Concise Explanatory Statement
New Chapter 246-275 WAC
On-site Nonpotable Water Systems

Washington State Department of HEALTH

WAC 246-275-005, Applicability

Comment Received	Department of Health Determination
Consider explaining why ONWS cannot be installed on single-family residences. The literature may not support excluding single-family residences.	**No change to proposed rule.** The proposed rules are based on the National Blue Ribbon Commission for Onsite Non-Potable Water Systems (NRBC) models and guidance documents. The NRBC framework does not address single-family residences as an allowable implementation scale.

WAC 246-275-120, Allowed source water

Comment Received	Department of Health Determination
Consider adding building condensate as an allowed source water. Building condensate is clean water that has formed on HVAC equipment or other building equipment and should be an allowed source water for the ONWS.	**No change to proposed rule.** The proposed rules are based on the National Blue Ribbon Commission for Onsite Non-Potable Water Systems (NRBC) models and guidance documents. In alignment with the NRBC framework, the proposed rules allow AC condensate as an allowable source water. A purveyor may apply for a variance for other source waters not explicitly stated in WAC 246-275-120.

WAC 246-275-125, Allowed end uses

Comment Received	Department of Health Determination

Expand allowable end uses of treated water to include high-demand applications such as cooling tower makeup water.	**No change to proposed rule.** The proposed rules are based on the National Blue Ribbon Commission for Onsite Non-Potable Water Systems (NRBC) models and guidance documents. The NRBC framework does not address cooling tower makeup water as an allowable end use. A purveyor may apply for a variance for other end uses not explicitly stated in WAC 246-275-125.
Expand the allowed uses to include: a) Cooling tower makeup b) Trap priming c) Decorative fountains and impoundments.	**No change to proposed rule.** The proposed rules are based on the National Blue Ribbon Commission for Onsite Non-Potable Water Systems (NRBC) models and guidance documents. The NRBC framework does not address cooling tower makeup or decorative fountains and impoundments as allowed end uses. A purveyor may apply for a variance for other end uses not explicitly stated in WAC 246-275-125. Priming drain traps are already allowed as an end use in WAC 246-275-125(1)(c).

WAC 246-275-215, Construction documents submittal

Comment Received	Department of Health Determination
Expand the list of accepted disinfection procedures to include additional resources, such as other state guidance, or the criteria the department will use to consider other disinfection procedures.	**No change to proposed rule.** The proposed rules state that the disinfection procedures have to "conform with the American Water Works Association (AWWA) standards **or other standards acceptable to the department.**" Decisions on other disinfection procedures will be made by the department on a case-by-case basis, as project proponents bring these proposals forward. Additionally, the department will consider developing standards and guidance documents to address this concern.

WAC 246-275-300, Log reduction targets

Comment Received	Department of Health Determination

Add a citation for "Risk-Based Framework for Developing Microbial Treatment Targets for Water Reuse" in tables that list log reduction targets.	**No change to proposed rule.** This type of citation is not necessary in the rule itself and can be added to guidance instead.
Expand flexibility for validation of reverse osmosis (RO) log reduction credits (LRCs) beyond what is provided in the "US EPA RO pathogen crediting framework". This can be accomplished with one or more of the following changes: • In Table 2, replace "US EPA RO pathogen crediting framework" with a citation to the Australian WaterVal RO and NF Validation Protocol (WaterSecure, 2017). • State that RO LRC validation using the "US EPA RO pathogen crediting framework" may be conducted using conductivity or total organic carbon reduction, or other department-approved parameters, as surrogates consistent with Water Research Foundation projects 4958 and 5047, and subject to site-specific validation under 246-275-305(3).d.	**No change to proposed rule.** Thank you for your suggestion. The department will add this to a parking lot list of topics for future rulemaking.
Many log reduction credits (LRCs) listed in Table 2 may be outdated or obsolete in the future. Consider making Table 2 more flexible by changing its caption to "**Baseline** Treatment Unit Process Log10 Reduction credits". This would add flexibility by establishing Table 2 as a baseline and allowing new methods that may be developed to be used to validate LRCs.	**No change to proposed rule.** The LRC values that are established in Table 2 are based on the National Blue Ribbon Commissions' final report. As science evolves and emerging literature provides new evidence for different LRCs, the department will consider these in future rulemakings.
Request to add flocculation/sedimentation/rapid media filtration (conventional filtration) as an allowed treatment unit process in Table 2. According to U.S. EPA Safe Drinking Water act information, this process could achieve a LRC of 2.0/2.5/0.0 as a baseline while operating with a combined filter effluent turbidity maximum of 0.3 Nephelometric Turbidity Units (NTU) for a monthly 95th percentile and 1.0 NTU instantaneous maximum for any sample.	**No change to proposed rule.** The NRBC final report does not include values for flocculation/sedimentation/rapid media filtration.
Table 2 establishes a log reduction credit (LRC) for reverse osmosis (RO) of 2.0/2.0/2.0. Ongoing research demonstrates that RO can achieve higher levels of treatment than this. Request removal of "Up to" in reverse osmosis row of Table 2. This	**No change to proposed rule.** The LRC values that are established in Table 2 are based on the National Blue Ribbon Commissions' final report. The department does not interpret the commenter's requested change, of removing

would allow use of higher LRCs, as supported by scientific research.	the words "up to", as achieving a pathway for the LRCs for RO to be higher than 2.0. As science evolves and emerging literature provides new evidence for different LRCs, the department will consider these in future rulemakings.
Table 2 establishes a log reduction credit (LRC) for chlorine disinfection of 5.0/0.0/5.0. Ongoing research demonstrates that chlorine disinfection can achieve a LRC of 6.0./0.0/5.0. Request updating chlorine disinfection crediting for up to 6.0/0.0/5.0 in Table 2.	**No change to proposed rule.** The LRC values that are established in Table 2 are based on the National Blue Ribbon Commissions' final report. Thank you for this suggestion. The department will add this to a list of topics for future rulemaking.
Table 2 establishes a log reduction credit (LRC) for ozone disinfection of 4.0/3.0/4.0. Ongoing research demonstrates that ozone disinfection can achieve a LRC of 6.0./3.0/4.0. Suggest updating ozone disinfection LRC for up to 6.0/3.0/4.0 in Table 2.	**No change to proposed rule.** The LRC values that are established in Table 2 are based on the National Blue Ribbon Commissions' final report. Thank you for this suggestion. The department will add this to a list of topics for future rulemaking.
Table 2 establishes a 0.0 bacteria LRC for microfiltration/ultrafiltration. This is a change from the 2023 draft of the rule which stated the LRV for microfiltration/ultrafiltration would be determined "case-by-case." This precludes a higher bacteria LRC for microfiltration/ultrafiltration, even when site-specific validation data support it. Request changing/adding language in WAC 246-275-305 to say: "Projects may seek, and the department may approve, microfiltration/ultrafiltration bacteria log reduction credit above the Table 2 baseline of 0.0 based on site-specific validation, challenge testing, or other data acceptable to the department."	**No change to proposed rule.** The LRC values that are established in Table 2 are based on the National Blue Ribbon Commissions' final report. Thank you for this suggestion. The department will add this to a list of topics for future rulemaking.

WAC 246-275-305, Log reduction credits

Comment Received	Department of Health Determination
Consider adding Ultra Violet Transmittance (UVT) to the examples of continuous monitoring methods for UV light disinfection listed in Table 2. The efficacy of UV light disinfection is highly dependent on the UVT of the water when it is treated.	**No change to proposed rule.** The last column in Table 2 is a non-exhaustive list of example continuous monitoring methods. The department can add more information about this in guidance.

Consider clarifying that there may be additional technologies that can achieve the log reduction credits in Table 2 and that projects can use site-specific validation, surrogate parameters, or other approved methods to achieve approval for these technologies.	**No change to proposed rule.** WAC 246-275-305(2) states that "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."

WAC 246-275-310, Water quality limits

Comment Received	Department of Health Determination
Provide greater clarity regarding turbidity limits listed in Table 3. The limits shown appear to mandate the use of membrane filtration. Some treatment processes can achieve adequate treatment of turbidity without the use of membrane technology.	**Adopt rule with amendment.** The department has added a footnote to the turbidity limits listed in Table 3, clarifying that the turbidity limits listed in the table are only required when using membrane filtration.

WAC 246-275-315, Design requirements for all ONWS

Comment Received	Department of Health Determination
Consider eliminating the requirement for treated water to have a chlorine residual when chlorine is not necessary to achieve treatment requirements.	**No change to proposed rule.** Chlorination is required in all cases, with the exception of subsurface irrigation end uses, to protect public health. A purveyor may apply for a waiver from the free chlorine residual requirement.
How will the State address projects which are served by a well or other water source that is not required to be connected to a public water system?	**No change to proposed rule.** The department does not anticipate that many ONWS will be served by private wells, as single-family homes are not included as an implementation scale under the proposed rules. If a project is being served by a private well, the purveyor would have to apply for a waiver to do so. If a well is being used for an ONWS, all required cross-connection controls would still apply, which would protect the well.
WAC 246-275-315(3) requires a licensed plumber to install "distribution piping, fixtures, equipment, appliances, and appurtenances" for commercial and multifamily projects. It is not clear whether this applies to interconnecting process piping within a packaged treatment unit (upstream of treated water storage). These components are typically installed and commissioned by the	**Adopt rule with amendment.** The department has added clarifying language to the proposed rule to state that "except for the installation of interconnecting process piping within a factory-packaged or field-assembled treatment unit" the ONWS must use a licensed plumber to install all distribution piping, fixtures, equipment, appliances, and appurtenances

equipment manufacturer's technician or a mechanical contractor under manufacturer supervision. Does this apply to internal piping within the treatment unit, or is it limited to piping, fixtures, and appurtenances downstream of treated water storage? Ambiguity on this affects project scoping, bid pricing, and scheduling for future ONWS projects. Request to clarify that the licensed plumber requirement in WAC 246-275-315(3) applies to treated nonpotable water distribution piping, fixtures, and appurtenances downstream of treated water storage, and to makeup water piping, and does not extend to interconnecting process piping within a factory-packaged or field-assembled treatment unit installed and commissioned under the manufacturer's instructions and inspected under 246-275-220.	according to project type: commercial or multifamily residential.
WAC 246-275-315(7) requires sample taps before and after each treatment unit process. This appears to apply to treatment units which have no assigned log reduction credits (LRC) in Table 2. Sampling at these points has limited compliance value. Each sample point on a blackwater line is an additional cross-connection control and containment point that must be maintained and protected from human contact under WAC 246-275-315(1). Request to clarify that the sample tap requirement in WAC 246-275-315(7) applies to unit processes for which an LRC is assigned or claimed in the approved engineering report under 246-275-305, and to points required for monitoring under Table 4 and Table 5, rather than to every treatment unit operation in the treatment train.	**No change to proposed rule.** A sample point is required before and after each treatment unit process. If sampling is not required at any given treatment unit, the purveyor may request a waiver.

WAC 246-275-320, Design requirements based on source water

Comment Received	Department of Health Determination
It may be helpful to update the proposed language to enable additional flexibility by adopting type of removal-based language. Consider changing WAC 246-275-320(1)(b) to say, "Filtration or physical separation method; and…"	**No change to proposed rule.** The list in subsection (1) is not exhaustive. The department can add information regarding physical separation methods to guidance.

WAC 246-275-500, Monitoring and sampling

Comment Received	Department of Health Determination
Can the frequency of monitoring for secondary free chlorine residual at the end of the distribution system required in Table 5 be changed to monthly? This would match the monitoring frequency required for BOD and TSS in Table 5. Secondary free chlorine residual will be still measured daily or continuously at the entry to the distribution system.	**No change to proposed rule.** If the purveyor of the ONWS would like to change the monitoring frequency, they would have to propose that change through the waiver process and have it approved in the engineering report.
Consider removing "for 12 months" in the HPC row of Table 5. It should be clear that this requirement continues in perpetuity, rather than for only 12 months.	**No change to proposed rule.** Thank you for catching this error. As this would be a substantive change to the proposed rules, the department will correct this error in a future rulemaking.

WAC 246-275-510, Annual reporting

Comment Received	Department of Health Determination
WAC 246-275-510 (3)(b) requires that annual reporting includes a water quality summary, including: "Monthly maximum and minimum values from LRT surrogate parameters, free chlorine residual, pH, and turbidity monitoring;". Suggest changing this to "Monthly maximum and minimum values from LRC continuous monitoring parameters, free chlorine residual, pH, and turbidity monitoring;" This will clarify that the intent of the rule is that the annual report includes a water quality summary of the parameters that are continuously monitored.	**Adopt rule with amendment.** The department has edited WAC 246-275-510(4)(b) to clarify that the water quality summary in the annual report should include monthly maximum and minimum values from the LRC continuous monitoring parameters, rather than the LRT surrogate parameters.

WAC 246-275-520, Recordkeeping

Comment Received	Department of Health Determination
Did the department consider the costs incumbent in the requirement to record all autogenerated alarms, causes, and corrective actions? This adds costs to the operations and maintenance of the ONWS, sometimes for alarms and notifications which have no impact on water quality.	**No change to proposed rule.** Thank you for this question. The department did consider the costs for recording all of the alarms and corrective actions and believes they are necessary for inclusion in the annual report.
Consider spelling out the acronym "JPR" the first time it is used.	**Adopt rule with amendment.** Thank you for this suggestion. The department has made this editorial change.

General comments

Comment Received	Department of Health Determination
The final rule should expressly clarify that untreated groundwater wells used directly for irrigation or other lawful nonpotable purposes are not considered on-site nonpotable water systems unless they are incorporated into a system that collects, treats, and reuses an alternative water source regulated under chapter 246-275 WAC. Similar clarification should be provided for public water system source, treatment, raw water, operational, fire protection, and construction water facilities. Clear exclusions will reduce regulatory uncertainty and help distinguish conventional nonpotable water supplies from the alternative water treatment and reuse systems contemplated by RCW 90.46.290.	**No change to proposed rule.** The proposed rules provide sufficient clarity regarding the scope and applicability of ONWS.
Where a property served by a public water system proposes an ONWS, the serving water purveyor should receive notice and have an opportunity to review the proposed system before approval, construction, and significant modification. The final rule should preserve the water purveyor's authority over cross-connection control, backflow prevention, metering, service conditions, and other requirements necessary to protect the public drinking water system.	**No change to proposed rule.** The serving water purveyor maintains authority over cross-connection control to the water system. The departments believes that the normal methods of maintaining cross-connection control will be adequate to protect from threats potentially posed by ONWS.
The rule should require prompt notification to the serving water purveyor whenever a cross-connection, treatment failure, backflow incident, or other condition could affect the public water system.	**No change to proposed rule.** Thank you for this suggestion. The department will consider adding this to guidance. Additionally, the department interprets the responsibilities

Clear delineation of responsibilities among the Department of Health, local health jurisdictions, building officials, the Department of Ecology, public water purveyors, and system owners will help avoid both regulatory overlap and potential gaps in oversight.	and authorities of each agency as being sufficiently and clearly defined.
Recommend that the Department more fully evaluate the potential impacts of ONWS located within Wellhead Protection Areas (WHPAs) that protect public drinking water sources and whether additional safeguards are appropriate for ONWS located within WHPAs. At a minimum, the final rule or accompanying guidance should acknowledge this issue and provide a framework for incorporating future scientific findings and regulatory developments related to PFAS and other emerging contaminants. The Department should also consider whether ONWS proposing irrigation or infiltration within a WHPA should receive additional review, consultation with the affected public water system, or other protective measures to ensure long-term protection of groundwater resources.	**No change to proposed rule.** Thank you for bringing these concerns to the department's attention. While protecting public drinking water sources is critical, the proposed rules do not regulate the source water. The affected public water system retains the authority to review projects within a WHPA and preclude activities such as irrigation, if there is concern for contamination.

Notes: The Department of Health did not receive written comments for the remaining sections in chapter 246-275 WAC.