

4100201

COBURG / PIONEER VALLEY ESTATES

ORDINANCE NO. A-169

AN ORDINANCE FOR THE CONTROL OF BACKFLOW AND CROSS-CONNECTIONS; REPEALING CONFLICTING ORDINANCES; AND DECLARING AN EMERGENCY TO EXIST.

THE CITY OF COBURG ORDAINS AS FOLLOWS:

1. The attached document consisting of eight (8) typewritten pages numbered 110 through 117 and entitled "An Ordinance For The Control of Backflow And Cross-Connections" is incorporated herein by this reference and hereby adopted as an ordinance of the City of Coburg, subject to the following:
 - A. Each reference to "(City, County or State)" and "(Water or Health agency name)" is hereby deleted and substituted therefor shall be "City of Coburg."
 - B. Each reference to "(Water Commissioner or State Health Official)" and each reference to "(Water Commissioner or Health Official)" or the like is hereby deleted and substituted therefor shall be "public works supervisor."
 - C. In Section 3.2.1 of the attached document the phrase "(name of legal document)" that appears twice is hereby deleted in both places and substituted therefor shall be "ordinance."
 - D. The footnote at the end of page 116 is hereby deleted in its entirety.
- 2.1 All sections or subsections of other City ordinances that conflict with a section or subsection of this ordinance are hereby repealed to the extent of such conflict, but all such ordinances shall otherwise remain in full force and effect.
- 2.2 The sections and subsections of this ordinance are severable. If any section or subsection of this ordinance shall be determined to be legally invalid and unenforceable, then such a determination shall affect only the section(s) or subsection(s) found to be legally invalid and unenforceable, and the remaining sections and subsections of this ordinance shall remain in full force and effect.
- 2.3 Whereas the maintenance of a potable water supply is critical to the health, safety and general welfare of the citizens of the City of Coburg and whereas this ordinance is intended to help maintain a potable water supply for the citizens of the City of Coburg, an emergency is hereby

declared to exist, and this ordinance shall take effect immediately upon its passage by the council and approval by the Mayor.

This ordinance was read once in full and once by title at the September 26, 1989 regular meeting of the Coburg City Council, whereupon it was put to a vote. The vote of the council was:

Yes: 5

No: 0

Abstentions: 0

SIGNED AND APPROVED this 26th day of September, 1989.

Carol Heinkel
Carol Heinkel, Mayor

Attest:

Diane Williams
Diane Williams, City Recorder

AN ORDINANCE
for the
CONTROL OF BACKFLOW AND CROSS-CONNECTIONS

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 (City, County or State) from the possibility of contamination or pollution by isolating within the customer's internal distribution system(s) or the consumer's private water system(s) such contaminants or pollutants which could backflow into the public water systems; and,

1.1.2 To promote the elimination or control of existing cross-connections, actual or potential, between the consumer's in-plant potable water system(s) and non-potable water system(s), 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 (*Water Commissioner or State Health Official*) 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 judgement of said (*Water Commissioner or Health Official*) an approved backflow prevention assembly 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 (*Water Commissioner or Health Official*) or his designated agent shall give notice in writing to said customer to install such an approved backflow prevention assembly(s) at specific location(s) on his premises. The consumer shall immediately install such approved assembly(s) at the consumers own expense; and, failure, refusal or inability on the part of the customer to install, have tested and maintain said assembly(s) shall constitute a ground for discontinuing water service to the premises until such requirements have been satisfactorily met.

Section 2. DEFINITIONS

2.1 Water Commissioner or Health Official. The (*Commissioner or Health Official*) in charge of the (*Water Department or Health Department*) of the (*City, County or*

State) is invested 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 (*Commissioner or Health Official*) 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 purveyor's approved public water supply will be considered as an auxiliary water supply. These 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, 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 backsiphonage.
- 2.5 Backpressure. 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 Backsiphonage. The flow of water or other liquids, mixtures or substances into the distribution pipes of a potable water supply from any source other than its intended source caused by the reduction of pressure in the potable water supply system.
- 2.7 Backflow Preventer. An assembly 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 overflow rim of the vessel; and in no case less than one inch.
 - 2.7.2 Reduced Pressure Principle Assembly. An assembly of two independently acting approved check valves together with a hydraulically operating, mechanically independent differential pressure relief valve located between the check valves and at the same time below the first check valve. The unit shall include properly located resilient seated test cocks and resilient seated 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 (*agency*) 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 assembly. At cessation of a normal flow the pressure between the two check valves shall be less than the pressure on the public water supply side of the assembly. 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 assemblies must be readily accessible for in-line testing and maintenance and be installed in location where no part of the assembly will be submerged.

- 2.7.3 Double Check Valve Assembly. An assembly of two independently operating approved check valves with resilient seated shut-off valves on each end of the check valves, plus properly located resilient seated 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 recognized and (*agency*) approved testing agency for backflow prevention assemblies. To be approved these assemblies 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, four way plug valves, spools, dummy section 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 assembly 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 assembly at the water service connection to any customer's premises where it is physically and economically infeasible 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 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 judgement of the (*Commissioner of Health Official*), 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 air-gap or approved backflow prevention assembly.
- 2.12.3 Hazard – Pollutational. 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 affect 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, pollutational 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 alkalines, 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 well, 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. Means 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 for 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 Water Purveyor 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 any 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.

- 2.18 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. REQUIREMENTS

3.1 Water System

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

3.2 Policy

- 3.2.1 No water service connection to any premises shall be installed or maintained by the Water Purveyor unless the water supply is protected as required by State laws and regulations and this (*name of legal document*). Service of water to any premises shall be discontinued by the Water Purveyor if a backflow prevention assembly required by this (*name of legal document*) is not installed, tested and maintained, or if it is found that a backflow prevention assembly 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 (*Water or Health agency name*) to determine whether cross-connections or other structural or sanitary hazards, including violations of these regulations, exist. When such a condition becomes known, the (*Water Commissioner or Health Officer*) 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 the State and City statutes relating to plumbing and water supplies and the regulations adopted pursuant thereto.
- 3.2.3 An approved backflow prevention assembly 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 (*Water Commissioner or Health Authority*), the public water system shall be protected against backflow from the premises by installing an approved backflow prevention assembly 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 assembly 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-connection that cannot be permanently corrected or 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 assembly in the service line.
- 3.2.4 The type of protective assembly required under subsections 3.2.3a, 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 assembly.
 - 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 assembly. 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 assembly 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-plant 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 assembly on each service to the premises.
- 3.2.5 Any backflow prevention assembly required herein shall be a model and size approved by the (*Water Commissioner or Health Official*). The term "Approved Backflow Prevention Assembly" shall mean an assembly that has been manufactured in full conformance with the standards established by the American Water Works Association entitled:

* AWWA C506-84 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 Assemblies – Section 10 of the most current issue of the MANUAL OF CROSS-CONNECTION CONTROL.

Said AWWA and FCCC&HR standards and specifications have been adopted by the (*Water Commissioner or Health Official*). Final approval shall be evidenced by a "Certificate of Approval" issued by an approved testing laboratory certifying full compliance with the said AWWA standards and FCCC&HR specifications.

The following testing laboratory has been qualified by the (*Water Commissioner or Health Officer*) to test and certified backflow preventers:

Foundation for Cross-Connection Control
and Hydraulic Research
University of Southern California
University Park
Los Angeles, California 90089

Testing laboratories other than the laboratory listed above will be added to an approved list as they are qualified by the (*Water Commissioner or Health Officer*).

** Editors' Note: At the time of publication the C506 Standard is being separated into two distinct Standards, one for RP's and one for DC's. New designations are not known.*

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