

**DRAFT**

41-00915

**CITY OF UNION ORDINANCES**

**ORDINANCE NO. 489-490**

**AN ORDINANCE REVISING CROSS-CONNECTION CONTROL REQUIREMENTS, AND REPEALING ORDINANCE NO. 416.**

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**THE CITY OF UNION DOES ORDAIN AS FOLLOWS:**

*Section 1. AUTHORITY:* Pursuant to Chapter 333, Division 61 of the Oregon Administrative Rules, it is the responsibility of the City of Union to protect its drinking water by instituting and enforcing a cross connection program.

*Section 2. DEFINITIONS:* For the purpose of this Ordinance, the following shall mean:

(A) APPROVED: Accepted by the authority responsible as meeting an applicable specification stated or cited in this Ordinance or as suitable for the proposed use.

(B) AUXILIARY WATER SUPPLY: Any water supply on or available to the premises other than the City's approved water supply. Auxiliary waters may include water from another purveyor's public potable water supply or any natural source(s), such as a well, spring, river, stream, harbor, and so forth; used waters; or industrial fluids. These waters may be contaminated or polluted, or they may be objectionable and constitute an unacceptable water source over which the City does not have sanitary control.

(C) BACKFLOW: The undesirable reversal of flow in a potable water distribution system

as a result of a cross connection.

(D) BACKPRESSURE: A pressure, higher than the supply pressure, caused by a pump, elevated tank, boiler, or any other means that may cause backflow.

(E) BACKSIPHONAGE: Backflow caused by negative or reduced pressure in the supply piping.

(F) BACKFLOW PREVENTER: An assembly or means designed to prevent backflow.

(G) AIR GAP: The unobstructed vertical distance through the free atmosphere between the lowest opening from any pipe or faucet conveying water or waste to a tank, plumbing fixture, receptor, or other assembly and the flood level rim of the receptacle. These vertical, physical separations must be at least twice the diameter of the water supply outlet, never less than one inch (25 cm).

(H) REDUCED-PRESSURE BACKFLOW ASSEMBLY: The approved reduced-pressure principle backflow-prevention assembly consists of two independently acting approved check valves together with a hydraulically operating, mechanically independent pressure differential relief valve located between the check valves and below the first check valve. These units are located between two tightly closing resilient-seated shutoff valves as an assembly and equipped with properly located resilient-sealed test cocks.

(I) DOUBLE CHECK VALVE ASSEMBLY: The approved double check valve assembly consists of two internally loaded check valves, either spring loaded or internally weighted, installed as a unit between two tightly closing resilient-seated shutoff valves and fittings with properly located resilient-seated cocks. This assembly shall only be used to protect against a nonhealth hazard--that is, a pollutant.

(J) CONTAMINATION: An impairment of a potable water supply by the introduction or admission of any foreign substance that degrades the quality and creates a health hazard.

(K) CROSS CONNECTION: Any physical arrangement where a public water system is connected, directly or indirectly (actual or potential), with any other non-potable water system, used water system or auxiliary supply, sewer, drain conduit, swimming pool, storage reservoir, plumbing fixture, swamp coolers, air conditioner units, fire protection system, or any other assembly 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 assemblies, or other temporary or permanent assemblies through which, or because of which, backflow may occur are considered to be cross connections..

(L) CROSS CONNECTIONS--CONTROLLED: A connection between a potable water system and a nonpotable water system with an approved backflow-prevention assembly properly installed and maintained so that it will continuously afford the protection commensurate with the degree of hazard.

(M) CROSS CONNECTION CONTROL BY CONTAINMENT: The installation of an approved backflow-prevention assembly at the water service connection to any customer's premises, where it is physically and economically unfeasible to find and permanently eliminate or control all actual or potential cross connections within the customer's water system; or it shall mean the installation of an approved backflow-prevention assembly on the service line leading to and supplying a portion of a customer's water system where there are actual or potential cross connections that cannot be effectively eliminated or controlled at the point of the cross connection.

(N) HAZARD, DEGREE OF: The term is derived from an evaluation of the potential risk to public health and the adverse effect of the hazard upon the potable water system.

(O) HAZARD--HEALTH: A cross connection or potential cross connection involving any substance that could, if introduced in the potable water supply, cause death, illness, spread disease, or have a high probability of causing such effects.

(P) HAZARD--PLUMBING: A plumbing-type cross connection in a consumer's potable water system that has not been properly protected by an approved air gap or an approved backflow-prevention assembly.

(Q) HAZARD--NONHEALTH: A cross connection or potential cross connection involving any substance that generally would not be a health hazard but would constitute a nuisance or be aesthetically objectionable, if introduced into the potable water supply.

(R) HAZARD--SYSTEM: An actual or potential threat of severe damage to the physical properties of the public potable water system or the consumer's potable water system or of a pollution or contamination that would have a protracted effect on the quality of the potable water in the system.

(S) INDUSTRIAL FLUIDS SYSTEM: Any system containing a fluid or solution that may be chemically, biologically, or otherwise contaminated or polluted in a form or concentration, such as would constitute a health, system, pollution, or plumbing hazard, if introduced into an approved water supply. This may include, but not be limited to: polluted or contaminated waters; all types of process waters and used waters originating from the public potable water system that may have deteriorated in sanitary quality; chemicals in fluid form; plating acids and alkalis; circulating cooling waters connected to an open cooling tower, and/or cooling waters that are chemically or biologically treated or stabilized with toxic substances; contaminated natural waters, such as wells, springs, streams, rivers, bays, harbors, seas, irrigation canals or systems, and so forth; oils, gases, glycerine, paraffins, caustic and acid solutions, and other liquid and gaseous fluids used in industrial or other purposes or fire-fighting purposes.

(T) POLLUTION: The presence of any foreign substance in water that tends to degrade its quality so as to constitute a nonhealth hazard or impair the usefulness of the water.

(U) WATER--POTABLE: Water that is safe for human consumption as described by the public health authority having jurisdiction.

(V) WATER--NONPOTABLE: Water that is not safe for human consumption or that is of questionable quality.

(W) SERVICE CONNECTION: The terminal end of a service connection from the public potable water system, that is, where the City loses jurisdiction and sanitary control over the water at its point of delivery to the customer's water system. If a meter is installed at the end of the service connection, then the service connection shall mean the downstream end of the meter. There should be no unprotected takeoffs from the service line ahead of any meter or backflow-prevention assembly located at the point of delivery to the customer's water system. Service connection shall also include water service connection from a fire hydrant and all other temporary or emergency water service connections from the public potable water system.

(X) WATER--USED: Any water supplied by a water purveyor from a public potable water system to a consumer's water system after it has passed through the point of delivery and is no longer under the sanitary control of the water purveyor.

*Section 3. CROSS CONNECTION PROHIBITED:* No person shall install or maintain any physical interconnection between the City water supply and any other source of water supply.

*Section 4. WHEN BACKFLOW PREVENTION DEVICES REQUIRED:* Backflow

prevention devices for protecting the City's water system shall be installed on all service connections to the premises where:

(A) There is an auxiliary water supply which is, or can be, connected to the potable water piping;

(B) There are any cross connections as the term is defined in Section 2., above;

(C) The nature and extent of any activity on the premises, or the materials used in connection with any activity on the premises, or materials stored on the premises, could contaminate or pollute the drinking water supply in any way;

(D) There is piping for conveying or containing liquids other than potable water, and where that piping is under pressure and is installed and operated in a manner which could cause a cross connection;

(E) There are internal cross connections that are not correctable, or intricate plumbing arrangements which make it impractical to ascertain whether or not cross connections exist;

(F) 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;

(G) There are fire sprinkler systems using non-potable piping;

(H) There is back-siphonage potential.

**Section 5. TYPE OF BACKFLOW ASSEMBLY REQUIRED:** The type of backflow prevention device required under this Ordinance shall be commensurate with the degree of hazard which exists:

(A) An approved air gap 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 vessel, or an approved reduced pressure backflow device assembly shall be installed where the substance which could backflow is hazardous to health, such as but not limited to: sewage treatment plants, sewage pumping stations, chemical manufacturing plants, plating plants, hospitals, mortuaries, car washes, medical clinics:

(B) An approved double check valve assembly shall be installed where the substance which could backflow is objectionable but does not pose an unreasonable risk to health.

(C) An approved double check valve assembly shall be the minimum protection for fire sprinkler systems using piping material that is not approved for potable water use and/or which does not provide for periodic flow through during each 24 hour period, unless a variance has been issued in writing. A reduced pressure assembly must be installed if any solution other than the potable water can be introduced into the sprinkler system.

**Section 6. DEVICES APPROVED BY OREGON DHS:** All backflow prevention devices

required under this Ordinance shall be of a type and model approved by the State of Oregon Department of Human Services or its successor.

*Section 7. RESPONSIBILITY:* The City Public Works Superintendent shall be responsible for the protection of the public potable water system from contamination and pollution due to the backflow of contaminants or pollutants through the water service connection. If, in the judgment of the Public Works Superintendent, an approved backflow prevention assembly as described in this Ordinance is necessary for the safety of the water system, the Public Works Superintendent or his designated agent shall give notice in writing to the customer that the installation of such an approved backflow prevention assembly at a specific location on the premises is required, and that such installation will be done by the City if not done by the customer by or before a date specified by the Public Works Superintendent or his designated agent.

*Section 8. INSTALLATION AT CUSTOMER'S EXPENSE:* The installation of an approved backflow prevention assembly as described in Section 7., above, shall be at the customer's expense, whether the installation is done by the customer or by the City.

*Section 9. OWNERSHIP OF BACKFLOW PREVENTION ASSEMBLY:* Upon installation, the backflow prevention assembly described in Section 7., above, shall become the property of the City, and the City shall assume responsibility for its testing, maintenance, repair and replacement in compliance with the regulations of the State of Oregon Department of Human Services or its successor, unless the customer specifically requests to retain ownership of the abovedescribed assembly, which request shall require the approval of the City Public Works Superintendent, which approval shall not be unreasonably withheld. If the customer retains ownership of the abovedescribed assembly, the testing, maintenance, repair and replacement thereof, in compliance with the requirements of the State of Oregon Department of Human Services or its successor, shall be the responsibility of the customer.

*Section 10. BACKFLOW PREVENTION DEVICE TESTING:*

(A) Backflow prevention assemblies shall be tested at least once per year. Where the Public Works Superintendent deems the hazard to be great enough, he may require tests at more frequent intervals. Backflow prevention assemblies shall be tested immediately after installation and after they are moved. Backflow prevention assemblies shall also be tested following a backflow incident, or after an approved air gap is re-plumbed. Tests shall be performed by certified testers in conformance with procedures established by the Foundation for Cross Connection Control and Hydraulic Research. All testers shall possess a valid certification issued by the State of Oregon Department of Human Services or its successor.

(B) Where the City owns the backflow prevention assembly, the Public Works Superintendent shall have the assembly tested at the City's expense in accordance with subsection (A), above. Where the assembly is not owned by the City, the water user or owner of the premises shall have the device tested in accordance with subsection (A), above, and tests, inspections, repairs and maintenance shall be at the expense of the water user or owner of the premises.

**Section 11. EXISTING DEVICES:** Backflow prevention assemblies installed before the effective date of this Ordinance that were approved at the time of installation but are not currently approved shall be permitted to remain in service provided the assemblies are not moved, the piping systems are not significantly remodeled or modified, the assemblies are properly maintained, and they are commensurate with the degree of hazard they were installed to protect. The assemblies must be tested at least annually and perform satisfactorily.

**Section 12. REPAIRS:** Approved backflow prevention assemblies found not to be functioning properly shall be repaired, replaced or re-plumbed as required by the Public Works Superintendent. Where the City owns the backflow prevention assembly, the assembly shall be repaired, replaced, or re-plumbed by the City at the City's expense; where the assembly is not owned by the City, the repair, replacement, or re-plumbing shall be at the expense of the water user or owner of the premises.;

**Section 13. ACCESS:** A customer's water system shall be open for inspection at all reasonable times to the Public Works Superintendent and his designated representatives to determine whether cross connections or other structural or sanitary hazards exist. When such a condition becomes known, the Public Works Superintendent shall deny or immediately discontinue service to the premises by providing for a physical break in the service line until the customer has corrected the condition in conformance with this Ordinance.

**Section 14. MOBILE SYSTEMS:** Any mobile apparatus which uses the City water system or water from any premises within the City system must obtain a permit from the City Public Works Superintendent or his designee.

**Section 15. DISCONTINUANCE OF SERVICE FOR NONCOMPLIANCE:** Water service to a premises shall be discontinued at the direction of the Public Works Superintendent for:

- (A) Failure to remove or eliminate an existing unprotected or potential cross connection, after the same has been identified by the Public works Superintendent and its correction ordered;
- (B) Failure to install a required approved backflow prevention assembly within ten (10) days of being ordered to do by the Public Works Superintendent;
- (C) Failure to maintain an approved backflow prevention assembly; or
- (D) Failure to conduct the required testing of an approved backflow prevention assembly, where the assembly is not owned by the City.

**Section 16. PRIOR ORDINANCE REPEALED:** Ordinance No. 416 (enacted 8/14/89, eff. 9/14/89) is hereby repealed.

**Section 17. SEVERABILITY:** The provisions of this Ordinance are severable. If any provision or part thereof shall be held invalid or unconstitutional or inapplicable to any persons or circumstances, such invalidity, unconstitutionality or inapplicability shall not affect or impair the

remaining provisions of this Ordinance.

*Section 18. EFFECTIVE DATE:* This ordinance shall take effect 30 days following its passage by the City Council and approval by the Mayor.

PASSED AND ADOPTED this \_\_\_\_ day of \_\_\_\_\_, 2005, by the following vote:

AYES: \_\_\_\_\_ NAYS: \_\_\_\_\_ ABSTENTIONS: \_\_\_\_\_

--and the Mayor having declared the ordinance enacted by a \_\_\_\_\_ vote, became effective on [date] \_\_\_\_\_.

APPROVED by the Mayor this \_\_\_\_ day of \_\_\_\_\_, 2005.

\_\_\_\_\_  
Deborah Clark, Mayor

ATTEST:

\_\_\_\_\_  
Jennean Lowery, City Recorder