Chapter 246-275 WAC
ON-SITE NONPOTABLE WATER SYSTEMS

PART 1 GENERAL PROVISIONS

NEW SECTION

WAC 246-275-100 Purpose and scope. (1) **Purpose.** The purpose of this chapter is to set standards and requirements for the use of treated nonpotable water from on-site nonpotable water systems (ONWS).

(2) **Scope.** This chapter establishes risk-based standards, administrative, review, and approval processes for ONWS and use-based requirements for treated nonpotable water. This chapter establishes requirements for:

(a) General provisions including, but not limited to, those for applicability, waivers and extensions of compliance, variances, professional engineer requirements, and inspections;

(b) Treatment and performance, including risk-based log reduction targets for the removal of pathogens;

(c) Allowable source water, end uses, and implementation scales;

(d) Design and construction standards;

(e) Cross-connection control;

(f) Permitting;

(g) Water quality standards;

(h) Operation and maintenance;

(i) Malfunction notification and user confidence;

(j) Enforcement procedures;

(k) Monitoring, reporting, and recordkeeping; and

(l) Fees.

NEW SECTION

WAC 246-275-105 Applicability. (1) The requirements of this chapter apply to ONWS designed, constructed, operated, and maintained to collect and treat source waters for distribution and use as treated nonpotable water, and to a person, owner, and purveyor involved in these activities, including legacy ONWS as defined in this chapter.

(2) This chapter does not apply to:

(a) Single-family residences;

(b) Industrial reuse water;

(c) Closed loop water reuse, such as closed loop laundry recycling;

(d) Roof runoff and stormwater source water with no end uses inside a building; or

(e) Reclaimed water facilities permitted or eligible for permitting under chapter 173-219 WAC.

NEW SECTION

WAC 246-275-110 Relationship to other applicable laws, rules, and regulations. (1) A purveyor shall obtain all applicable local building, plumbing, or other required permits from the local authority having jurisdiction.

(2) A person designing, constructing, altering, repairing, or operating and maintaining an ONWS shall comply with all applicable local ordinances and codes, federal and state statutes, rules, and regulations including, but not limited to, this chapter, chapters 90.46 and 19.27 RCW, and chapter 51-56 WAC.

NEW SECTION

WAC 246-275-115 Definitions. The definitions in this section apply throughout this chapter unless the context clearly indicates otherwise.

(1) "Air conditioning condensate (AC condensate)" means water extracted from atmospheric water vapor due to the operation of air conditioning or refrigeration.

(2) "Accredited laboratory" means an environmental laboratory accredited under chapter 173-50 WAC and operating within its scope of accreditation.

(3) "ANSI" means the American National Standards Institute.

(4) "Approved air gap" means the same as in chapter 246-290 WAC.

(5) "Annual report" means a department-supplied form summarizing the annual operational conditions and service population of an on-site nonpotable water system.

(6) "Authority having jurisdiction" means local, state, or federal entities having regulatory authority over a specific aspect of the ONWS project.

(7) “Blackwater” means water-carried domestic human waste from toilets or urinals and includes liquid effluent from kitchen sinks or dishwashers.

(8) "BOD_5" means the five-day biochemical oxygen demand, typically expressed in mg/L.

(9) “Commercial building” means a structure with either or both of the following:

(a) Five or more residential units, also called a commercial multifamily building.

(b) A single occupancy classification and constructed under chapter 19.27 RCW, as implemented by chapter 51-50 WAC or local ordinance.

(10) "Conditional startup mode" means a period after the construction of the ONWS during which the treatment and distribution system's operations and performance are monitored and evaluated to validate design and performance assumptions.

(11) "Continuous monitoring" means ongoing confirmation of system performance with the use of sensors, analyzers, meters, and other instrumentation, no less than once every 15 minutes for the continuous observation of selected parameters, including

surrogate parameters correlated with pathogen log reduction targets.

(12) "CT" means the disinfectant residual concentration multiplied by contact time.

(13) "Data and monitoring report (DMR)" means a document containing the operation and water quality results of an ONWS permitted under this chapter.

(14) “Department” means the Washington state department of health.

(15) "Disability adjusted life years (DALYs)" means the measure of the health burden of a disease, calculated as the sum of years of life lost (YLL) due to premature death and years of life lived with disability (YLD) from illness (DALY=YLL+YLD).

(16) "Disinfection" means a physical or chemical process including, but not limited to, ultraviolet irradiation, ozonation, and chlorination used for the inactivation of pathogenic microorganisms.

(17) “District-scale agreement” means a written document required for a district-scale project that defines the roles and

responsibilities of a property owner or entity acting as a purveyor or user of an ONWS, or both.

(18) "District-scale project" means a single project at the time of design consisting of two or more commercial, multifamily residential, or mixed-use buildings on one or more parcels near the point of treatment or use and sharing an ONWS.

(19) “Engineering report” means a technical document prepared under the direction, and bearing the seal, date, and signature of a professional engineer, describing the ONWS.

(20) “Facility inventory” means a document summarizing the characteristics of an ONWS.

(21) "First flush diverter" means a device operated by a mechanical float valve or other type of automatic control which redirects a quantity of roof runoff or stormwater collected from a surface following the onset of a rain event.

(22) "Foundation drainage" means shallow groundwater collected from the drainage around building foundations or sumps. Foundation drainage does not include nonpotable groundwater extracted for beneficial use.

(23) “Greywater” means liquid effluent collected from nonblackwater sources, such as bathroom sinks, showers, bathtubs, clothes washers, and laundry sinks. Greywater does not include flow from toilets or urinals and does not include liquid effluent from kitchen sinks or dishwashers.

(24) "HPC" means heterotrophic plate count.

(25) "Implementation scale" means the size of the ONWS in terms of the number and type of buildings it serves.

(26) “Industrial reuse water” means the same as in RCW 90.46.010(9).

(27) "Inadequately treated nonpotable water" means a source water put through all or part of the ONWS's treatment process that does not satisfy the requirements of this chapter.

(28) “Joint plan of responsibility” means a written agreement between the department and a local health jurisdiction, local health officer, or designee, as needed, to either partially or fully administer, enforce, and carry out the responsibilities under this chapter.

(29) “Legacy ONWS” means an on-site nonpotable water treatment system or alternate water source system under WAC 51-

56-1500 or nonpotable rainwater catchment system under 51-56-1600 that either was:

(a) In operation prior to January 1, 2022, and required to comply with this chapter under RCW 90.46.290(3)(a); or

(b) Designed, constructed, permitted, or in operation prior to the effective date of this chapter and required to comply with this chapter.

(30) "Local health jurisdiction" means a local health department as defined in chapter 70.05 RCW, city-county health department as defined in chapter 70.08 RCW, or a health district as defined in chapter 70.05 RCW.

(31) "Local health officer" means the same as in RWC 70.05.010.

(32) "Log reduction" means the reduction in the concentration of infective pathogens or surrogate parameters through a treatment process expressed in $\log_{10}$ units. For example, a 1-log reduction equates to 90-percent removal, 2-log reduction to 99-percent removal, and 3-log reduction to 99.9-percent removal.

(33) “Log reduction credit (LRC)” means the log_{10} reduction value approved by the department or a local health jurisdiction under a joint plan of responsibility for a treatment technology based on the capability of the technology to remove or inactivate pathogens and proposed surrogate parameter for continuous monitoring.

(34) “Log reduction target (LRT)” means the required degree of pathogen reduction needed to achieve a risk of 10^{-6} DALYs per person per year (PPY) through exposure to treated nonpotable water.

(35) “Major modification" means changes from existing source waters, treatment unit processes, or implementation scales.

(36) “MBR” means membrane biological reactor.

(37) “Mixed-use building” means a structure containing two or more occupancy classifications and constructed under chapter 19.27 RCW, as implemented by chapter 51-50 WAC, or local ordinance.

(38) “Multifamily residential building” means the same as defined in chapter 19.27 RCW.

(39) “NTU” means nephelometric turbidity unit.

(40) “NWRI” means National Water Research Institute.

(41) “On-site nonpotable water system (ONWS)” means a system in which water from local sources is collected, treated, and used for non-potable uses at the building to district/neighborhood-scale, generally at a location near the point of generation. ONWS includes “nonpotable reuse system” under chapter 173-219 WAC, “alternate water source system” under WAC 51-56-1500, and “nonpotable rainwater catchment system” under WAC 51-56-1600.

(42) “Operations and maintenance manual (O&M manual)” means a document providing comprehensive information, including, but not limited to, the ONWS’s design, legal status, operation, maintenance, performance, and repair.

(43) “Operating permit” means a legally enforceable written document designed to improve compliance by clarifying the compliance obligations of this chapter for each ONWS.

(44) “Operator” means a qualified individual or entity with routine duties that affect the treatment performance or water quality of the treated nonpotable water.

(45) “Owner” means one or more persons, jointly or severally, in whom is vested all or any part of the legal title to the ONWS.

(46) “Person” means any individual, government agency, political subdivision of the state, public or private corporation, firm, company, mutual or cooperative association, institution, partnership, or other legal entity.

(47) “Premises isolation” means a method of protecting a public water system by installation of approved air gaps or approved backflow prevention assemblies at or near the service connection to isolate the consumer's water system from the purveyor's distribution system.

(48) “Professional engineer” means a person licensed in the state of Washington under chapter 18.43 RCW or exempt under RCW 18.43.130(6), and having specific expertise appropriate to ONWS design, operation, and maintenance.

(49) “Purveyor” means a person, partnership, or other entity operating an ONWS. Purveyor also means the authorized agents of these entities.

(50) “Reclaimed water” means the same as defined in chapter 90.46 RCW.

(51) “Record drawing” means an accurate graphic and written record of the location and features that are needed to properly monitor, operate, and maintain the ONWS that bears the stamp and signature of a professional engineer.

(52) “Regulatory authority” means the primary entity responsible for administering, enforcing, and carrying out the responsibilities under this chapter. The regulatory authority is either the department or a local health jurisdiction, local health officer, or designee as identified in a joint plan of responsibility under WAC 246-275-135.

(53) “Roof runoff” means precipitation from rain or snowmelt events collected directly from a rooftop not subject to frequent public access.

(54) "Rooftop" means a part of a fixed structure above the ground with a primary purpose other than the collection of roof runoff for beneficial use.

(55) "RPBA" means reduced pressure backflow assembly.

(56) "RPDA" means reduced pressure detector assembly.

(57) “Source water” means blackwater, greywater, roof runoff, stormwater, foundation drainage, AC condensate, or other untreated, nonpotable water approved under WAC 246-275-210 that is captured for treatment and nonpotable end uses on-site or nearby.

(58) “Spray irrigation” means a method of applying water for use by plants where the water emits from a fixture or device into the air before contacting the soil, ground, or plant surface.

(59) “Stormwater” means precipitation runoff from rain or snowmelt events that flows over land or impervious surfaces, for example streets and parking lots, and does not soak into the ground. Stormwater also includes precipitation from rain or snowmelt events collected directly from a rooftop subject to frequent public access.

(60) "Subsurface irrigation" means a method of applying water for use by plants where the water is delivered beneath the soil surface.

(61) "Surface nonspray irrigation" means a method of applying water for use by plants where the water is delivered

directly at the ground plane via hardware such as drip emitters or soaker hoses.

(62) "Surrogate parameter" means a measurable physical or chemical parameter that can assess the performance of a treatment unit process in the control of a specific group or groups of pathogens or chemicals.

(63) “Treated nonpotable water” means the water generated by an ONWS that meets the log reduction targets and water quality limits established in this chapter which make it suitable for approved end uses and is an alternative water source identified as “on-site treated nonpotable water” under chapter 51-56 WAC.

(64) "Treatment process" means a combination of treatment unit processes and is also known as a treatment train.

(65) "Treatment unit process" means a physical, chemical, or biological system intended to improve water quality. Examples include filtration, oxidation, adsorption, disinfection, and membrane separation.

(66) "TSS" means total suspended solids.

(67) "User" means people who use or otherwise interact with fixtures, appliances, or landscaping using treated nonpotable water from an ONWS including, but not limited to, property owners, residents, commercial tenants, employees, and visitors.

(68) "Validation engineering report" means a technical document prepared under the direction, and bearing the seal, date, and signature, of a professional engineer providing a detailed treatment technology evaluation study conducted by challenging the treatment technology over a wide range of operational conditions.

NEW SECTION

WAC 246-275-120 Allowed source water. The following source waters may be collected, stored, and treated under this chapter:

(a) AC condensate;

(b) Blackwater;

(c) Foundation drainage;

(d) Greywater;

(e) Roof runoff;

(f) Stormwater; and

(g) Other sources approved by a variance under WAC 246-275-160.

NEW SECTION

WAC 246-275-125 Allowed end uses. (1) The following end uses may be permitted under this chapter:

(a) Clothes washing;

(b) Dust control and street cleaning;

(c) Priming drain traps;

(d) Subsurface irrigation, surface nonspray irrigation, and spray irrigation of nonfood plants;

(e) Toilet and urinal flushing; and

(f) Other end uses approved by a variance under WAC 246-275-160.

(2) End uses not allowed under this chapter or eligible for a variance under WAC 246-275-160 include, but are not limited to, the following:

(a) Drinking;

(b) Food preparation and cooking;

(c) Patio misting systems for temperature and humidity control;

(d) Showering and bathing; and

(e) Handwashing or other sanitary uses, including bidets.

NEW SECTION

WAC 246-275-130 Allowed implementation scales. This chapter applies to the following implementation scales:

(a) Commercial building;

(b) District-scale project;

(c) Mixed-use building;

(d) Multi-family residential building; and

(e) Variance approved under WAC 246-275-160.

NEW SECTION

WAC 246-275-135 General administration. (1) The department shall administer, enforce, and carry out the responsibilities under this chapter.

(2) The department may establish a joint plan of responsibility with a local health jurisdiction, local health officer, or designee, to either partially or fully administer, enforce, and carry out the responsibilities under this chapter. A joint plan or responsibility must:

(a) List the roles and responsibilities of each jurisdiction and agency necessary to fulfill the purposes of this chapter including, but not limited to, the required number and type of full-time equivalent positions to administer, enforce, and carry out the responsibilities under this chapter;

(b) Specifically designate types or categories of ONWS for which the department and the local health jurisdiction, or local health officer have primary responsibility;

(c) Establish an agreed-to level of ONWS oversight that fulfills the roles and responsibilities necessary to administer, enforce, and carry out the responsibilities under this chapter;

(d) Be signed by both parties; and

(e) Be reviewed at least once every five years and updated as needed.

(3) If permitted by the department and outlined in the joint plan of responsibility established under subsection (2) of this section and in accordance with RCW 39.34.030, a local health jurisdiction, local health officer, or designee may establish joint or cooperative action agreements with other local health jurisdictions, local health officers, or designees, to either partially or fully administer, enforce, and carry out the responsibilities under this chapter. The agreement must include, but is not limited to, a list of the roles and responsibilities of each jurisdiction and agency necessary to fulfill the purposes of this chapter, including the required number and type of full-time equivalent positions to administer, enforce, and carry out the responsibilities under this chapter.

(4) The local health jurisdiction, local health officer or designee may use forms provided by the department or create their own forms to administer this chapter.

(5) Local health jurisdictions implementing all or part of this chapter shall provide required ONWS information and data annually to the department in a format specified by the department.

NEW SECTION

WAC 246-275-140 Engineering qualifications. All work required to be prepared under the direction of a professional engineer including, but not limited to, feasibility studies, engineering reports, validation engineering reports, construction documents, and construction completion reports must bear the seal, date, and signature of the professional engineer. The professional engineer shall have expertise commensurate with the complexity of the design, operation, and maintenance of the ONWS.

NEW SECTION

WAC 246-275-145 Legacy ONWS.

The following requirements apply to legacy ONWS:

(1) A purveyor of a legacy ONWS shall submit the required engineering report under WAC 246-275-210 by [x].

(2) A purveyor of a legacy ONWS shall submit to the regulatory authority the requirements under WAC 246-275-210(3)

and include in the engineering report a description of the existing ONWS and the required modifications necessary to comply with this chapter and RCW 90.46.290(3)(a) and, if applicable, (b).

(3) A purveyor of a legacy ONWS may apply for a waiver if compliance requiring engineering, repair, or replacement of the system is cost prohibitive under chapter 90.46.290 RCW. The applicant shall:

(a) Identify the specific requirements proposed to be waived;

(b) Identify and describe the cost prohibitive engineering, repair, or replacement necessary to achieve compliance;

(c) Attest that no major modifications have been made to the ONWS after the effective date of this chapter;

(d) Provide any additional information requested by the regulatory authority, including, but not limited to, the anticipated cost for the engineering, repair, or replacement necessary to comply with the requirement for which the waiver is sought; and

(e) Pay a review fee in accordance with WAC 246-275-990.

(4) A waiver may not apply to greater than a three-year term. Upon expiration, a purveyor shall comply with this chapter or reapply for a waiver of compliance under subsection (3) of this section.

(5) A purveyor granted a waiver of compliance under subsection (3) of this section shall deliver annual, dated notice to all users via mail, email, or publicly posted notice. The notice must:

(a) Identify the requirements for which the legacy ONWS has received the waiver;

(b) The costs associated with coming into compliance; and

(c) The expiration date of the waiver.

NEW SECTION

WAC 246-275-150 Waivers. (1) The purveyor of an ONWS may request a waiver from a specific requirement of this chapter. The request must:

(a) Be in writing;

(b) Identify the requirement requested to be waived;

(c) State the reason for the waiver; and

(d) Provide supporting information.

(2) The department may grant a waiver request if it:

(a) Is consistent with the applicable standards and the intent of this chapter; and

(b) Provides a comparable level of public health and environmental protection to the requirement being waived.

(3) If the department approves a waiver request, the department shall notify the requestor of the decision in writing.

(4) If the department denies a waiver request, the department shall notify the requestor of the decision in writing stating the reasons for the denial.

(5) A purveyor granted a waiver of compliance under this section shall deliver annual, dated notice to all users via mail, email, or publicly posted notice. The notice must identify:

(a) The requirements for which the ONWS has received the waiver of compliance; and

(b) The expiration date of the waiver.

NEW SECTION

WAC 246-275-155 Extensions. (1) The owner or purveyor may not begin construction until receiving the department's written approval to construct.

(2) If construction does not begin within two years following the date of the department's approval of the plans and specifications, the approval for plans and specifications, and notice to construct expire and become null and void. If these approvals expire, the purveyor shall resubmit the project for approval, following the requirements in WAC 246-275-200(2).

(3) The owner may request a single extension of up to two years of the plans and specifications approval and all subsequent approvals prior to the two-year expiration date by submitting a written request including a status report and construction schedule with the anticipated completion date.

(4) The department may impose additional terms and conditions if it grants an extension.

(5) An owner granted an extension under this section shall deliver annual, dated notice to all users via mail, email, or publicly posted notice. The notice must identify:

(a) The reason for the extension; and

(b) When construction is anticipated to be completed.

NEW SECTION

WAC 246-275-160 Variances. (1) A purveyor may apply to the department for a variance from certain requirements of this chapter. The request must:

(a) Be in writing;

(b) Identify the requested variance;

(c) State the reason for the variance; and

(d) Provide supporting information.

(2) Except for the end uses listed under WAC 246-275-125(2), the department may grant a variance for:

(a) Additional water sources and end uses under WAC 246-275-120 and 246-275-125;

(b) End uses established under chapter 51-56-1500 or 51-56-1600 WAC with no established risk-based water quality standards under this chapter, if:

(i) Analogous system performance data is provided;

(ii) The purveyor submits a Qualitative Microbial Risk Assessment (QMRA) that determines the LRT for the proposed end use;

(iii) The department determines that proposed water quality standards are protective of public health and the environment; and

(iv) Ongoing monitoring results demonstrate that the water meets the expected water quality for source waters and treatment; and

(c) Additional implementation scales under WAC 246-275-130, if:

(i) The proposed implementation scale is consistent with the purpose of this chapter;

(ii) The purveyor provides a copy of the feasibility study required under WAC 246-275-205 to the department of ecology to evaluate the need for a water right impairment review under RCW 90.46.290 (2)(i);

(iii) The purveyor provides other relevant documents requested by the regulatory authority, or the department of ecology; and

(iv) The engineering report under WAC 246-275-210 satisfies all relevant requirements from the regulatory authority including, if applicable, department of ecology requirements to mitigate, compensate, or otherwise address a water right impairment.

(3) The department may approve alternative sampling requirements and reporting frequencies.

(4) If the department approves a variance request, the department shall notify the requestor of the decision in writing.

(5) If the department denies a variance request, the department shall notify the requestor of the decision in writing, stating the reasons for the denial.

NEW SECTION

WAC 246-275-165 Inspection. Site and document access. An owner, purveyor, and user shall allow the department or local health jurisdiction under a joint plan of responsibility to enter and inspect any ONWS governed by this chapter.

(1) A property served by an ONWS, including a property that provides source waters or is served treated nonpotable water, are subject to inspection.

(2) The department or local health jurisdiction under a joint plan of responsibility may enter and inspect any ONWS governed by this chapter to determine compliance with this chapter:

(a) On any weekday that is not a legal holiday between the hours of 8:00 a.m. and 5:00 p.m.; and

(b) At any time with the consent of the owner or purveyor;

(3) The department or local health jurisdiction under a joint plan of responsibility may inspect:

(a) All records, including records of O&M;

(b) All data submitted;

(c) All permits; and

(d) The ONWS, all ONWS components, and all ONWS performance equipment.

(4) During an inspection, the department or local health jurisdiction under a joint plan of responsibility shall have free and unimpeded access to all:

(a) Buildings, warehouses, storage facilities, and other places reasonably considered to be or to have been part of the ONWS;

(b) Ledgers, books, accounts, memorandums, or records required to be compiled or maintained in this chapter; and

(c) Products, components, maintenance supplies, or other material used in connection with the ONWS.

(5) During an inspection, the department or local health jurisdiction under a joint plan of responsibility may take such samples as may be reasonably necessary to verify compliance.

(6) The purveyor shall take preventative or corrective action as directed by the department or local health jurisdiction under a joint plan of responsibility when results of an inspection indicate conditions which may harm or are harming ONWS operation or which are in violation of any requirements of this chapter.

PART 2 PLANNING, REVIEW, APPROVAL, AND PERMITTING PROCESS

NEW SECTION

WAC 246-275-200 New systems and major modifications to approved ONWS. (1) An owner and purveyor proposing a new ONWS or major modifications to an approved ONWS shall follow the sequence provided in this section unless the regulatory authority determines a different order is necessary to satisfy the requirements of this chapter. The owner or purveyor must receive notice of approval from the regulatory authority prior to proceeding to each step in this sequence.

(2) Before construction of an ONWS, a purveyor shall pay all applicable fees per WAC 246-275-990 and submit to the regulatory authority for review and approval the following:

(a) A feasibility study under WAC 246-275-205;

(b) An engineering report under WAC 246-275-210;

(c) Construction documents under WAC 246-275-215; and

(d) All applicable permits issued by authorities having jurisdiction including, but not limited to, all construction and plumbing permits.

(3) During construction, a purveyor shall make the site available for inspection by the regulatory authority, or an

authority having jurisdiction, as required under WAC 246-275-165.

(4) Within 60 calendar days of the completion of construction, a purveyor shall provide to the regulatory authority:

(a) A construction completion report under WAC 246-275-220;

(b) Record drawings under WAC 246-275-220; and

(c) A facility inventory under WAC 246-275-220.

(5) A purveyor shall:

(a) Test, in the presence of the authority having jurisdiction, to confirm that no cross-connections exist under WAC 246-275-415; and

(b) Request and receive notice to proceed to conditional startup mode from the regulatory authority under WAC 246-275-400(3).

(6) While operating in conditional startup mode, a purveyor shall:

(a) Operate, monitor, and report pursuant to the conditional startup mode requirements of this chapter, including WAC 246-275-400 and 246-275-500; and

(b) If required, submit the validation engineering reports to the regulatory authority for review and approval under WAC 246-275-305(2).

(7) To complete the conditional startup mode performance period, a purveyor shall comply with the requirements under WAC 246-275-400 including, but not limited to, the following submittals to the regulatory authority for review and approval:

(a) A conditional startup mode final report; and

(b) The O&M manual.

(8) A purveyor shall, after the conditional startup mode performance period is complete:

(a) Submit an operating permit application under WAC 246-275-405 and the documentation required under WAC 246-275-405(3)(a) through (e) to the regulatory authority; and

(b) Pay applicable fees required by WAC 246-275-990.

(9) A purveyor shall operate, maintain, monitor, keep records, and report on the ONWS pursuant to the following:

(a) The final use mode requirements in this chapter;

(b) The approved O&M manual; and

(c) The operating permit issue by the regulatory authority.

(10) An owner shall renew the operating permit annually under WAC 246-275-405 and pay applicable fees required by WAC 246-275-990.

NEW SECTION

WAC 246-275-205 Feasibility study. An owner or their designee may request a preproject meeting with the regulatory authority to discuss the scope of the project and the feasibility study required in this section.

(1) An owner or their designee shall submit a feasibility study to the regulatory authority for review and approval before submitting the engineering report or construction documents, or the installation of any ONWS component.

(2) The feasibility study must include, but is not limited to, a description of the proposed new ONWS project, including:

(a) Contact information for the owner, purveyor, and design engineer, if applicable;

(b) Site address, legal description, and name of the county where the project is located;

(c) Vicinity map showing:

(i) The project site;

(ii) Project property boundaries; and

(iii) Parcels surrounding and adjoining the project property boundaries;

(d) Site map scaled to clearly show project boundaries;

(e) The expected operator qualifications, skills, and experience needed to operate and maintain the ONWS in compliance with this chapter;

(f) Proposed source water;

(g) Proposed treatment unit processes with corresponding proposed log reduction credit values that demonstrate compliance with the appropriate risk-based

(h) Proposed end uses;

(i) Consideration of financial and staffing requirements for the proposed ONWS;

(j) Identification of all local permits and requirements affecting the project; and

(k) Other data and information deemed necessary by the regulatory authority to show the feasibility of the proposed project.

NEW SECTION

WAC 246-275-210 Engineering report submittal. (1) A purveyor shall submit engineering reports consistent with the standards in Part 3 of this chapter, compatible with component replacement, long-term operation and maintenance, and potential abandonment of the ONWS. Engineering reports are required for a legacy ONWS, new ONWS, or major modification to any ONWS.

(2) Engineering reports must specify necessary operating conditions and identify surrogate parameters requiring continuous monitoring. Engineering reports must show required log reduction credits are achieved by treatment processes and are consistent with WAC 246-275-305, Table 2. The engineering report must include, but is not limited to:

(a) Contact information for the owner, purveyor, and design engineer, if applicable;

(b) Site address, legal description, and name of the county where the project is located;

(c) Vicinity map showing:

(i) The project site;

(ii) Project property boundaries; and

(iii) Parcels surrounding and adjoining the project property boundaries;

(d) Site map scaled to clearly show project boundaries;

(e) Basis of design for ONWS including:

(i) Estimated 24-hour minimum, peak, and average source water flow rate;

(ii) Estimated treated nonpotable demand;

(iii) Source water quality; and

(iv) Treated nonpotable water quality;

(f) Treatment process design criteria, including:

(i) Process flow diagram;

(ii) Contingency plan for treatment of source water during partial occupancy periods or when environmental conditions or other limiting factors would impact treatment performance;

(iii) Pathogen log reduction credit under WAC 246-275-305;

(iv) Treatment process flow summary;

(v) Treatment unit process design criteria;

(vi) Secondary disinfection;

(vii) Chemical use and handling; and

(viii) Solids handling.

(g) Operations and maintenance details, including but not limited to:

(i) Wastewater source control for biological treatment systems including prevention of hazardous waste disposal that kills treatment microbes;

(ii) Treatment prescreening to capture and remove hair, sanitary wipes, including those that are marked as flushable, and similar nondegradable contaminants that is easy and safe to access;

(iii) Consideration for treatment equipment maintenance, repair, and replacement access including full access to storage tank hatches;

(iv) Workspace odor control and air quality safety;

(v) Reliability features;

(vi) Workplace safety equipment including, but not limited to, chemical showers, eye wash stations, spill, and first-aid kits; and

(vii) O&M training program and employee notification procedures;

(h) System control strategy for monitoring and alarms, including, but not limited to:

(i) Alarms and automatic diversions;

(ii) Remote monitoring;

(iii) Grab sampling with safe and easy access to sampling ports; and

(iv) Providing full access to critical equipment components and control points;

(i) Supplemental water supply and cross-connection control under WAC 246-275-415;

(j) Description of pathways for potential exposure and impacts to the public;

(k) Detailed conditional startup mode operations testing and monitoring plan in accordance with WAC 246-275-400 and 246-275-500, including Table 5. These plans must demonstrate that the ONWS will function as intended, reliably and consistently achieve the LRTs and water quality limits established in this chapter, and must include:

(i) Hydraulic load during the test;

(ii) Location and schedule for all sampling or measurements;

(iii) Methods used to analyze samples or make measurements;

(iv) Persons responsible for conducting the test and processing samples;

(v) Indicators of steady-state operation;

(vi) Method used to verify required pathogen log reduction targets are achieved;

(vii) Test plan for the monitoring, alarm, alarm response, and control systems;

(viii) If required under WAC 246-275-305, a validation engineering report for log reduction targets, including the surrogate parameters for field verification to determine log reduction performance and a process for accounting for variability in the ONWS during field verification. Field verification must consist of at least three test runs during which the water quality, influent flow rate to the treatment process, or both, is the most difficult for treatment process efficacy or for the subsequent treatment unit process; and

(ix) Consideration of partial occupancy periods and environmental or other limitations that will impact the quantity of available source water or otherwise impact the timing and the duration of the performance period;

(l) Environmental documentation including, but not limited to, a final environmental impact statement, determination of nonsignificance, or mitigated determination of nonsignificance under chapters 43.21C RCW and 197-11 WAC or water right impairment documentation if required under WAC 246-275-155; and

(m) Other data and information deemed necessary to show a complete engineering report.

NEW SECTION

WAC 246-275-215 Construction documents submittal. An owner or purveyor shall submit to the regulatory authority all construction documents for review and approval before beginning construction on ONWS major modifications or requesting a notice to proceed to conditional startup mode under WAC 246-275-400(3).

(1) ONWS construction documents must show how the project was or will be modified or constructed in accordance with the approved engineering report. Construction documents must be consistent with the design requirements in Part 3 of this chapter and must include, but are not limited to:

(a) Detailed drawings of each project component;

(b) Detailed material specifications for each project component;

(c) Detailed construction specifications and assembly techniques for conducting the project;

(d) Testing criteria and procedures for each applicable portion of the project;

(e) Disinfection procedures that conform with the American Water Works Association (AWWA) standards or other standards acceptable to the department; and

(f) Provisions for inspection of the installation of each project component.

NEW SECTION

WAC 246-272-220 Construction completion report and facility inventory. A purveyor shall submit a construction completion report and record drawings to the department after construction is completed. The construction completion report and record drawings must bear the seal, date, and signature of a professional engineer stating that the ONWS was constructed in accordance with the approved engineering report and construction documents. A purveyor shall submit a facility inventory with the construction completion report.

PART 3 DESIGN, LOG_{10} REDUCTION TARGETS AND CREDITS, AND WATER QUALITY LIMITS

NEW SECTION

WAC 246-275-300 Pathogen log reduction targets (LRT). (1) ONWS must have a treatment process design to achieve the log reduction targets in Table 1 of this section.

(2) Inadequately treated nonpotable water not meeting log reduction targets in Table 1 of this section must automatically divert to sanitary or storm sewer appropriate for the source of

inadequately treated water as described under WAC 246-275-315(4).

Table 1: Pathogen Log_{10} Reduction Targets (LRT)

Source Water	Virus	Protozoa	Bacteria
Blackwater (wastewater)	10.0	6.5	5.5
Greywater	7.5	4.0	3.5
Stormwater (0.01%)	5.0	3.0	2.5
Roof runoff	N/A	1.0	3.5
Foundation	5.0	3.0	2.5
AC Condensate	N/A	N/A	3.5

NEW SECTION

WAC 246-275-305 Log reduction credits. (1) Log reduction credits (LRC) are assigned by the department based on the ability of each treatment unit process to achieve an assigned or validated log reduction credit. Table 2 of this section summarizes the log reduction credits assigned for each treatment

unit process. Projects may seek, and the department may approve, higher log reduction credits than Table 2 with site-specific validation, surrogate parameters, or other approved methods.

(2) Other treatment unit processes not included in Table 2 of this section may receive LRC if verifiable evidence is provided in an approved validation engineering report. The validation engineering report must characterize and quantify ONWS treatment performance under low flow, high flow, and treatment upset conditions, include evidence the treatment unit process can reliably and consistently achieve a specific LRT, and provide information on the required operating conditions and surrogate parameters that require continuous monitoring.

(3) UV log reduction credits are reactor-specific and dose dependent. The UV validation report must document results. Validation testing must be based on one of the following:

(a) United States Environmental Protection Agency (US EPA) UV Disinfection Guidance Manual (US EPA 2006);

(b) NWRI UV Disinfection: Guidelines for Drinking Water and Water Reuse, third edition (NWRI 2012);

(c) NSF/ANSI 55 Standard for UV Water Treatment Systems (NSF/ANSI 2022);

(d) DVGW W294 (Deutsche Vereinigung des Gas und Wasserfaches);

(e) ÖNORM M5873-1 or ÖNORM M5873-2 protocol (Österreichisches Normungsinstitut - Austrian Standards Institute); or

(f) A published protocol submitted to the regulatory authority for approval.

(4) The following treatment-specific information must be included in the engineering report for each of the following treatment unit processes used:

(a) Microfiltration or ultrafiltration:

(i) Description and calculation of how the system defines an acceptable pressure decay test value per the US EPA's Membrane Filtration Guidance Manual (US EPA 815-R-06-009);

(b) Membrane biological reactor (MBR):

(i) Full description of the operating envelope including operation with the Tier 1 operating envelope as defined in the

Membrane Bioreactor Validation Protocols for Water Reuse (WRF project 4997);

(c) Reverse osmosis:

(i) Full description of the log removal credits as described in the US EPA RO pathogen crediting framework; and

(ii) Rationale for surrogate parameter used to calculate log removal credits;

(d) UV light disinfection:

(i) Full description of LRCs as described in the selected framework under subsection 4 of this section; and

(ii) Documentation describing the validated operating envelope and how the UV system will be designed and operated to stay within the acceptable limits for flow, UVT, and other relevant parameters;

(e) Chlorine disinfection:

(i) Full descriptions of LRCs as described in US EPA free chlorine CT tables or Australian WaterVal Validation Protocol; and

(ii) Specifics on how concentration and contact time will be determined;

(f) Ozone disinfection:

(i) Full description of LRCs based on contact time framework as described in EPA Disinfection Profiling and Benchmarking Guidance Manual (1999).

Table 2: Treatment Unit Process Log_{10} Reduction Credits

Treatment Unit Process	Log10 Reduction Credits Virus/Protozoa/Bacteria	Crediting Framework	Example Continuous Monitoring Methods
Microfiltration or ultrafiltration	0.0/4.0/0.0	US EPA Membrane Filtration Guidance Manual	Daily pressure decay test to detect breach of 3 µm or larger Effluent turbidity
MBR	1.5/2.0/4.0	Membrane Bioreactor Validation Protocols for Water Reuse (WRF project 4997)	Effluent turbidity equal to or less than 0.2 NTU 95% of the time and always below 0.5 NTU
Reverse osmosis	Up to 2.0/2.0/2.0 (Surrogate parameter dependent)	US EPA RO pathogen crediting framework	Influent and effluent total organic carbon Influent and effluent electrical conductivity
UV light disinfection	Up to 6.0/6.0/6.0 (Dose dependent)	US EPA UV Disinfection Guidance Manual or NSF 55 Class A validation	UV intensity Flow rate UV dose
Chlorine disinfection	Up to 5.0/0/5.0 (CT dependent)	US EPA free chlorine CT tables Australian WaterVal Validation Protocol	Chlorine residual Flow rate
Ozone disinfection	Up to 4.0/3.0/4.0 (CT dependent)	EPA Disinfection Profiling and Benchmarking Guidance Manual (1999)	Ozone residual Flow rate

NEW SECTION

WAC 246-275-310 Water quality limits. ONWS must have a treatment process design to continuously achieve the water quality limits in Table 3 of this section and the automatic diversion requirements in WAC 246-275-300(2) and 246-275-315(4).

Table 3: Water Quality Limits

Parameter	Limit	Automatic Diversion
Log10 reduction targets (LRT)	See WAC 246-275-300, Table 1	Yes
Free Chlorine Residual for secondary disinfection minimum, when required by WAC 246-275-315(7)	0.5 mg/L (at entry to distribution) 0.2 mg/L (at a representative location at end of distribution)	No
pH	6.0-9.0	No
Turbidity (95% maximum)	0.2 NTU	No
Turbidity (absolute maximum)	0.5 NTU	Yes
5-day Biological Oxygen Demand (BOD_5)	30 mg/L	No
Total Suspended Solids (TSS)	30 mg/L	No

NEW SECTION

WAC 246-275-315 Design requirements for all ONWS. An ONWS must:

(1) Be designed to prevent unintentional contact with humans;

(2) Be designed and equipped with features that result in a controlled and nonhazardous automatic shutdown of the treatment process in case of a treatment or physical malfunction or failure;

(3) Use a licensed plumber to install all distribution piping, fixtures, equipment, appliances, and appurtenances according to project type: commercial or multifamily residential;

(4) Include automatic diversion and overflow connections to the sanitary or stormwater system, when appropriate, with an approved air gap or other approved backflow prevention assembly. ONWS that treat blackwater or greywater must automatically divert to sanitary sewers. If allowed by the local stormwater authority, an ONWS that only treats roof runoff, stormwater, or both, may divert to stormwater systems. The ONWS must always be capable of automatically diverting when:

(a) Operating during conditional startup mode;

(b) The required log reduction targets under WAC 246-275-300, Table 1 or applicable water quality limits in WAC 246-275-310, Table 3 are not met; or

(c) There is an ONWS malfunction or failure;

(4) Provide and maintain signage as required by chapter 51-56 WAC. Signage must be included on a property collecting, treating, receiving, or distributing water from an ONWS. Signage must be in a language that is understood by the populations served, maintained in good condition, and free from damage;

(5) Be designed with and have:

(a) Appropriate flow meters to verify and control flow rates and contact times required to meet the LRTs; and

(b) Totalizing flow meters to separately measure the volume of:

(i) Treated water for permitted end uses; and

(ii) Makeup water for permitted end uses;

(6) Have sample taps installed before and after each treatment unit process and at critical points in the distribution system, as approved by the regulatory authority;

(7) Except for ONWS permitted solely for subsurface irrigation as an end use or when using makeup water, include a treatment unit process to achieve a free chlorine concentration

in the treated nonpotable water. The free chlorine concentration must be a minimum of:

(a) 0.5 mg/L at the entry to the distribution system; and

(b) 0.2 mg/L at a representative location at the end of the distribution system;

(8) Be designed and operated to control odors and comply with applicable federal, state, and local indoor air quality standards;

(9) Be designed so that all air vents for ONWS water tanks or collection tanks are screened with a durable, noncorrosive, fine mesh screen;

(10) Include seals for all gaps around pipes feeding the water tank with a durable, waterproof, nonporous material. A durable gasket with no gaps must be installed around the door openings to the tank;

(11) Prevent cross-connections with potable and reclaimed water supplies as required by WAC 246-275-415;

(12) Be designed to continuously monitor:

(a) LRT surrogate parameters at locations identified in the approved engineering report;

(b) Free chlorine residual at entry to the distribution system when a free chlorine residual is required under subsection (7) of this section, unless a reduced monitoring frequency using a grab sample is approved in the engineering report under WAC 246-275-210;

(c) pH at entry to distribution; and

(d) Turbidity in filter output;

(13) Excluding irrigation-only systems, include a source of makeup water. Makeup water must be provided via an approved air gap. The makeup water source must be either:

(a) A public water system approved by the department under chapter 246-290 WAC or 246-291 WAC; or

(b) A reclaimed water facility permitted under chapter 173-219 WAC for the end uses supplied by the ONWS.

NEW SECTION

WAC 246-275-320 Design requirements based on source water. ONWS must include design features specific to each approved source water as described in this section.

(1) ONWS treating blackwater or greywater must be designed to include, at a minimum, the following treatment unit processes:

(a) Biological treatment resulting in stabilized, nonputrescible nonpotable water that contains dissolved oxygen;

(b) Filtration; and

(c) Properly vented storage tanks as required under chapter 51-56 WAC.

(2) ONWS treating roof runoff or stormwater must:

(a) Include a first flush diverter or debris excluder as required under chapter 51-56 WAC; and

(b) Address corrosivity of the treated nonpotable water on end use plumbing and fixtures.

(3) ONWS treating AC condensate must address corrosivity of the treated nonpotable water on end use plumbing and fixtures.

NEW SECTION

WAC 246-275-325 Design requirements for irrigation end use. ONWS supplying treated nonpotable water for irrigation

must include design features so the treated nonpotable water does not:

(1) Leave the approved irrigation area as spray or surface flow or runoff, including when soils are saturated;

(2) Enter a dwelling or food handling facility; or

(3) Contact a drinking water fountain.

NEW SECTION

WAC 246-275-330 Design requirements for district-scale implementation. ONWS collecting, treating, receiving, or distributing water, for a district-scale project must include lockable valves which can be activated to control the flow of water from any source originating from another property and lockable valves which can be activated to control the flow of water to any property.

PART 4 OPERATIONS

NEW SECTION

WAC 246-275-400 Conditional startup mode operations.

(1) Conditional startup mode must begin after construction or major modification is completed but before obtaining an operating permit.

(a) The ONWS must operate in conditional startup mode for 12 months.

(b) A purveyor may request, and the regulatory authority may allow, a reduction of the duration of the required conditional startup mode performance period in this subsection on a case-by-case basis.

(2) Before conditionally operating the ONWS, cross-connection testing must confirm the ONWS is not cross-connected in any manner with the potable water system under WAC 246-275-415.

(3) All new ONWS and all ONWS having completed major modifications must operate in a conditional startup mode during which the system’s operation and performance must be verified in accordance with WAC 246-275-210(2)(k).

(4) After satisfactory completion of subsection (2) of this section and upon request by the purveyor, the regulatory

authority may issue a notice to proceed to conditional startup mode.

(5) Prior to distribution and use, all treated nonpotable water must be automatically diverted, as described in WAC 246-275-315(4), and all fixtures must be operated using makeup water until the LRTs in WAC 246-275-300, Table 1 and water quality limits in WAC 246-275-310, Table 3 are met, continuously for 30 days.

(6) After 30 days of continuously meeting the requirements, the purveyor may distribute and use the treated nonpotable water for the remainder of the conditional use startup mode performance period.

(7) For the remainder of the conditional use startup mode performance period, inadequately treated nonpotable water must be diverted when not achieving the LRTs in WAC 246-247-300, Table 1 and water quality limits in WAC 246-275-310, Table 3.

(a) A purveyor may request, and the regulatory authority may allow, a reduction of the duration of the required diversion in this subsection on a case-by-case basis. The request must be in writing and demonstrate that the system is capable of meeting

the LRTs in WAC 246-275-300, Table 1 and water quality limits in WAC 246-275-310, Table 3.

(8) A purveyor must meet the conditional startup mode requirements in this section within two years of the issuance of the notice to proceed to conditional startup mode unless the regulatory authority approves an extension.

(9) Once conditional startup mode requirements approved under WAC 246-275-210(2)(k) are met, a purveyor must submit a conditional startup mode final report to the regulatory authority for review and approval. The report must:

(a) Summarize the LRT and water quality compliance required under WAC 246-275-300, Table 1 and WAC 246-275-310, Table 3;

(b) Be signed and stamped by the project's professional engineer under WAC 246-275-140; and

(c) Be submitted with the finalized O&M manual in compliance with the requirements under WAC 246-275-440.

(10) If the conditional startup mode requirements are not met, the purveyor must submit to the regulatory authority for review and approval the necessary changes to fully address LRT, water quality, and other performance deficiencies.

(11) An operating permit will not be issued until the requirements of this section are met.

(12) The regulatory authority may extend the duration of the required diversion, the conditional startup mode performance period, or both, if necessary to fulfill the purpose of this section.

NEW SECTION

WAC 246-275-405 Operating permit.

(1) The regulatory authority may issue an operating permit in accordance with this section and chapter.

(2) The purveyor shall obtain an operating permit before operating an ONWS, unless authorized by the regulatory authority to operate in conditional startup mode.

(3) To get an operating permit, the purveyor must:

(a) Submit a complete affidavit of qualifications signed by the purveyor stating the operator's expertise is commensurate for the complexity of the operation and maintenance of the permitted ONWS, in accordance with WAC 246-275-410;

(b) Submit a current facility inventory signed by the purveyor;

(c) Provide an approved conditional startup mode final report under WAC 246-275-400(7) and finalized O&M manual satisfying the requirements of WAC 246-275-440;

(d) For ONWS granted a waiver of compliance under WAC 246-275-150 or an extension of compliance under WAC 246-275-155, provide a copy of the notice sent to all users satisfying the requirements of WAC 246-275-150(5) or WAC 246-275-155(5) and dated within the previous 12 months; and

(e) Pay the applicable fee required by WAC 246-275-990.

(4) The operating permit must at a minimum contain the following terms and conditions:

(a) Issue date and expiration date;

(b) Approved design capacity;

(c) The owner shall employ a purveyor at all times and notify the regulatory authority of any change in the purveyor;

(d) The purveyor shall employ one or more operators meeting the requirements of WAC 246-275-410 at all times and shall notify the regulatory authority of any change in the operator;

(e) A purveyor shall notify the regulatory authority by email and phone within 24 hours when a source water or inadequately treated nonpotable water enters the treated nonpotable water distribution system, whether in conditional startup or final use mode;

(f) With appropriate notice to the owner or purveyor, the regulatory authority may enter in or onto the ONWS site or ONWS facility at reasonable times during normal business hours as necessary to verify compliance with permit conditions or to investigate public health or environmental concerns;

(g) The purveyor shall maintain at least five years of accurate records of all monitoring and maintenance-related activities and provide them to the regulatory authority upon request;

(h) Water quality limits, including sample type, method, and point of compliance;

(i) Limit the distribution and use of treated nonpotable water to approved end uses and locations;

(j) Prohibit the release or distribution of inadequately treated nonpotable water, including water quality limits that

qualify treated nonpotable water for diversion or shutoff in case of ONWS malfunction or failure; and

(k) Follow cross-connection control requirements.

(5) The operating permit may include use-specific conditions, including but not limited to specific conditions authorizing and controlling the storage, treatment, distribution, and permitted end uses of treated nonpotable water in accordance with this chapter and in a manner that protects public health and the environment.

(6) Operating permit conditions may include, but are not limited to, requiring:

(a) Monitoring information;

(b) Annual reports;

(c) New or modified documents such as O&M manual, engineering report, engineering inspection and evaluation of the ONWS, plans and specifications, record drawings, or other information to the regulatory authority; and

(d) ONWS component repairs or replacement.

(7) A purveyor, including a purveyor with ONWS in conditional startup mode due to major modifications, shall renew

the ONWS operating permit annually and comply with subsection (3) of this section. If the purveyor fails to renew the operating permit or pay the required fees, the operating permit is no longer valid, and the purveyor shall:

(a) Cease operations; and

(b) Notify the regulatory authority.

(8) To renew an operating permit, the purveyor shall:

(a) Submit a completed operating permit renewal application, annual report, and all other permit requirements to the regulatory authority at least 30 days prior to the expiration date of the current operating permit; and

(b) Pay the applicable fee required by WAC 246-275-990.

(9) Upon receiving the completed renewal packet, the regulatory authority shall:

(a) Review the completed renewal application, submitted information, the existing permit, and other relevant information to determine compliance with this chapter and existing operating permit conditions and requirements;

(b) Issue, deny, or modify a renewal operating permit within 30 days of receiving the complete renewal form and other

required items, or notify the owner of any delay within 30 days; and

(c) Impose conditions or requirements it determines are necessary to demonstrate the ONWS is properly operated and maintained to protect public health and the environment.

(10) During the regulatory authority's review of the completed renewal application and other materials, the current ONWS operating permit shall remain in full force and effect until the owner is notified of the regulatory authority's decision.

(11) For an operating permit to remain valid, the owner shall continuously meet the permit terms and conditions required by this section.

NEW SECTION

WAC 246-275-410 Operator qualifications and duties.

(1) The owner or purveyor shall directly employ or maintain a service contract with a qualified operator who will be in charge of the daily and ongoing operations and maintenance of the ONWS.

(2) The owner or purveyor shall notify the regulatory authority in writing within 30 days of replacement of the operator.

(3) The operator must be duly qualified to conduct the operations, maintenance, and monitoring required to ensure continuous compliance with the requirements of this chapter.

(4) The operator must have expertise commensurate with the complexity of the operation and maintenance of the ONWS and hold a valid department-issued certification as a cross-connection control specialist. Expertise may include, but is not limited to:

(a) For ONWS that use blackwater or greywater as a source water, any of the following:

(i) Relevant experience with each treatment unit process of the ONWS;

(ii) A wastewater, reclaimed water, or on-site nonpotable reuse system certification issued by a U.S. state agency; or

(iii) National ONWS operator certification for blackwater and greywater systems;

(b) For ONWS that do not use blackwater or greywater as a source water, any of the following:

(i) Relevant experience with each treatment unit process of the ONWS;

(ii) A wastewater, reclaimed water, or on-site nonpotable reuse system certification issued by a U.S. state agency; or

(iii) National ONWS operator certification.

(5) An operator shall:

(a) Operate the ONWS according to acceptable public health practices, industry standards, and with due care and diligence to protect public health and the environment in compliance with this chapter, the operating permit, approved O&M manual, any applicable local ordinances and codes, and federal and state laws, rules, or regulations;

(b) Only perform the duties consistent with the operator’s experience, skills, abilities, or level of certification;

(c) Inform the purveyor if a required action or correction is inconsistent with the operator’s experience, skills, abilities, or level of certification;

(d) Be available either on-site or able to be contacted by telephone or other electronic communication 24 hours per day and able to initiate appropriate action within two hours. Appropriate action may include, but is not limited to:

(i) Making necessary repairs or resolving problems; or

(ii) Directing staff or contractors to make necessary repairs or resolve problems;

(e) Conduct water quality monitoring as required by the O&M manual and WAC 246-275-500, maintain adequate water quality records as required by WAC 246-275-520, and take follow-up action, if necessary, to comply with permit requirements and federal, state, and local ONWS laws and regulations;

(f) Implement preventive maintenance programs, inspect treatment, collection, and distribution systems, and other ONWS components for malfunctions as required by the O&M manual, maintain adequate maintenance and inspection records as required by WAC 246-275-520, and make needed repairs;

(g) Analyze, review, and maintain records of instrument readings and laboratory test results as required by the O&M manual and WAC 246-275-520, determine the location and causes of

any malfunctions, and adjust various treatment unit processes or other components as needed;

(h) Implement a cross-connection control program, under WAC 246-275-415;

(i) Determine and implement remedial actions in an emergency and, if applicable, follow directives from the regulatory authority;

(j) Provide free and unimpeded access during an inspection under WAC 246-275-165;

(k) Maintain and provide required records and reports to the regulatory authority or its representative as required by WAC 246-272-520 and upon request;

(l) Report system issues, nonfunctioning ONWS components, and any other condition that jeopardizes public health, the environment, or operating permit compliance to the purveyor or regulatory authority as required by this chapter; and

(m) Provide written notification to the regulatory authority within 30 calendar days of either:

(i) Starting operations of an ONWS; or

(ii) Ending operations of an ONWS in accordance with WAC 246-275-430.

(6) The duties of an operator required in this chapter do not relieve the owner or purveyor of the responsibility to comply with the requirements of this chapter.

NEW SECTION

WAC 246-275-415 Cross-connection control and makeup water supply.

(1) All potable water connections to potable drinking water systems serving premises with treated nonpotable water must have either an:

(a) Approved air gap installed for premises isolation; or

(b) Approved Reduced Pressure Backflow Assembly or Reduced Pressure Detector Assembly installed for premises isolation in combination with an approved air gap at any nonpotable water storage tanks.

(2) Cross-connection testing must be completed in accordance with WAC 51-56-1500 and 51-56-1600.

(3) Excluding irrigation-only systems, ONWS must include a source of makeup water. Makeup water must be provided via an approved air gap. When temporarily operating with makeup water, the ONWS is not required to maintain a chlorine residual.

NEW SECTION

WAC 246-275-420 Operations and maintenance.

(1) The purveyor shall operate and maintain ONWS, distribution systems, and other systems of control installed by the purveyor to achieve compliance with this chapter and the terms and conditions of the operating permit.

(2) The treatment, collection, storage, or distribution of source water, the diversion of inadequately treated nonpotable water, or the use of treated nonpotable water must not create a nuisance. For the purposes of this chapter, a nuisance is water that is undesirable in odor or appearance.

(3) Treated nonpotable water must continuously achieve the log reduction targets under WAC 246-275-300, Table 1 and meet water quality standards under WAC 246-275-310, Table 3. Inadequately treated nonpotable water that does not meet log

reduction targets or water quality standards must be diverted as specified in WAC 246-275-315(4).

(4) A purveyor shall operate the system based on the site-specific O&M manual for the ONWS under WAC 246-275-440.

(5) The operator shall conduct periodic inspections of all facilities to monitor and assure compliance with conditions of the operating permit, the O&M manual, chapter 51-56 WAC, this chapter, and, for district-scale projects, the district-scale agreement.

NEW SECTION

WAC 246-275-425 Change of ownership.

(1) ONWS permits are nontransferable and any change in owner must meet the following requirements:

(a) ONWS owners shall report any change in purveyor to the regulatory authority a minimum of 30 days prior to the change taking effect; and

(b) Any new owner shall submit a complete application for a new operating permit that includes the permit fee and a facility inventory 30 days prior to assuming ownership.

(2) The regulatory authority may approve or deny the change in ownership, notifying the owner of the decision in writing.

(3) If the regulatory authority approves the change in ownership, it shall issue the new owner an operating permit within 30 days of receiving a complete application.

(4) If the regulatory authority denies the change in ownership, the notice of the decision must include the reasons for the decision.

(5) If the change in ownership is denied:

(a) The owner to whom the operating permit is issued may continue to operate the ONWS;

(b) The regulatory authority may allow another person to operate the ONWS under a compliance agreement or order; or

(c) The regulatory authority may direct the person operating the ONWS without a valid operating permit to discontinue operating the ONWS.

NEW SECTION

WAC 246-275-430 Abandonment. A purveyor shall have an abandonment plan to be reviewed and approved as an element of

the O&M manual under WAC 246-275-440. The abandonment plan must include the following:

(1) Written notice of the abandonment to the regulatory authority;

(2) Notification to users of system abandonment. The notification must:

(a) Describe the components being abandoned;

(b) Describe expected impacts to the user, such as change in service or water quality;

(c) Provide a timeline for abandonment; and

(d) Be made available to all users via mail, email, or publicly posted notice;

(3) Removal and disposal of all sewage according to local requirements;

(4) Removal of all mechanical and electrical equipment no longer in use;

(5) Disconnection of all abandoned components from remaining systems, draining, plugging, and capping in an approved manner;

(6) Removal or crushing in place of underground storage tanks that have been abandoned or otherwise discontinued from use in the system. Remaining voids must be filled with earth, sand, gravel, concrete, or other approved materials.

NEW SECTION

WAC 246-275-435 District-scale agreement. A purveyor of a district-scale project shall enter an executed, enforceable, legal agreement defining the roles and responsibilities of each property owner or entity in relation to the maintenance and use of the system. The district-scale agreement must require that only the purveyor and authorized qualified operators are allowed to alter or maintain the ONWS. The purveyor shall include the district-scale agreement in the O&M manual under WAC 246-275-440.

NEW SECTION

WAC 246-275-440 Operations and maintenance manual (O&M manual).

(1) The regulatory authority may approve the O&M manual in accordance with this section.

(2) A purveyor shall develop and implement a site-specific O&M manual for the ONWS. The O&M manual must be:

(a) Submitted for review and approval before beginning final use mode and following any revision;

(b) Reviewed annually and updated as appropriate and upon request by the regulatory authority; and

(c) Kept on the premises in one or more locations specified in the O&M manual.

(3) O&M manual content and details must be consistent with the size, complexity, past performance, implementation scale, source waters, and end uses of the ONWS and include:

(a) A detailed diagram of the entire system and the location of the ONWS components including, but not limited to:

(i) General facility information including, but not limited to:

(A) Location of approved air gaps, other approved backflow prevention assemblies, flow meters, treatment components, sample ports, and diversion location(s); and

(B) Exact locations where the O&M manual and copies will be kept;

(ii) Makeup water source under WAC 246-275-415; and

(iii) Public access restrictions in place to minimize human contact with treated nonpotable water;

(b) Instructions for operating and maintaining the system, including, but not limited to:

(i) ONWS operations, including treatment process operations, instruments and alarms, and any chemicals used;

(ii) Equipment and instrument product manufacturer literature that specifically addresses product installation, recommendations, and maintenance; and

(iii) End use water management plan;

(c) Details on maintaining the required water quality as determined by the regulatory authority including, but not limited to:

(i) Conditional startup mode final report;

(ii) Compliance monitoring plan including treatment system monitoring, pathogen reduction compliance, and water quality sampling; and

(iii) Provisions for monitoring and managing failure of treatment unit processes;

(d) Details on deactivating the system for maintenance, repair, or other purposes, including, at a minimum, an abandonment plan in compliance with WAC 246-275-430;

(e) Applicable testing, inspection, and maintenance frequencies for treatment and monitoring equipment, approved air gaps, and approved backflow prevention assemblies;

(f) Names, contact information and contact methods for key personnel, qualified operator(s), installer, engineer, and manufacturer of the primary treatment system;

(g) A record of completion or certification of training; and

(h) System records including, but not limited to:

(i) Current, signed facility inventory;

(ii) Operating permit;

(iii) Annual reports from the past five years;

(iv) Current and signed affidavit of qualification form;

(v) Manufacturer cut sheets for all components requiring routine or periodic maintenance;

(vi) For ONWS that serve district-scale projects, the legal agreement under WAC 246-275-435; and

(vii) For systems granted a waiver of compliance under WAC 246-275-150 or an extension of compliance under WAC 246-275-155, a copy of the waiver and the most recent notice satisfying WAC 246-275-150 and WAC 246-275-155.

(4) The regulatory authority may require additional information or changes to an O&M manual or its components as necessary to protect public health and the environment.

PART 5 MONITORING, REPORTING, NOTIFICATION, AND RECORDKEEPING

NEW SECTION

WAC 246-275-500 Monitoring and sampling.

(1) An operator shall monitor water quality parameters at the locations and frequencies in Table 4 of this section during the conditional startup mode performance period and in Table 5 of this section during final use mode.

(2) Sample collection, transportation, and analysis must meet quality assurance and quality control procedures of an

accredited laboratory, including maintenance of required hold times and temperatures. The purveyor shall allow the regulatory authority to be present during required water quality sample collections.

(3) Equipment and instruments used to comply with the treatment and monitoring requirements under this chapter must be calibrated, maintained, and operated consistent with manufacturer's installation, operating and maintenance instructions, and recommendations.

(4) Microbial, BOD_5, TSS, and any other parameters that require laboratory capability must be analyzed by an accredited laboratory in accordance with an approved standard method or through continuous monitoring devices as detailed in the engineering report required under WAC 246-275-210.

Table 4: Conditional Startup Mode Monitoring Frequencies and Locations

Parameter	Roof runoff, stormwater, foundation drainage, AC condensate	Graywater	Blackwater	Other
LRTs	Continuously using surrogate parameters at locations identified in the approved engineering report.[1]			
Secondary Free Chlorine Residual[2]	Daily or continuously prior to entry to distribution system, and; Weekly at a representative location at the end of distribution system, described in engineering report.			

Parameter	Roof runoff, stormwater, foundation drainage, AC condensate	Graywater	Blackwater	Other
HPC	One sample monthly, for 12 months, prior to entry to distribution system, and; One sample monthly, for 12 months, at a representative location at the end of distribution system, described in engineering report.[3]			As determined by the regulatory authority.
pH	Continuously prior to entry to distribution system.			
Turbidity - Media or membrane filter	Continuously in filter outlet.			
BOD_5 and TSS	N/A	Weekly prior to entry to distribution system.		As determined by the regulatory authority.
Total source water treated/flow rates	As described in the engineering report under WAC 246-275-210.			

[1] Refer to WAC 246-275-305

[2] If required by WAC 246-275-315(7)

[3] Same location as secondary chlorine residual if WAC 246-275-415(7) requires a residual

Table 5: Final Use Mode Monitoring Frequencies and Locations

Parameter	Roof runoff, stormwater, foundation drainage, AC condensate	Graywater	Blackwater	Other
LRTs	Continuously using surrogate parameters at locations identified in the approved engineering report.[1]			
Secondary Disinfection - Free Chlorine Residual[2]	Daily or continuously prior to entry to distribution system, and; Weekly at a representative location at the end of distribution system, described in engineering report.			
HPC	One sample monthly, for 12 months, prior to entry to distribution system, and; One sample monthly, for 12 months, at a representative location at the end of distribution system, described in engineering report.[3]			
pH	Continuously prior to entry to distribution system.			
Turbidity - Media or membrane filter	Continuously in filter outlet.			
BOD_5 and TSS	N/A	Monthly prior to entry to distribution system.		
Total source water treated/flow rates	As described in the engineering report under WAC 246-275-210.			

[1] Refer to WAC 246-275-305

[2] If required by WAC 246-275-315(7)

[3] Same location as secondary chlorine residual if WAC 246-275-415(7) requires a residual

NEW SECTION

WAC 246-275-505 Routine water quality reporting.

(1) On or before the 10th day of each month during conditional startup, the purveyor shall report to the regulatory authority all required water quality laboratory results and surrogate parameters instrumentation summaries from the previous month on a signed data and monitoring report (DMR) form. The form must include descriptions of any component failures, treatment upsets or disruptions, bypasses, odors, complaints, or other system operation anomalies.

(2) During final use mode, a purveyor shall submit the following:

(a) An annual report to the regulatory authority under WAC 246-275-510 in addition to notification requirements in WAC 246-275-515; and

(b) A quarterly DMR to the regulatory authority, if blackwater is a source water for the ONWS.

NEW SECTION

WAC 246-275-510 Annual reporting. A purveyor shall submit an annual report each calendar year to the regulatory authority by a date specified by the regulatory authority. The annual report must contain, at a minimum:

(1) A description of compliance with this chapter and the terms and conditions established in the operating permit;

(2) A summary of complaints received from users and responses;

(3) A complete list of malfunctions requiring diversion, including:

(a) The date of each malfunction;

(b) A description of the malfunction;

(c) Actions taken to resolve the malfunction; and

(d) Whether the malfunction has been resolved and the date;

(4) A water quality summary, including:

(a) Required HPC, BOD_5, and TSS sample results;

(b) Monthly maximum and minimum values from LRT surrogate parameters, free chlorine residual, pH, and turbidity monitoring;

(c) Period of time that treatment operations were diverted;

(d) Monitoring results outside of applicable water quality limits in WAC 246-275-310, Table 3 that did not require automatic diversion and what corrections were made; and

(e) HPC results compared to conditional startup mode HPC results;

(5) Population served including, but not limited to:

(a) Number of occupied, full-time domestic units;

(b) Approximate daily employee population; and

(c) Approximate daily transient population;

(6) Annual volume of:

(a) Potable water from the public water systems;

(b) Treated nonpotable water for approved end uses; and

(c) Makeup water for approved end uses; and

(7) Signature of the purveyor.

NEW SECTION

WAC 246-275-515 Malfunction notification and reporting.

(1) The purveyor shall notify the regulatory authority within 24 hours when a source water or inadequately treated

nonpotable water enters the treated nonpotable water distribution system, whether in conditional startup or final use mode.

(2) The purveyor shall provide initial notification to the regulatory authority within 24 hours of becoming aware of a malfunction and include, as applicable:

(a) A description of the malfunction, including a location description;

(b) A description of any component involved in the malfunction;

(c) A description of the suspected causes;

(d) Planned diagnostic and mitigation steps;

(e) The estimated date and time when the malfunction started;

(f) The estimated date and time when the malfunction was stopped or will be stopped; and

(g) The estimated date and time when the system returned to normal operations or will return to normal operations.

(3) The purveyor shall notify the regulatory authority within 10 business days of any corrective action, violation,

penalty, or a failure to obtain required permits from any authority having jurisdiction other than the regulatory authority.

(4) A purveyor shall notify all users by mail, email, and posted notices within 15 business days of notifying the regulatory authority and upon request of the regulatory authority when a source water or inadequately treated nonpotable water enters the treated nonpotable water distribution system. The notification must:

(a) Describe in an accurate and understandable manner the circumstances in which a source water or inadequately treated nonpotable water entered the treated nonpotable water distribution system;

(b) Comply with WAC 246-275-525(2); and

(c) Include, at a minimum:

(i) A description of what occurred;

(ii) The location of where it occurred;

(iii) The impact to the user; and

(iv) When service is expected to resume.

(5) Malfunctions must be reported in data and monitoring report (DMR) and annual report submittals.

NEW SECTION

WAC 246-275-520 Recordkeeping.

(1) The purveyor shall keep system records on-site including, but not limited to:

(a) Current ONWS operating permit;

(b) Signed results delivered by the accredited laboratory and evidence of chain of custody;

(c) Data and monitoring report (DMR);

(d) Annual report;

(e) Notifications as described in WAC 246-275-515;

(f) A log of all calibrations, maintenance, and major changes in operation;

(g) A log of all system auto-generated alarms, causes, and corrective actions; and

(h) A complete list of user complaints and responses, as required in WAC 246-275-525.

(2) A purveyor must retain engineering documents describing any part of the ONWS, including the O&M manual, record drawings, engineering reports, construction documents, validation engineering reports, and conditional startup mode final reports until the system is abandoned. Other ONWS records must be kept for at least five years.

(3) ONWS records must be made available for inspection by the department and the local health jurisdiction under a JPR.

NEW SECTION

WAC 246-275-525 User communications.

(1) Signage must be provided and maintained as required by chapter 51-56 WAC.

(2) All communication with users must use clear, concise, and simple language and be provided in languages commonly understood by the population served.

(3) User notification of a malfunction must be provided under WAC 246-275-515(4).

(4) The purveyor shall maintain a complete list of user complaints and responses. The purveyor shall address user

complaints in a timely manner and provide a written response to the user if user contact information is provided.

(5) A purveyor shall provide a copy of the most recent annual report satisfying WAC 246-275-510 to any ONWS user upon request.

PART 6 COMPLIANCE AND ENFORCEMENT

NEW SECTION

WAC 246-275-600 Modification, suspension, and revocation of operating permits. (1) The generation, distribution, or use of treated nonpotable water from an ONWS without an operating permit, or in a manner that violates this chapter, the terms and conditions of an operating permit, order, or directive issued under this chapter, is prohibited.

(2) The regulatory authority may immediately revoke or suspend an operating permit issued under this chapter if there is an immediate and unacceptable risk to public health.

(3) The regulatory authority may modify, revoke, suspend, or deny an operating permit issued for an ONWS, as authorized by

RCW 43.70.115, for good cause, including, but not limited to, when:

(a) There is a change in any condition that requires the ONWS to temporarily or permanently limit or stop operating;

(b) An ONWS fails or there is need for repair or replacement of any ONWS component that is the result of neglect or poor management practices;

(c) The operating permit was obtained by fraud or with any material misrepresentation;

(d) The ONWS was built without applicable building and plumbing permits issued by the local authorities within its jurisdiction. This includes permits issued by local authorities having jurisdiction for systems that serve district-scale projects with collection or distribution pipes within the public right-of-way;

(e) It is necessary or becomes necessary to comply with applicable water quality standards under chapter 90.48 RCW;

(f) The owner has not paid the operating permit fee under WAC 246-275-990;

(g) A purveyor or any employee of a purveyor has violated any federal or state laws, regulations, or rules, or local ordinances or codes while operating ONWS and the purveyor had, or should have had, actual or constructive knowledge the illegal conduct was occurring;

(h) The ONWS is being managed, conducted, or maintained in any way that does not protect public health or the environment; or

(i) The purveyor, any employee of the purveyor, or any entity identified in a legal agreement with the purveyor refused to allow the department or the local health jurisdiction under a joint plan of responsibility to inspect the premises or the operations of the ONWS.

NEW SECTION

WAC 246-275-605 Notice of violations, enforcement actions, and penalties. (1) When an ONWS is out of compliance with any rule or law regulating the ONWS and administered by the regulatory authority, the regulatory authority may initiate

enforcement action. Enforcement action may include, but is not limited to:

(a) A notice of correction describing the condition that is not in compliance and the text of the specific section or subsection of the applicable state or federal law or rule, a statement of what is required to achieve compliance, and the date by which compliance is to be achieved;

(b) A notice of violation with or without a civil penalty;

(c) An order requiring specific actions or ceasing unacceptable activities within a designated time period;

(d) Modification, revocation, suspension, or denial of permits under WAC 246-275-600; and

(e) Civil or criminal penalties authorized under chapter 70.05 RCW and RCW 43.70.190.

(2) An informal conference may be held at the request of any party to resolve disputes arising from enforcement of this chapter.

(3) Notices and orders issued under this section must:

(a) Be in writing;

(b) Name the person or persons to whom the order is directed;

(c) Briefly describe each action or inaction constituting a violation of the rules of chapter 246-275 WAC, or applicable local rules;

(d) Specify any required corrective action, if applicable;

(e) Specify the effective date of the order, with the date or timeframe required for coming into compliance; and

(f) Provide notice of the consequences of failure to comply or repeated violation, as appropriate.

(4) Enforcement orders must be served in the manner of service of a summons in a civil action or in another manner showing proof of receipt.

NEW SECTION

WAC 246-275-610 Appeals and adjudicative proceedings. The owner of an ONWS that has had an approval or permit modified, revoked, suspended, or denied by the department may request an adjudicative proceeding under chapter 34.05 RCW and chapter 246-10 WAC. A request for an adjudicative proceeding must be filed

with the department within 28 calendar days of service of the department's notice of decision.

PART 9 FEES

NEW SECTION

WAC 246-275-990 Fees. (1) A local health jurisdiction or local health officer may charge service fees and operating permit fees as authorized under RCW 70.05.060 or 70.46.120 to either partially or fully administer, enforce, and carry out the responsibilities under this chapter when:

(a) A joint plan of responsibility has been established between the department and a local health jurisdiction or local health officer under WAC 246-275-135(2) to either partially or fully administer, enforce, and carry out the responsibilities under this chapter; or

(b) A joint or shared services agreement is established between local health jurisdictions or local health officers, or both, under WAC 246-275-135(3) to either partially or fully administer, enforce, and carry out the responsibilities under

this chapter on behalf of other local health jurisdictions or local health officers, or both.

(2) The department shall collect the following nonrefundable fees:

(a) $1,548 for initial design review for a minor project. This includes four hours of engineer review. Additional time will be billed at the hourly rate listed in subsection (2)(c) of this section.

(b)$3,096 for initial design review for a major project. This includes eight hours of engineer review. Additional time will be billed at the hourly rate listed in subsection (2)(c) of this section.

(c) $387 per hour for engineer review.

(d) $2,572 for an annual operating permit.

(e) $466 for a late permit fee for applications submitted after the renewal application due date.

(f) $1,280 for an expired permit fee for applications submitted after the operating permit has expired. This fee consists of a late fee and abbreviated design review to re-

permit an expired ONWS. This fee is in addition to the annual operating permit fee.