

WAC 173-219-310 Cross-connection control. (1) Applicability, purpose, and responsibility.

Reclaimed water generators, distributors, users, and potable water purveyors must take action to eliminate or prevent cross-connection between water supplies.

(2) Group A water systems, as defined in WAC 246-290-020, are responsible for protecting their potable water distribution system from cross-connections with lower quality water supplies, such as Class A and Class B reclaimed water.

(3) Reclaimed water generators and distributors are responsible for protecting reclaimed water and partially treated reclaimed water from contamination via cross-connection with lower quality water supplies and preventing water under their control from contaminating potable water, starting in the generation facility, including all treatment stages, storage, and distribution facilities, and ending at the point of delivery to the user's reclaimed water meter at the property line of the use area.

(a) Distributors must provide the potable water purveyor, if any, written notification prior to providing reclaimed water service to any property within the purveyor's service area so the purveyor can ensure users comply with the cross-connection control requirements under WAC 246-290-490 and any locally adopted regulations.

(b) Generators must notify their potable water purveyor of the proposed and ongoing reclaimed water treatment activity and facility location and comply with the purveyor's cross-connection control requirements under WAC 246-290-490 and any locally adopted regulations.

(c) Reclaimed water generators and distributors must not provide reclaimed water to any user before the user has installed and tested the correct backflow prevention assembly on the potable supply line, and the potable water purveyor verifies it.

(d) Under the provisions of this section, generators and distributors are not responsible for eliminating or controlling cross-connections on the end user's property.

(4) General program requirements. The reclaimed water generator and distributor must develop and implement a written cross-connection control program that meets the requirements of this section for the portions of reclaimed water treatment, storage, and delivery under their control. They must:

(a) Use good engineering practices in the development and implementation of cross-connection control programs. Guidance publications and references such as, but not limited to, the most recent edition of the following, may be used for cross-connection program development and implementation:

(i) Foundation for Cross-Connection Control and Hydraulic Research, University of Southern California, *Manual of Cross-Connection Control*.

(ii) Washington state department of ecology *Criteria for Sewage Works Design*.

(iii) Washington state department of ecology *Reclaimed Water Facilities Manual*.

(iv) Pacific Northwest Section of the American Water Works Association *Cross-Connection Control Manual, Accepted Procedure and Practice*.

(b) Provide a certified cross-connection control specialist (CCS) to review all plans, engineering reports, and operation and maintenance manuals to ensure compliance with cross-connection control re-

quirements before documents are submitted to the lead agency for review.

(c) The generator must document cross-connection prevention responsibilities of the generator, distributor, and potable water purveyor at all generation and distribution facilities in the reclaimed water engineering plan, cross-connection control program, and operation and maintenance manual.

(d) Include the requirement that cross-connections between the reclaimed water and lower quality water are eliminated, or controlled by the installation of approved backflow prevention assemblies.

(e) Ensure that the CCS determines and documents the appropriate method of backflow protection to eliminate or control cross-connections in the reclaimed water facility and distribution system.

(f) Take appropriate corrective action if a cross-connection or potential cross-connection exists that is not controlled by the installation of an approved backflow prevention assembly. Corrective action may include, but is not limited to:

(i) Diverting potentially contaminated reclaimed water or taking other action to prevent it from leaving the reclaimed water facility and entering the distribution system until the hazard is controlled or eliminated.

(ii) Denying or discontinuing reclaimed water service to a user's property until the cross-connection hazard is eliminated or controlled.

(iii) Requiring the user to install, repair, or replace an approved backflow prevention assembly appropriate for the level of risk of contamination for premises isolation of the reclaimed water system.

(g) Prohibit the intentional return of used water to the distribution system. Such water includes reclaimed water used for any purpose within the user's property.

(5) Minimum elements of a cross-connection control program. The reclaimed water generator and distributor must:

(a) **Element 1:** Adopt a local ordinance, resolution, code, bylaw, or other written legal instrument that:

(i) Establishes the generator's or distributor's legal authority to implement a cross-connection control program.

(ii) Describes the operating policies and technical provisions of the cross-connection control program.

(iii) Describes corrective actions to be taken to ensure compliance with the cross-connection control requirements.

(b) **Element 2:** Develop and implement procedures and schedules for ensuring that:

(i) Cross-connections are eliminated whenever possible.

(ii) When cross-connections cannot be eliminated, they are controlled by installation of approved backflow prevention assemblies commensurate with the degree of hazard.

(iii) Approved backflow prevention assemblies are installed in the approved orientation and in accordance with industry standards.

(iv) New and existing points of use are assessed for compliance with the cross-connection control program.

(v) Approved backflow prevention assemblies are inspected and tested as required.

(c) **Element 3:** Ensure that personnel, including at least one person certified as a CCS, develop and implement the cross-connection control program.

(d) **Element 4:** Develop and implement a backflow prevention assembly testing quality control assurance program including, but not limi-

ted to, documentation of the tester's BAT certification and test kit calibration, test report contents, and time frames for submitting completed test reports.

(e) **Element 5:** Develop and implement, when appropriate, procedures for responding to backflow incidents.

(f) **Element 6:** Develop and maintain cross-connection control records including, but not limited to, the following:

(i) Locations in the generation facility where cross-connections between higher quality and lower quality water have been identified.

(ii) Property locations where reclaimed water is provided.

(iii) Property locations where users are served by both reclaimed water and potable water, and identification of and notification to the potable purveyor.

(iv) Approved backflow assemblies and air gaps protecting the reclaimed water generation and distribution systems; including exact location, description of the type, manufacturer, model, size, and serial number, assessed degree of hazard, installation date, history of inspections, tests and repairs, test results, and person performing tests.

(v) Cross-connection control program annual summary reports and backflow incident reports.

(6) Protecting the reclaimed water distribution system.

(a) If the reclaimed water use on a property poses a high likelihood of contaminating the reclaimed water distribution system, the reclaimed water distributor must ensure installation of an approved backflow prevention assembly at the meter or property line.

(b) Reclaimed water distributors may require backflow prevention assemblies to be installed at the meter or property line for properties with characteristics such as, but not limited to, the following:

(i) Complex piping arrangements or piping subject to frequent changes that make it impractical to assess whether cross-connections exist.

(ii) A repeated history of cross-connections being established or reestablished; or

(iii) Cross-connections that are unavoidable or not correctable.

(7) Approved backflow prevention assemblies. The reclaimed water generator and distributor must ensure that all installed backflow prevention assemblies relied upon to protect the reclaimed water facility and distribution system are models that appear on current *University of Southern California Foundation for Cross-Connection Control and Hydraulic Research* approved backflow prevention assemblies list.

(8) Approved backflow prevention assembly installation. The reclaimed water generator and distributor must ensure that:

(a) Approved backflow prevention assemblies are installed in a manner that:

(i) Facilitates their proper operation, maintenance, inspection, and/or in-line testing using standard procedures.

(ii) Ensures that the assembly will not become submerged due to equipment failure or weather-related conditions such as flooding.

(iii) Ensures compliance with all applicable safety regulations.

(b) Bypass piping installed around any approved backflow prevention assembly is equipped with an approved backflow prevention assembly that affords at least the same level of protection as the assembly that is being bypassed.

(9) Approved backflow prevention assembly inspection and testing. The reclaimed water generator and distributor must ensure that:

(a) Inspections and/or tests of approved air gaps and approved backflow prevention assemblies relied upon to protect the reclaimed water system are conducted:

(i) At the time of installation.

(ii) Annually after installation, or more frequently, if required by the reclaimed water distributor for connections serving premises or systems that pose a high health cross-connection hazard or for assemblies that repeatedly fail.

(iii) After a backflow incident.

(iv) After an assembly is repaired, reinstalled, or relocated or the replumbing of an air gap.

(b) Approved backflow prevention assemblies relied upon to protect the reclaimed water system are tested using standards approved for assemblies installed to protect potable water systems in accordance with subsection (5) of this section.

(10) Recordkeeping and reporting. Reclaimed water generators and distributors:

(a) Must keep cross-connection control records for the following time frames:

(i) Records pertaining to the list of properties using reclaimed water must be kept as long as reclaimed water is provided to the property.

(ii) Records regarding information required in subsection (5)(f) of this section must be kept for five years or for the life of the approved backflow prevention assembly, whichever is shorter.

(b) May maintain records or data in any media, such as paper, film, or electronic format.

(c) Must complete the cross-connection control program annual summary report and make all records and reports available as required in the permit conditions.

(d) Must notify the lead agency, potable water purveyor, and local health jurisdiction as soon as possible, but no later than the end of the next business day, when a backflow incident is discovered by the reclaimed water generator or distributor to have contaminated the reclaimed water facility, distribution system, or the potable water system.

[Statutory Authority: RCW 90.46.015. WSR 18-03-166 (Order 06-12), § 173-219-310, filed 1/23/18, effective 2/23/18.]