41-00699

ORDINANCE NO. 689

AN ORDINANCE FOR THE CONTROL OF BACKFLOW AND CROSS-CONNECTIONS; AND DECLARING AN EMERGENCY.

The Common Council of the City of Reedsport ordains as follows:

Section 1. CROSS-CONNECTION CONTROL - GENERAL POLICY

1.1 Purpose. The purpose of this Ordinance is:

1.1.1 To protect the public potable water supply of Reedsport from the possibility of contamination or pollution by isolating within the customer's internal distribution system(s) or the customer's private water system(s) such contaminants or pollutants which could backflow into the public water system; and

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

1.1.3 To provide for the maintenance of a continuing Program of Cross-Connection Control which will systematically and effectively prevent the contamination or pollution of all potable water systems.

1.2 Responsibility. The Reedsport City Manager shall be responsible for the protection of the public potable water distribution system from contamination or pollution due to the backflow of contaminants or pollutants through the water service connection. If, in the judgment of the City Manager, an approved backflow prevention device is required at the customer's water service connection, or within the customer's private water system for the safety of the water system, the City Manager, or the City Manager's designated agent, shall give notice in writing to said customer to install such an approved backflow prevention device(s) at specific location(s) on the customer's premises. The customer shall immediately install such approved device(s) at the customer's own expense; and, failure, refusal or inability on the part of the customer to install, have tested and maintain said device(s) at the customer's own expense shall constitute a ground for discontinuing water service to the premises until such requirements have been satisfactorily met.

Section 2. DEFINITIONS

2.1 City Manager. The City Manager of Reedsport is in charge of the Water Department of the City of Reedsport and is vested with the authority and responsibility for the implementation of an effective cross-connection control program and for the enforcement of the provisions of this Ordinance.

2.2 Approved. Accepted by the City Manager as meeting an applicable specification stated or cited in this Ordinance, or as suitable for the proposed use.

2.3 Auxiliary Water Supply. Any water supply on or available to the premises other than the City's approved public water supply. These auxiliary waters may include water from another purveyor's public potable water supply or any nature source(s) such as a well, spring, river, stream, harbor, etc., or "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 water purveyor does not have sanitary control.

2.4 Backflow. The reversal of the normal flow of water caused by either back-pressure or back-siphonage.

2.5 Back-pressure. The flow of water or other liquids, mixtures or substances under pressure into the distribution pipes of a potable water supply system from any source or sources other than the intended source.

2.6 Back-siphonage. The flow of water or other liquids, mixtures or substances into the distribution pipes of a potable water supply system from any source other than its intended source caused by the sudden reduction of pressure in the potable water supply system.

2.7 Backflow Preventer. A device or means designed to prevent backflow.

2.7.1 Air-Gap. The unobstructed vertical distance through the free atmosphere between the lowest opening from any pipe or faucet supplying water to a tank, plumbing fixture, or other device and the flood level rim of said vessel. An approved air-gap shall be at least double the diameter of the supply pipe, measured vertically, above the top of the overflow rim of the vessel; and in no case less than one inch.

2.7.2 Reduced Pressure Principle Device. An assembly of two independently acting approved check valves together with a hydraulically operating, mechanically independent pressure relief valve located between the check valves and at the same time below the first check valve. The unit shall include properly located test cocks and tightly closing shut-off valves at each end of the assembly. The entire assembly shall meet the design and performance specifications as determined by a laboratory and a field evaluation program resulting in an approval by a recognized and approved testing agency for backflow prevention assemblies. The assembly shall operate to maintain the pressure in the zone between the two check valves at an acceptable level less than the pressure on the public water supply side of the device. At cessation of normal flow the pressure between the two check valves shall be less than the pressure on the public water supply side of the device. In case of leakage of

either of the check valves the differential relief valve shall operate to maintain the reduced pressure in the zone between the check valves by discharging to the atmosphere. When the inlet pressure is two pounds per square inch or less, the relief valve shall open to the atmosphere. To be approved these devices must be readily accessible for in-line testing and maintenance and be installed in a location where no part of the device will be submerged.

2.7.3 Double Check Valve Assembly. An assembly of two independently operating approved check valves with tightly closing shut-off valves on each end of the check valves, plus properly located test cocks for the testing of each check valve. The entire assembly shall meet the design and performance specifications as determined by a laboratory and field evaluation program resulting in an approval by a recognized and approved testing agency for backflow prevention assemblies. To be approved these devices must be readily accessible for in-line testing and maintenance.

2.8 Contamination. Means an impairment of the quality of the potable water by sewage, industrial fluids or waste liquids, compounds or other materials to a degree which creates an actual or potential hazard to the public health through poisoning or through the spread of disease.

2.9 Cross-Connection. Any physical connection or arrangement of piping or fixtures between two otherwise separate piping systems one of which contains potable water and the other non-potable water or industrial fluids of questionable safety, through which, or because of which, backflow may occur into the potable water system. This would include any temporary connections, such as swing connections, removable sections, fourway plug valves, spools, dummy sections of pipe, swivel or change-over devices or sliding multiport tube.

2.10 Cross-Connections - Controlled. A connection between a potable water system and a non-potable water system with an approved backflow prevention device properly installed and maintained so that it will continuously afford the protection commensurate with the degree of hazard.

2.11 Cross-Connection Control by Containment. The installation of an approved backflow prevention device 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 device on the service line leading to and supplying a portion of a customer's water system where there are actual or potential cross-connections which cannot be effectively eliminated or controlled at the point of the cross-connection.

2.12 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.

2.12.1 Hazard - Health. Any condition, device or practice in the water supply system and its operation which could create, or in the judgment of the City Manager, may create a danger to the health and well-being of the water consumer.

2.12.2 Hazard - Plumbing. A plumbing type cross-connection in a consumer's potable water system that has not been properly protected by an approved airgap or approved backflow prevention device.

2.12.3 Hazard - Pollutional. An actual or potential threat to the physical properties of the water system or to the potability of the public or the consumer's potable water system but which would constitute a nuisance or be aesthetically objectionable or could cause damage to the system or its appurtenances, but would not be dangerous to health.

2.12.4 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 which would have a protracted effect on the quality of the potable water in the system.

2.13 Industrial Fluids System. Any system containing a fluid or solution which may be chemically, biologically or otherwise contaminated or polluted in a form or concentration such as would constitute a health, system, pollutional 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 which may have deteriorated in sanitary quality; chemicals in fluid form; plating acids and alkalies, circulating cooling waters connected to an open cooling tower and/or cooling towers that are chemically or biologically treated or stabilized with toxic substances; contaminated natural waters such as from wells, springs, streams, rivers, bays, harbors, seas, irrigation canals or systems, etc.,; oils, gases, glycerine, paraffins, caustic and acid solutions and other liquid and gaseous fluids used in industrial or other purposes or for fire-fighting purposes.

2.14 Pollution. The presence of any foreign substance (organic, inorganic, or biological) in water which tends to degrade its quality so as to constitute a hazard or impair the usefulness or quality of the water to a degree which does not create an actual hazard to the public health but which does adversely and unreasonably affect such waters of domestic use.

2.15 Water - Potable. Any water which, according to recognized standards, is safe for human consumption.

2.16 Water - Nonpotable. Water which is not safe for human consumption or which is of questionable potability.

2.17 Water - Service Connection. The terminal end of a service connection from the public potable water system, i.e., 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 device 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.

2.18 Water - Used. Any water supplied by the City 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 City.

Section 3. REQUIREMENTS

3.1 Water System

3.1.1 The water system shall be considered as made up of two parts: The City System and the Customer System.

3.1.2 City system shall consist of the source facilities and the distribution system; and shall include all those facilities of the water system under the complete control of the utility, up to the point where the customer's system begins.

3.1.3 The source facilities shall include all components of the facilities utilized in the production, treatment, storage, and delivery of water to the distribution system.

3.1.4 The distribution system shall include the network of conduits used for the delivery of water from the source to the customer's system.

3.1.5 The customer's system shall include those parts of the facilities beyond the termination of the utility distribution system which are utilized in conveying utility-delivered domestic water to points of use and shall generally begin from the downstream side of the water shutoff or meter serving the customer's property or, in the absence of either, at the property line.

3.2 Policy

3.2.1 No water service connection to any premises shall be installed or maintained by the City unless the water supply is protected as required by State laws and regulation and this Ordinance. Service of water to any premises shall be discontinued by the City if a backflow prevention device required by the Ordinance is not installed, tested and maintained, or if it is found that a backflow prevention device has been removed, by-passed, or if an unprotected cross-connection exists on the premises. Service will not be restored until such conditions or defects are corrected.

3.2.2 The customer's system should be open for inspection at all reasonable times to authorized representatives of the City of Reedsport to determine whether cross-connections or other structural or sanitary hazards, including violations of these regulations, exist. When such a condition becomes known, the City Manager 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(s) in conformance with State and City statutes relating to plumbing and water supplies and the regulation adopted pursuant thereto.

3.2.3 An approved backflow prevention device shall also be installed on each service line to a customer's water system at or near the property line or immediately inside the building being served; but, in all cases, before the first branch line leading off the service line wherever the following conditions exist:

3.2.3.a In the case of premises having an auxiliary water supply which is not or may not be of safe bacteriological or chemical quality and which is not acceptable as an additional source by the City, the public water system shall be protected against backflow from the premises by installing an approved backflow prevention device in the service line appropriate to the degree of hazard.

3.2.3.b In the case of premises on which any industrial fluids or any other objectionable substance is handled in such a fashion as to create an actual or potential hazard to the public water system, the public system shall be protected against backflow from the premises by installing an approved backflow prevention device in the service line appropriate to the degree of hazard. This shall include the handling of process waters and waters originating from the utility system which have been subject to deterioration in quality.

3.2.3.c In the case of premises having (1) internal cross-connections that cannot be permanently corrected and controlled, or (2) intricate plumbing and piping arrangements or where entry to all portions of the premises is not readily accessible

for inspection purposes, making it impracticable or impossible to ascertain whether or not dangerous cross-connections exist, the public water system shall be protected against backflow from the premises by installing an approved backflow prevention device in the service line.

3.2.4 The type of protective device required under subsections 3.2.3.a, b and c shall depend upon the degree of hazard which exists as follows:

3.2.4.a In the case of any premises where there is an auxiliary water supply as stated in subsection 3.2.3.a of this section and it is not subject to any of the following rules, the public water system shall be protected by an approved air-gap separation or an approved reduced pressure principle backflow prevention device.

3.2.4.b In the case of any premises where there is water or substance that would be objectionable but not hazardous to health, if introduced into the public water system, the public water system shall be protected by an approved double check valve assembly.

3.2.4.c In the case of any premises where there is any material dangerous to health which is handled in such a fashion as to create an actual or potential hazard to the public water system, the public water system shall be protected by an approved air-gap separation or an approved reduced pressure principle backflow prevention device. Examples of premises where these conditions will exist include sewage treatment plants, sewage pumping stations, chemical manufacturing plants, hospitals, mortuaries and plating plants.

3.2.4.d In the case of any premises where there are "uncontrolled" cross-connections, either actual or potential, the public water system shall be protected by an approved air-gap separation or an approved reduced pressure principle backflow prevention device at the service connection.

3.2.4.e In the case of any premises where, because of security requirements or other prohibitions or restrictions, it is impossible or impractical to make a complete in-plan cross-connection survey, the public water system shall be protected against backflow from the premises by either an approved air-gap separation or an approved reduced pressure principle backflow prevention device on each service to the premises.

3.2.5 Any backflow prevention device required herein shall be a model and size approved by the City. The term "Approved Backflow Prevention Device" shall mean a device that has been manufactured

in full conformance with the standards established by the American Water Works Association entitled:

AWWA C506-78 Standards for Reduced Pressure Principle and Double Check Valve Backflow Prevention Devices;

and, have met completely the laboratory and field performance specifications of the Foundation for Cross-Connection Control and Hydraulic Research of the University of Southern California established by

Specifications of Backflow Prevention Devices #69-2 dated March 1969 or the most current issue.

Said AWWA and FCCC&HR standards and specifications are hereby adopted by the City of Reedsport. Final approval shall be evidenced by a "Certificate of Approval" issued by an approved testing laboratory certifying full compliance with said AWWA standards and FCCC&HR specifications.

The following testing laboratory is hereby qualified by the City of Reedsport to test and certify backflow preventers:

Foundation for Cross-Connection
Control & Hydraulic Research
University of Southern California
University Park
Los Angeles, California 90007

Testing laboratories other than the laboratory listed above will be added to an approved list as they are qualified by the City.

Backflow preventers which may be subjected to back pressure or back siphonage that have been fully tested and have been granted a Certificate of Approval by said qualified laboratory and are listed on the laboratory's current list of "Approved Backflow Prevention Devices" may be used without further test or qualification.

3.2.6 It shall be the duty of the customer-user at any premises where backflow prevention devices are installed to have certified inspections and operational tests made at least once per year. In those instances where the City Manager deems the hazard to be great enough the City Manager may require certified inspections at more frequent intervals. These inspections and tests shall be at the expense of the water user and shall be performed by the device manufacturer's representative, City personnel or by a certified tester approved by the Oregon State Health Division. It shall be the duty of the City Manager to see that these tests are made in a timely manner. The customer-user shall notify the City Manager in advance when the tests are to be undertaken so that the City Manager

or the City Manager's representative may witness the tests if so desired. These devices shall be repaired, overhauled or replaced at the expense of the customer-user whenever said devices are found to be defective. Records of such tests, repairs and overhaul shall be kept and made available to the City Manager for review or copying.

3.2.7 At the customer's request the City will perform all tests and necessary repairs on a time and material basis.

3.2.8 All presently installed backflow prevention devices which do not meet the requirements of this section but were approved devices for the purposes described herein at the time of installation and which have been properly maintained, shall, except for the inspection and maintenance requirements under subsection 3.2.6, be excluded from the requirements of these rules so long as the City Manager is assured that they will satisfactorily protect the utility system. Whenever the existing device is moved from the present location or requires more than minimum maintenance or when the City Manager finds that the maintenance constitutes a hazard to health, the unit shall be replaced by an approved backflow prevention device meeting the requirements of this section.

Section 4. COSTS

The costs incurred to install, test and maintain any device required under this Ordinance, and to disconnect or reconnect the customer to the City water system, shall be solely the customer's responsibility and the City can withhold water service to any customer until all costs owing to City have been paid in full.

Section 5. SEVERABILITY

The provisions of this Ordinance are severable. If a section, sentence, clause or phrase of this Ordinance is adjudged by a Court of competent jurisdiction to be invalid, the decision shall not affect the validity of the remaining portions of this Ordinance.

Section 6. EMERGENCY

An emergency is hereby declared to exist and it is declared to be necessary for the immediate preservation of the peace, health and safety of the citizens of the City of Reedsport that this Ordinance be in full force and effect immediately upon its passage and approval.

PASSED by the Council and approved by the Mayor May 6, 1985.