

**TOLLGATE WATER COMPANY
CROSS CONNECTION CONTROL PROGRAM
RESOLUTION – AMENDED MAY 20, 2002**

Pursuant to Chapter 333, Division 61 of the Oregon Administrative Rules, it is the responsibility of Tollgate Water Company (TGWC) to protect its drinking water by instituting and enforcing a cross connection program. Therefore, the following resolution is hereby adopted:

1:01 DEFINITIONS

(1) Air Gap - A physical separation between the free-flowing discharge end of a potable water supply pipeline, and the overflow rim of an open or non-pressure receiving vessel. These separations must be vertically oriented a distance of at least twice the diameter of the inlet pipe, but never less than one inch.

(2) Approved backflow prevention assembly - An assembly to counteract backpressure or prevent backsiphonage. This assembly must appear on the list of approved assemblies issued by the Oregon Health Division.

(3) Atmospheric Vacuum Breaker (AVB) - A device which allows air to enter the water line through a float check (poppet), a check seat, or an air inlet port. AVB's are only acceptable on lawn sprinkler systems and under specific installation standards.

(4) Auxiliary Water Supply - Any water supply on or available to the premises other than the purveyors approved public water supply will be considered as an auxiliary water supply. These auxiliary waters may include a well, spring, river, stream, pond, etc. These waters may be contaminated or polluted, or they may be objectionable and constitute an unacceptable water source over which the water purveyor does not have sanitary control.

(5) Backflow - 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 Indian Meadow Water Company.

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(6) Backpressure - Any elevation of pressure in the downstream piping system (by pump, elevation of piping, or steam and/or air pressure) above the supply pressure at the point of consideration which would cause, or tend to cause, a reversal of the normal direction of flow.

(7) Backsiphonage - A form of backflow due to a reduction in system pressure which causes a subatmospheric pressure to exist at a site in the water system.

(8) Backflow Preventer - An assembly or means designed to prevent backflow.

(9) Contamination - The entry into or presence in a public water supply system of any substance which may be deleterious to health and/or quality of the water.

(10) Cross Connection - Any physical arrangement where a public water system 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 and other device which contains, or may contain, contaminated water, sewage, or 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 changeover devices, or other temporary or permanent devices through which, or because of which, backflow may occur are considered to be cross connections.

(11) Degree of Hazard - To be derived from the evaluation of a health, system, plumbing or pollution hazard.

(12) Double Check Valve Assembly (DCVA) - An approved assembly consisting of two, independently-operating check valves, loaded to the closed position by springs or weights, and installed as a unit with, and between, two resilient seated shut-off valves and having suitable connections for testing.

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(13) Health Hazard - An actual or potential threat of contamination of a physical or toxic nature to the public potable water system or the consumer's potable water system that would be a danger to health.

(14) Hose Bib Atmospheric Vacuum Breaker (HBAVB) - A device used on hose bib outlets where hoses can be attached. HBAVB can be the adapter style which screw onto the hose bib, or the integral type built into the hose bib.

(15) Plumbing Hazard - An internal or plumbing-type cross-connection in a consumer's potable water system than may be either a pollutorial or a contamination-type hazard. This includes, but is not limited to, cross connections to toilets, sinks, lavatories, wash trays, domestic washing machines and lawn sprinkling systems. Plumbing-type cross connections can be located in many types of structures including homes, apartment houses, hotels and commercial or industrial establishments.

(16) Pollution Hazards - An actual or potential threat to the physical properties of the water system or the portability of the public or the consumer's potable water system but which would not constitute a health or system hazard, as defined. The maximum degree of intensity of pollution to which the potable water system could be degraded under this definition would cause a nuisance or be aesthetically objectionable or could cause minor damage to the system or its appurtenances.

(17) Pressure Vacuum Breaker Assembly (PVBA) - An approved assembly consisting of a spring-loaded check valve loaded to the closed position, an independently-operating air inlet valve loaded to open position, and installed as a unit with, and between, two resilient seated shut-off valves and having suitable connections for testing. It is designed to protect against backsiphonage only.

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(18) Potable Water Supply - Any system of water supply intended or used for human consumption or other domestic use.

(19) Premises - Any piece of land to which water is provided including all improvements, mobile home(s) and structures located on it.

(20) Reduced Pressure Backflow Assembly (RPBA) - An assembly containing two, independently-acting, approved check valves together with a hydraulically-operated, mechanically-independent, pressure differential relief valve located between the check valves and at the same time below the first check valve. The assembly shall include properly located test cocks and tightly-closing shut-off valves at the end of the assembly. A check valve is approved if it appears on the list of approved assemblies issued by the Oregon Health Division.

(21) System Hazard - An actual or potential threat of severe danger to the physical properties of the public or consumer's potable water system or of a pollution or contamination which would have a detrimental effect on the quality of the potable water in the system.

1:02 THE PURPOSE OF THIS RESOLUTION IS:

(1) To protect the potable water supply of TGWC from the possibility of contamination or pollution by isolation within the customer's internal distribution system or the customer's private water system such contaminants or pollutants which could backflow into the Tollgate water system.

(2) To promote the elimination or control of existing cross connections, actual or potential, between the customer's in-plant potable system and non-potable water systems, and plumbing fixtures.

(3) To provide for the maintenance of a continuing program of cross connection control which will systematically and effectively prevent the contamination or pollution of the TGWC system.

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1:03 CROSS CONNECTIONS REGULATED

No water service connection to any premise shall be installed or maintained by TGWC unless the water supply is protected from actual or potential cross connections including, but not limited to: stock watering tanks, solar systems, ponds with recirculating pumps, boilers, fire sprinkler systems, darkrooms, hot tubs, swimming pools, irrigation sprinkler systems and auxiliary water systems.

1:04 RESPONSIBILITY - TOLLGATE WATER COMPANY

(1) An Oregon State Health Division certified Cross Connection Control Inspector will administer the cross connection control program of Tollgate Water Company and conduct cross connection inspections as required.

(2) A Double Check Valve Assembly (DCVA) or Reduced Pressure Backflow Assembly (RPBA) will be installed on every service line at or near the point where the water enters the premise, before any branch in the service line, so as to provide premise isolation. The degree of hazard will determine the type of backflow assembly installed.

(3) TGWC will purchase, install, maintain, and test the assemblies.

(4) Testing will be done by Oregon State Health Division certified Cross Connection Tester working for the TGWC or under contract to test for TGWC.

1:05 CONSUMER RESPONSIBILITY

(1) Property owners will pay a one-time assessment to cover the cost of purchasing, testing and installation of service line backflow assemblies.

(2) It is the responsibility of the property owner to eliminate the possibility of thermal expansion if a closed system has been created by the installation of a backflow assembly on the service line.

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(3) Premise isolation does not provide protection from hazards, which may exist downstream, of the service line backflow assembly. It is the property owner's responsibility to install, maintain, and test backflow assemblies within the consumer's water system at the point at which the actual or potential cross connection exists. All costs associated with purchase, installation, inspections, testing, replacement, maintenance, parts, and repairs of these backflow assemblies are the financial responsibility of the water user.

(4) Such assemblies must be registered with TGWC. They must be tested annually, at the property owner's expense, and a copy of the test report given to TGWC. The property owner may contract with a TGWC certified tester or other certified testers for the annual assembly test.

(5) Inspections will be made on private property to identify potential or actual cross connections, at the owner's request.

(6) The assembly must be protected from freezing and other severe weather conditions. It is the responsibility of the assembly owner to provide protection from freezing and other severe weather conditions.

1:06 INSTALLATION REQUIREMENTS

To ensure proper operation and accessibility of all backflow prevention assemblies, the following requirements shall apply to installation of assemblies.

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(1) No part of the backflow prevention assembly shall be submerged in water or installed in a location subject to flooding. If installed in a vault or basement, adequate drainage shall be provided.

(2) All backflow prevention assemblies shall be of a type and model approved by the Oregon Health Division and the TGWC.

(3) Only assemblies specifically approved by the Oregon Health Division for vertical installation may be installed vertically.

(4) If a backflow assembly is installed inside a building, the assembly shall be readily available for testing.

(5) Air gaps installation must maintain a physical separation of at least twice the inside diameter, but not less than one inch, of the incoming supply line measured vertically above the top rim of the receiving vessel.

(6) Atmospheric Vacuum Breakers (AVB)

1. Absolutely no means of shut-off on the downstream or discharge side of the vacuum breaker.

2. For intermittent use only. Must not be pressurized for more than 12 hours in any 24

3. Shall not be subject to any backpressure.

4. Shall not be installed in dusty or corrosive atmospheres.

5. Shall not be installed where subject to flooding.

6. Shall be installed a minimum of six inches above the highest downstream piping and/or outlets.

7. On system not using compressed air to drain the lines.

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(7) Pressure Vacuum Breakers (PVB)

1. Downstream side of vacuum breaker may be maintained under pressure by a valve, but there may be absolutely no means of imposing backpressure by pump or other means.
2. PVB's are designed to protect against back siphonage only, not backpressure.
3. It shall be installed where occasional water discharge from the device caused by pressure fluctuations will not be objectional.
4. Adequate spacing shall be available for maintenance and testing.
5. Shall not be subject to flooding.
6. Shall be installed a minimum of twelve inches above the highest downstream piping and/or outlets.
7. In a vertical configuration.
8. Only on systems where compressed air is not used to drain lines.

(8) Double Check Valve Assembly (DCVA)

1. Adequate space for testing, repair, and maintenance. Minimum clearance is deemed to be six inches below, above, and on both sides.
2. Only those devices specifically designed for vertical installation may be installed vertically.
3. DCVA's may be installed below grade in a vault, provided plugs are installed in the test cocks, but the device shall not be subject to continuous immersion.
4. "Y" pattern DCVA should be installed with test cocks upward.

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(9) Reduced Pressure Backflow Assembly (RPBA)

1. Bottom and side clearances apply when devices are installed inside buildings. Access doors may be provided on side of above-ground vault.
2. RPBD's shall always be installed horizontally, never vertically.
3. RPBD's shall always be installed above the 100 year (1 %) flood level.
4. Relief valves shall never be extended or plugged.
5. Protection from freezing should be provided.
6. A provision for an air gapped drain shall be provided.
7. RPBD's shall not be installed in an enclosed vault or box unless a bore-sighted drain to daylight is provided.
8. Minimum clearances for device assemblies shall be six inches on all sides.

1:07 CONSTITUTIONALITY AND SAVING CLAUSE

If any provision, section, sentence, clause or phrase of this resolution or the application of same to any person or set of circumstances are for any reason unenforceable, the validity of the remaining portions of this resolution or its application to other persons or circumstances shall not be affected thereby, it being the intent of the Tollgate Water Company Board of Directors in adopting and the Chairman of the Board in approving this resolution that no portion hereof or provision or regulation contained herein shall become inoperative or fail by reason of any unconstitutionality or invalidity of any other portion, provision, or regulation.

1: 12 EFFECTIVE DATE

Accepted by the Tollgate Water Company Board of Directors this 20 day of May 2002.