

TRI CITY WATER & SANITARY AUTHORITY
CROSS CONNECTION CONTROL PLAN
EFFECTIVE DATE: 1/11/95
REVISED DATE: 1/14/15

Tri City Water #00549 2015

Section 1 - Definitions

The following definitions apply unless the context clearly indicates or requires a different meaning. Any word or term not defined in this section will be defined as provided in the Oregon Administrative Rules, Chapter 333, or the most recent edition of the *Manual of Cross Connection Control* published by the Foundation for Cross Connection Control and Hydraulic Research, University of Southern California (USC)

1. **Approved Air Gap** – means a physical separation between the free flowing discharge end of a potable water supply pipeline and an open or non-pressurized receiving vessel. An Approved Air Gap shall be at least twice the diameter of the supply pipe measured vertically above the overflow rim of the vessel and in no case less than 1 inch.
2. **Approved Backflow Prevention Assembly** – means an assembly to counteract backpressure and/or prevent back-siphonage. This assembly must appear on the list of approved assemblies issued by the Oregon Health Authority.
3. **Auxiliary Water Supply** – any water source or system other than the public water system that may be available in the building or on the premises.
4. **Backflow** – means the flow in the direction opposite to the normal flow or the introduction of any foreign liquids, gases, or substances into the water system of the Tri City Water & Sanitary Authority
5. **Back pressure** – means an elevation of pressure downstream of the distribution system that would cause, or tend to cause, water to flow opposite of its intended direction
6. **Back siphonage** – means a form of backflow caused by a drop in distribution system pressure below atmospheric pressure (partial vacuum), allowing water in downstream piping to flow opposite of its intended direction.
7. **Cross Connection** – means any physical arrangement where a potable water supply is connected, directly or indirectly, with any other non-drinkable water system or auxiliary system, sewer, drain conduit, swimming pool, storage reservoir, plumbing fixture, swamp coolers or any other liquid of unknown or unsafe quality which may be capable of imparting contamination to the public

water system as a result of backflow. Bypass arrangements, jumper connections, removable sections, swivel, or change-over devices, and other temporary or permanent devices through which, or because of which, backflow can occur are considered to be cross connections

8. **Degree of Hazard** – means either pollution (non-health) or contamination (health) hazard and is determined by an evaluation of conditions within a system.

9. **Double Check Valve Assembly (DCVA)** – means an assembly of two independently acting approved check valves, including tightly closing resilient seated shutoff valves attached at each end of the assembly and fitted with properly located resilient seated test cocks.

10. **Premise** – any property to which water service is provided, including, but not limited to, all improvements, mobile structures and other structures located on the property.

11. **Premise Isolation** – means the practice of protecting the public water supply by installing backflow prevention assemblies at, or near the point of delivery where water enters the premises. Premises isolation does not provide protection to persons on the premises.

12. **Reduced Pressure Backflow Assembly (RPBA)** – means an assembly containing two independently acting approved check valves, together with a hydraulically operating, mechanically independent pressure differential relief valve located between the check valves, at the same time, below the first check valve. The unit shall include properly located resilient seated test cocks and tightly closing resilient seated shutoff valves at each end of the assembly.

13. **Thermal Expansion** – means the pressure increase due to a rise in water temperature that occurs in heated water piping systems when such systems become “closed” and do not allow for expansion.

Section 2 - Purpose

The purpose of the regulation is to protect the water supply of Tri City Water & Sanitary Authority from contamination or pollution due to any existing or potential cross connection.

Section 3 – Application and Responsibilities

These rules apply throughout the Tri City Water & Sanitary boundaries and to every premises and property served with water by the district. It applies to all premises, regardless of date of connection to the Authority Water System. Every

owner, occupant, or person in control of any concerned premises is responsible for complying with the provisions of this plan.

Section 4 – Cross Connections Regulated

1. No cross connection shall be created, installed, used or maintained within the territory served by Tri City Water & Sanitary Authority, except in accordance with these regulations.
2. The Specialist shall carry out or cause surveys to be carried out to determine if any actual or potential cross connection exists. If found necessary, an assembly commensurate with the degree of hazard will be installed at the service connection.
3. The owner, occupant or person in control of any given premises is responsible for all cross connection control within the premises.
4. The owner of any premises found on Table 48 “Premises Requiring Isolation” of OAR 333-061-0070 shall install a Reduced Pressure Backflow Assembly at the service connection in accordance with this administrative rule.
5. It is the responsibility of the property owner/occupant of the premise to purchase, install, test, repair and maintain all backflow assemblies.
6. If there is a change of ownership of any property within the Authority’s service area, it is the responsibility of the new owner to determine that all assemblies are in compliance with this plan.
7. If a point-of-use assembly has not been tested or repaired as required, the installation of a reduced pressure principle assembly will be required at the service connection.
8. The use of any type of chemical spray attachment connected to the premise plumbing, including garden hose fertilizers and pesticide applicators, is not allowed within the Authority’s boundaries without proper protection from the potential of backflow occurring.
9. The use of any type of radiator flush kits attached to the premises plumbing is not allowed within the Authority without proper protection from backflow occurring.

Section 5 – Backflow Prevention Assembly Requirements

A specialist employed by or under contract with the Authority shall determine the type of backflow assemblies to be installed within the Authority. All assemblies shall be installed at the service connection unless it is determined by the Specialist and approved by the Manager that a specific assembly should be installed at the point of use. An approved assembly shall be required in each of the following circumstances, but the Specialist is in no way limited to the following circumstances:

1. In the case of any premises where there is any material dangerous to health which is handled in such a fashion as to permit entry into the Authority Water System, the System shall be protected by an approved air gap separation or an approved reduced pressure principle backflow prevention assembly.
2. When the nature and extent of any activity at premises, or the materials used in connection with any activity at premises, or materials stored at a premises, could contaminate or pollute the Authority Water System.
3. When a premises has one (1) or more cross connections, as the term is defined in Section 1.
4. When internal cross connections are present that are not correctable.
5. When intricate plumbing arrangements are present making it impractical to ascertain whether cross connections exist.
6. When the premises has a repeated history of cross connections being established or re-established.
7. When entry to the premises is restricted so that surveys for cross connections cannot be made with sufficient frequency to assure cross connections do not exist.
8. When materials are being used such that, if backflow should occur, a health hazard could result.
9. When an appropriate cross connection survey report form has not been filed with the Manager.
10. Any and all water return systems.
11. There is piping or equipment for conveying liquids other than potable municipal water and that piping or other equipment is under pressure and installed and operated in a manner that could cause a cross connection.
12. When installation of an approved backflow prevention assembly is deemed by a Specialist to be necessary to accomplish the purpose of this Plan.
13. Whenever reclaimed water or ditch water is used on the premises.
14. When premises with an auxiliary water supply is interconnected to the Authority Water System.

Section 6 – New Construction and/or Change in Ownership

1. On all new residential or non-residential and/or if there is a change in ownership on premises supplied with residential or non-residential water service, a cross connection survey shall occur. If there is an actual or potential cross connection, the required backflow assembly will be commensurate with the degree of hazard as determined by the Specialist.
2. When a building is constructed on commercial premises, and the end use of the building is not determined or could change, a reduced pressure principle backflow prevention assembly shall be installed at the service

connection to provide protection of the public water supply in the event of the most hazardous use of the premises.

Section 7 – Irrigation Systems

All irrigation systems shall be protected according to Oregon Specialty Plumbing Code regulations. In the event any system is equipped with an injector system, a reduced pressure principle assembly will be required.

Section 8 – Thermal Expansion

If a closed system has been created by the installation of a backflow prevention assembly or other appurtenances, it is the responsibility of the property owner, the occupant, or person in control of the property to eliminate the possibility of damage from thermal expansion in accordance with the Oregon Plumbing Specialty Code.

Section 9 – Pressure Loss

Any decrease in water pressure caused by the installation of a backflow assembly shall not be the responsibility of the Authority.

Section 10 – Fire Systems

An approved double check assembly shall be the minimum protection on all new fire sprinkler systems using piping material that is not approved for potable water use, and/or that does not provide for periodic flow through. A reduced pressure principle assembly must be installed if any solution other than potable water can be introduced into the sprinkler system. Retrofitting on fire sprinkler systems will be required in each of the following circumstances.

- Where improper maintenance has occurred
- On all high hazard systems
- Wherever a Specialist deems necessary and;
- Wherever required by the OAR or State Law

Section 11 – Access to Premises

Authorized Authority personnel with proper identification and sufficient notice to the owner or occupant shall have access during reasonable hours to all parts of a premise and within the structure to which water is supplied. However, if any owner, occupant or person in control refuses authorized personnel to access the property or to the interior of a structure during reasonable hours for inspection, a reduced principle assembly will be required to be installed at the service connection to that premises.

Section 12 – Annual Testing and Repair

All backflow prevention assemblies installed within the area served by the Authority shall be tested immediately upon installation, and at least annually thereafter by an OHA certified backflow assembly tester and in accordance with all applicable regulations. All such assemblies found not functioning properly shall be promptly repaired or replaced at the expense of the owner, occupant or person in control of the premises. In the event an assembly is moved or replaced, it must be tested within 24 hours.

All repairs on backflow assemblies within the Authority's service area must be performed according to all State and County regulations. Assemblies protecting health hazard connections must be repaired or replaced within 24 hours. Assemblies protecting non-health hazard connections must be repaired or replaced within 10 business days.

Section 13 – Maintenance of Assemblies

Backflow prevention assemblies shall be maintained, tested and repaired in accordance with the requirements set out in this resolution and Oregon statutes, and regulations. The assembly owner is responsible for protecting the assembly from freezing and vandalism.

Section 14 – Cost of Compliance

All costs associated with purchase, installation, surveys, testing, replacement, maintenance, parts and repairs of the backflow prevention assembly are the financial responsibility of the property owner, occupant, or other person in control of the premises.

Section 15 – Discontinuing Water Service

Failure on the part of any owner, occupant or person in control of the premises to install a required assembly, have it tested annually and/or to discontinue the use of all cross connections and to physically separate cross connections in accordance with this plan is sufficient cause for the discontinuance of public water service to the premises pursuant to OAR 333-061-0070. In the case of an extreme emergency or where an immediate threat to life or public health is found to exist, discontinuance of public water to the premises shall be immediate.