use to provide a temporary or supplemental water source.** Reclaimed water meeting the requirements for use in natural wetlands may be used to provide a temporary or supplemental water source to protect or enhance wetlands functions and values after the mitigation wetland is established.
- (5) **Uses as a primary water source of supply.** Reclaimed water or any other 'artificial' source of water supply proposed for use as the primary water source for wetland mitigation is generally denied since the cessation of use of reclaimed water must allow the wetland to continue to function as such. Reclaimed water meeting the requirements for natural wetlands use may be allowed as a primary water source for mitigation for the loss of an isolated wetland.

WAC 173-219-640 Artificially Constructed Wetlands

- (1) **Applicability.** Reclaimed water use in constructed wetlands for purposes other than wetland mitigation is subject to the following additional requirements.
- (2) **Other applicable laws.** Any use of reclaimed water in wetlands must be consistent with the applicable requirements of the state Water Pollution Control Act chapter 90.48.RCW, the Shoreline Management Act of 1971 (chapter 90.58 RCW), local government adopted Critical Areas Ordinances, Water Quality Standards for Groundwaters (chapter 173-200 WAC, and Water Quality Standards for Surface Waters (chapter 173-201A).
- (3) **Allowable uses.** Reclaimed water may be used as the primary or supplemental water source for the following types of constructed wetlands:
 - (a) Beneficial use wetlands created to produce natural wetland functions and values. The Class A technology-based standards apply to all uses in constructed beneficial use wetlands. Once established, constructed beneficial use wetlands may or may not be designated as jurisdictional wetlands regulated under the federal Clean Water Act. It is important to get this determination early in the planning process. If the wetland is considered a jurisdictional wetland, the cessation of use of reclaimed water must allow the wetland to continue to function.
 - (b) Treatment wetlands constructed for the primary purpose of water treatment or retention. The Class B technology-based standards apply to all uses in constructed treatment wetlands. Treatment wetlands may provide additional treatment or retention of reclaimed water to prepare it for another use or may use the reclaimed water to construct or supplement wetlands used for wastewater treatment or stormwater management.

- (c) Wetland water features constructed in parks or other locations to provide aesthetic, recreational or educational benefits. The Class A technology-based standards apply to all uses in constructed wetlands where public contact is likely.
- (4) **Monitoring.** The lead agency may establish additional monitoring requirements to assure that the use of reclaimed water is sufficient to protect the wetland functions and values, public health and the environment.
- (5) **Engineering report.** The following information is required as part of the reclaimed water engineering report.
 - (a) The location and proposed uses of reclaimed water in the wetland.
 - (b) The proposed functions and values of the constructed wetland.
 - (c) The quality of reclaimed water to be used.
 - (d) Wetland design including influent and effluent structures, grading, linings, berms, vegetation, flow patterns and number of cells.
 - (e) The relationship to and potential for impact to groundwater quality.
 - (f) The relationship to and potential for impact to surface water quality.
 - (g) Additional information applicable to the specific project or site.

WAC 173-219-660 Streamflow and Surface Water Augmentation

- (1) **Applicability.** Reclaimed water use for streamflow or surface water augmentation purposes is subject to the following additional requirements.
- (2) **Other applicable laws.** Reclaimed water used for any streamflow or surface water augmentation project must meet all applicable requirements of the federal water pollution control act and chapter 90.48 RCW and must be issued an NPDES permit in accordance with the requirements of chapter 173-220 WAC and this chapter.
- (3) **Use in primary recreation impoundments.** The Class A technology-based standards apply to all uses for augmentation directly into primary recreation impoundments.
- (4) **Use in potable water supply impoundments.** The Class A technology-based standards apply to all uses for augmentation directly into impoundments used as a source of water supply.
- (5) **Use in other surface waters.** The Class B technology-based standards apply to all other uses for direct augmentation of surface water.
- (6) **Use for indirect augmentation of surface water via groundwater.** Requirements for indirect augmentation of surface water by ground water recharge shall be established by ecology on a case-by-case basis. In establishing requirements, ecology shall consider whether specific requirements in sections 700, and 720 of this chapter are appropriate.

- (7) **Monitoring.** The lead agency may establish additional monitoring requirements to assure that the use of reclaimed water is sufficient to protect the surface water, public health and the environment.
- (8) **Engineering report.** The following information is required as part of the reclaimed water engineering report.
 - (a) The location and proposed augmentation uses of the reclaimed water.
 - (b) The quality of reclaimed water to be used.
 - (c) A description of the receiving water, applicable water quality standards, potential for impact to surface water quality and how water quality standards will be met outside any applicable dilution zone.
 - (d) The degree of treatment required based upon applicable permits and rules, the receiving body of water, and other influencing factors.
 - (e) Additional information applicable to the specific project or site.

WAC 173-219-700 Groundwater Recharge

- (1) **Applicability.** The controlled use of reclaimed water for groundwater recharge is subject to the following additional requirements. The project description must clearly specify the planned intent to recharge groundwater and the relevant site characteristics.
- (2) **Other applicable laws.**
 - (a) Reclaimed water used for any groundwater recharge project must meet all applicable requirements of chapter 90.48 RCW including chapter 173-200 WAC for the protection of groundwater.
 - (b) The minimum horizontal distance between a groundwater recharge site any potable water supply well must comply with restrictions for the sanitary control area established in WAC 246-290-135 for Group A public water supplies and WAC 246-291-100 for all other potable water supplies. The public water purveyor must provide written acceptance of a planned ground water recharge area within an established wellhead protection area adopted pursuant to WAC 246-290-135 for Group A public water supplies and WAC 246-291-100 for Group B public water systems.
- (3) **Recharge by surface percolation.** The Class A technology-based standards plus biological nitrogen reduction apply for all uses of reclaimed water to recharge groundwater by surface or vadose zone percolation except as in subsection 5. Total nitrogen must be reduced within the biological oxidation treatment process. Total nitrogen measured in the final, disinfected reclaimed water prior to groundwater recharge must not exceed a monthly average of 10 mg/L or a sample maximum of 15 mg/L.
- (4) **Recharge directly into groundwater.** The technology-based standards for recharge by percolation plus reverse osmosis apply to all uses of reclaimed water to direct recharge of groundwater except as in subsection 5. The following performance standards apply:

- (a) Total nitrogen measured in the final, disinfected reclaimed water prior to groundwater recharge must not exceed a monthly average of 10 mg/L or a sample maximum of 15 mg/L.
 - (b) Turbidity must be continuously measured following reverse osmosis treatment and must not exceed a monthly average of 0.1 NTU or exceed 0.5 NTU at any time.
 - (c) Total Organic Carbon (TOC) must be measured in the final, disinfected reclaimed water prior to direct recharge. TOC must not exceed a monthly average of 1.0 mg/L based on 24-hour composite samples.
 - (d) Total coliform must be measured in the final, disinfected reclaimed water prior to direct recharge. Grab samples must not exceed a 7-day median reported as 1 MPN/100mL or a sample maximum of 5 reported as MPN/100mL. The lead agency may approve other standard methods and criteria that are equivalent to these MPN values.
- (5) **Exception for recharge to naturally low quality aquifers.** When in the public interest, the lead agency may establish less stringent technology based requirements for recharge to aquifers of naturally low quality. The aquifer must not be designated as a special protection area under WAC 173-200-090, must be considered unsuitable as source water for potable use, and the required treatment methods must be considered unreasonable or impractical. The determination must be made on a case-by-case basis.
- (6) **Enforceable limits.** Enforceable limits must be established in permits at levels that will be protective of the groundwater quality beneath the recharge application site. Limits must take into consideration the potential for the parameter to be in the reclaimed water prior to recharge, the existing groundwater quality, the existing and proposed uses of the groundwater recharged, the antidegradation provisions of state waters established in chapter 173-200 WAC, and the point where compliance is measured. Enforceable limits are based on:
- (a) Drinking water standards adopted by the state of Washington under chapter 246-290 WAC.
 - (b) Water quality standards for groundwaters adopted by the state of Washington under chapter 173-200 WAC.
- (7) **Point of Compliance.** For each parameter, the lead agency establishes the point of compliance at a location where the enforceable limit for each parameter must not be exceeded. The point of compliance must be established by the lead agency:
- (a) In the reclaimed water prior to recharge.
 - (b) Within the groundwater as near the source as technically, hydrogeologically, and geographically feasible.
 - (c) At an alternative point some distance from the source up to but not exceeding the property boundary.
 - (d) At an alternative point in the surface water beyond the property boundary, if necessary, for the purpose of compliance with chapter 173-201A WAC.
- (8) **Monitoring requirements.** Monitoring requirements must be sufficient to document the protection of public health and groundwater quality at the designated point(s) of compliance.

The need for an ongoing groundwater monitoring program will be based upon the evaluation of the information in the engineering report.

- (9) **Engineering report.** The following information is required as part of the reclaimed water engineering report.
- (a) Information requested by the lead agency necessary to assess the specific treatment and use of reclaimed water for application to recharge groundwater.
 - (b) Site specific soil and hydro-geologic information necessary to characterize and evaluate the groundwater recharge site using criteria from chapter 173-157 WAC, sections 110 through 170, and chapter 173-200 WAC, as applicable.
 - (c) A pilot plant study, if needed.

WAC 173-219-720 Aquifer Storage and Recovery (ASR)

- (1) **Applicability.** The following additional requirements apply to the artificial storage of reclaimed water in underground geological formations and subsequent recovery for beneficial use permitted under this chapter.
- (2) **Other applicable laws.** Use, distribution and recovery of reclaimed water from aquifer storage are exempt from the permit requirements of RCW 90.03.250 and RCW 90.44.060. The provisions of this chapter do not limit a person's ability to submit an application for and acquire water rights appropriated under RCW 90.03.250 and RCW 90.44.060.
- (3) **Engineering report.** The following information is required as part of the reclaimed water engineering report. A professional hydrogeologist licensed by the state of Washington must prepare the geological information required.
- (a) Reclaimed water ASR projects must meet the standards for mitigation of impacts and review established under RCW 90.03.370(2) for artificial underground storage and recovery. These standards are described in RCW 90.03.370(2) and chapter 173-157 WAC sections 110 through 170.
 - (b) Any withdrawal facilities constructed solely for the purpose of extracting reclaimed water from the underground must comply with chapter 173-136 WAC, chapter 173-150 WAC, and chapter 173-157 WAC.
- (4) **Permit conditions.** The permit must include appropriate conditions authorizing and controlling the storage, recovery and subsequent uses of the reclaimed water. Conditions must include estimated time frames for recovery of the reclaimed water based on the hydrogeologist report. Ecology may modify the permit and the recovery time based on later documentation.