

Ordinance # \_\_\_\_\_

**An Ordinance Establishing Standards & Requirements  
For Controlling Cross Connections to the Municipal Water Supply System of the  
City of Unity.**

## A.) Definitions and Explanations as used in this Ordinance:

1. "Approved backflow prevention assembly" means a device to counteract back pressures or prevent back siphonage. This device must appear on the list of approved devices issued by the Oregon DHS Drinking Water Program.
2. "Auxiliary supply" means any water source or system other than the public water system that may be available in the building or on the premises.
3. "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 City's water.
4. "City" or "The City" means the City of Unity.
5. "Contamination" means 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.
6. "Cross Connection" means 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 any 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 change over devices, or other temporary or permanent devices through which, or because of which, backflow may occur are considered to be cross connections.
7. "Degree of Hazard" means either pollution (non-health hazard) or contamination (health hazard) and is determined by an evaluation of hazardous conditions within a system.
8. "Potable Water Supply" means any system of water supply intended or used for human consumption or other domestic use.
9. "Premises" means any piece of land to which water is provided including all improvements, mobile home(s) and structures located on it.

10. "Reduced Pressure Principle Assembly (RPPA) shall mean 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 property located test cocks and tightly closing resilient wedge shut-off valves or fully ported ball valves at the end of the assembly. A check valve is approved if it appears on the list of approved devices issued by the Oregon DHS Drinking Water Program.

11. "System Hazard" means an actual or potential threat of 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.

B.) Purpose

The purpose of this ordinance is to protect the water supply of the City of Unity from contamination or pollution due to any existing or potential cross connections.

C.) Cross Connections Regulated

No cross connections shall be created, installed, used or maintained within the territory served by the City of Unity, except in accordance with this ordinance.

D.) Backflow Prevention Assembly Requirements

Approved backflow prevention assembly shall be installed at the expense of the user, either at the service connection or within the premises, as determined by a certified water system operator employed by the City of Unity, whenever:

1. The nature and extent of any activity of the premises, or the materials used in connection with any activity of the premises, or materials stored on the premises, could contaminate or pollute the drinking water supply.
2. Premises having any one or more cross connections as that term is defined in section A, paragraph 5 are identified or are present.
3. Internal cross connections that are not correctible or intricate plumbing arrangements which make it impractical to ascertain whether or not cross connections exist are present.
4. There is a repeated history of cross connections being established or reestablished.
5. There is unduly restricted entry so that inspections for cross connections cannot be made with sufficient frequency or with sufficient notice to assure that cross connections do not exist.
6. Materials of a toxic or hazardous nature are being used such that, if backflow should occur, a health hazard could result.
7. Any mobile apparatus (i.e., tank, truck) which uses the City's water or water from any premises facility within the City of Unity's system.

8. Installation of an approved backflow prevention assembly is deemed to be necessary to accomplish the purpose of these regulations in the judgement of a certified cross connection specialist contracted by or employed by the City of Unity.
9. An appropriate cross connection report form has not been filed with the City.
10. A fire sprinkler system is connected to the City's water system.

D.) Installation Requirements

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

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. The assembly must be installed at the point of delivery of the water supply, before any branch in the line, on private property located just inside of the property line. Alternate locations must be approved in writing by the City prior to installations.
3. The assembly must be protected from freezing and other severe weather conditions.
4. All backflow assemblies shall be of a type and model approved by the Oregon DHS Drinking Water Program and the City.
5. Only assemblies specifically approved by the Oregon DHS Drinking Water Program for vertical installation may be installed vertically.
6. The assembly shall be readily accessible with adequate room for maintenance and testing. Assemblies 2" and smaller have at least 6" clearance on all sides of the assembly. All assemblies larger than 2" shall have a minimum clearance of 12" on the back side, 24" on the test clock side, 12" below the device and 36" above the device. "y" pattern double check valve assemblies shall be installed so that the checks are horizontal and the test clocks face upward.
7. The property owner assumes all responsibility for all maintenance and testing of the assembly, as determined and required by the City.
8. If written permission is granted to install the backflow assembly inside of the building, the device shall be readily accessible during regular working hours of 8:00 AM to 5:00 PM, Monday through Friday.
9. If an assembly, with written permission, is installed inside of the premises and is 4" or larger and is installed 4' above the floor, it must be equipped with a rigidly and permanently installed scaffolding acceptable to the City. This installation must also meet the requirements set out by the U.S. Occupation Safety and Health Administration and the State of Oregon Occupational Safety and Health Codes.
10. RP assemblies may be installed in a vault only if relief valve discharge can be drained to daylight through a "boresight" type drain. The drain shall be of adequate capacity to carry the full rated flow of the assembly and shall be screened on both ends. An approval air gap shall be located at the relief

valve office. This air gap shall be at least twice the inside diameter of the incoming supply line as measured vertically above the top rim of the drain and in no case less than 1”.

11. Upon completion of installation, the City shall be notified and all assembly devices must be inspected and tested. The testing and repairs of all assemblies are the financial responsibility of the water user.
12. All backflow assemblies must be registered with the City. Registration shall consist of date of installation, make, model, serial number of the backflow assembly and initial test report.
13. Any water pressure drop caused by the installation of a backflow assembly is not the responsibility of the City of Unity.

E.) Access to Premises

Authorized employees of the City, or their designated representatives with proper identification, shall have access during reasonable hours to all parts of a premise and within the building to which water is supplied. However, if any water user refuses access to a premise or to the interior of a structure at reasonable times and on reasonable notice for inspection by a cross connection specialist appointed by the City, a reduced pressure principle assembly will be required to be installed at the service connection to that premise. If the water user refuses to install the reduced pressure principle device, then the City may apply to any court of competent jurisdiction for a warrant authorizing entry onto the premises for purposes of inspection of the water supply system.

F.) Annual Testing and Repairs

All backflow assemblies installed within the territory served by the City shall be tested immediately upon installation and at least annually thereafter by a state certified tester. All such assemblies found not functioning properly shall be promptly repaired or replaced by the water user. If any such assembly is not promptly repaired or replaced, the City may deny or discontinue water service to the premise. All testing and repairs are the financial responsibility of the water user.

G.) Cost of Compliance

All costs associated with purchase, installation, inspections, testing, replacement, maintenance, parts, and repairs of the backflow assembly are the financial responsibility of the property owner.

H.) Termination of Service

Failure on the part of any customer to either protect with approved assembly or to discontinue the use of all cross connections and to physically separate cross connections is sufficient cause for the immediate discontinuance of public water service to the premises.

I.) Emergency Clause and Declaration of Effective Date:

It is hereby determined and found that it is in the best interests and welfare of the citizens of Unity new regulations regarding the control of cross connections to the

municipal water supply system be adopted. By reason of the foregoing, an emergency is hereby declared to exist, and this Ordinance shall be in full force and effect on the \_\_\_\_\_ day of \_\_\_\_\_, 2007.

J.) Thermal Expansion (Clause)

Means a potentially dangerous condition if a backflow assembly is installed in a water system and the premises is still utilizing a hot water heater that does not have a pressure relief valve installed or has a malfunctioning valve.

K.) Example of facilities requiring backflow protection:

1. Fire sprinkler protection	Protection Level	3
2. Food processing plants		3
3. Inspection restricted		2
4. Sewage treatment plant		2
5. Unapproved auxiliary supply		2
6. Commercial Laundries		2
7. Portable tanks trucks		2
8. Film processing facilities		2
9. Underground sprinklers		3
10. Swimming Pools		2
11. Commercial car wash		2
12. Mortuary's		2
13. Decorative ponds		1 or 2
14. Beverage dispensers using CO <sub>2</sub>		2
15. Buildings with domestic water over 30 feet high		3

L.) Assembly Names:

Potential Level:	Name:	Abbreviation:
1	Air Gap	AG
2	Reduced Pressure Back flow Assembly	RPBA
2	Reduced Pressure Detector Assembly	RPDA
3	Double Check Valve Assembly	DCVA
3	Double Check Detector Assembly	DCDA
4	Pressure Vacuum Breaker	PVBA
5	Atmospheric Vacuum Breaker	AVB

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J. The final Expansion (Clause)

Means a potentially dangerous condition in a backflow assembly in installed in a water system and the premises is still utilizing a hot water heater that does not have a pressure relief valve installed or has a malfunctioning valve.

K. Examples of facilities requiring backflow protection

- 1. Fire sprinkler protection
- 2. Food processing plants
- 3. Injection restricted
- 4. Sewage treatment plant
- 5. Unapproved auxiliary supply
- 6. Commercial Laundry
- 7. Portable tanks/trucks
- 8. Air processing facilities
- 9. Air conditioning systems
- 10. Swimming Pools
- 11. Commercial car wash
- 12. Motorists
- 13. Recreative ponds
- 14. Burial vaults using CO<sub>2</sub>
- 15. Buildings with hot water over 30 feet high

L. Assembly Names

Assembly Name	Protection Level	Abbreviation
Air Gap	1	AG
Reduced Pressure Backflow Assembly	2	RPSA
Reduced Pressure Detector Assembly	3	RPSA
Double Check Valve Assembly	4	DCA
Double Check Detector Assembly	5	DCA
Pressure Vacuum Breaker	6	PVB
Atmospheric Vacuum Breaker	7	AVB