Done 3-7

411-00318

ORDINANCE 90-648

Introduced by Councillor _____

AN ORDINANCE REGULATING CONTROL OF BACKFLOW AND CROSS CONNECTIONS TO PROTECT THE PUBLIC POTABLE WATER SUPPLY, PROMOTE ELIMINATION OR CONTROL OF EXISTING CROSS CONNECTIONS AND PROVIDE FOR MAINTENANCE OF CONTINUING PROGRAM OF CROSS CONNECTION CONTROL.

The City of Gearhart does ordain 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 the City of Gearhart from the possibility of contamination or pollution by isolating within its customers' internal distribution system(s) or its customers' private water system(s) such contaminants or pollutants which could backflow or back-siphon into the public water supply system; and

1.1.2 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 Public Works Director shall be responsible for the protection of the public potable water distribution system from contamination or pollution due to the backflow or back-siphonage of contaminants or pollutants through the water service connection. If, in the judgment of said Public Works director, an approved backflow prevention device is required, at the city's water service connection to any customer's premises, for the safety of the water system, the Public Works Director or his designated agent shall give notice in writing to said customer to install such an approved backflow prevention device at each service connection to his premises. The customer shall immediately install such approved device or devices at his own expense; and failure, refusal or inability on the part of the customer to install said device or devices immediately shall constitute a ground for discontinuing water service to the premises until such device or devices have been properly installed.

Section 2. Definitions.

2.1 **Public Works Director.** The Public Works Director in charge of the Water Department of the City of Gearhart 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 **Approve.** Accepted by the Public Works Directors 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 potable 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 polluted or contaminated 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 flow of water or other liquids, mixtures or substances under pressure into the distributing 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.

2.5 **Back-Siphonage.** The flow of water or other liquids, mixtures or substances into the distributing 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.

2.6 **Backflow Preventer.** A device or means designated to prevent backflow or back-siphonage.

2.6.1 **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 rim of the vessel; and, in no case less than one inch. When an air-gap is used at the service connection to prevent the contamination or pollution of the public potable water system, an emergency by-pass shall be installed around the air-gap system and an approved reduced pressure principle device shall be installed in the by-pass system.

2.6.2 **Reduced Pressure Principle Device.** An assembly of two independently operating approved check valves with an automatically operating differential relief valve between the two check valves, tightly closing shut-off valves on either side of the

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check valves, plus properly located test cocks for the testing of the check and relief valves. The entire assembly shall meet the design and performance specifications and approval of a recognized and City approved testing agency for backflow prevention assemblies. The device shall operate to maintain the pressure in the zone between the two check valves at a 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 valvae 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 maintenance and testing and be installed in a location where no part of the device will be submerged.

2.6.3 Double Check Valve Assembly. An assembly of two independently operating approved check valves with tightly closing shut-off valves on each side 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 and approval of a recognized and City approved testing agency for backflow prevention devices. To be approved these devices must be readily accessible for in-line maintenance and testing.

2.7 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 hazard to the public health through poisoning or through the spread of disease.

2.8 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 or back-siphonage may occur into the potable water system. A water service connection between a public potable water distribution system and a customer's water distribution system which is cross connected to a contaminated fixture, industrial fluid system or with a potentially contaminated supply or auxiliary water system, constitutes one type of cross connection. Other types of cross connections include connectors such as swing connections, removable sections, four-way plug valves, spools, dummy sections of pipe, swivel or change-over devices, sliding multiport tube, solid connections, etc.

2.9 Cross Connections - Controlled. A connection between a potable water system and a non-potable water system with an approved backflow prevention device properly installed that will

continuously afford the protection commensurate with the degree of hazard.

2.10 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 infeasible to find an 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 supply 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 cross connection.

2.11 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.

2.11.1 Hazard - Health. Any condition, device, or practice in the water supply system and its operation which could create, or in the judgment of the Public Works Director, may create a danger to the health and well-being of the water consumer. An example of a health hazard is a structural defect, including cross-connections, in a water supply system.

2.11.2 Hazard - Plumbing. A plumbing type cross connection in a consumer's potable water system that has not been properly protected by a vacuum breaker, air-gap separation or backflow prevention device. Unprotected plumbing type cross-connections are considered to be a health hazard.

2.11.3 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 could constitute a nuisance or be aesthetically objectionable or could cause damage to the system or its appurtenances, but would not be dangerous to health.

2.11.4 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.

2.12 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 deteriorate din sanitary quality; chemicals in fluid form, plating acids and alkalies, circulated 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, gasses, glycerine, paraffins, caustic and acid solutions and other liquid and gaseous fluids used in industrial or other purposes or for fire-fighting purposes.

2.13 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 unreasonable affect such waters for domestic use.

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

2.15 Water - Nonpotable. Any water which is not safe for human consumption or which is of questionable potability.

2.16 Water - Service connections. 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 a 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 deliver 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.

2.17 Water - Used. Any water supplied by a Water Purveyor from a public potable water system to a consumer's waters system after it has passed through the point of delivery and is no longer under the sanitary control of the Water Purveyor.

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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, including OAR 333-61-070, and this ordinance. Service of water to any premises shall be discontinued by the Water Purveyor if a backflow prevention device required by this 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 Public Works Department to determine whether cross connections or other structural or sanitary hazards, including violations of these regulations, exist. When such a condition becomes known, the Public Works Director 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 regulations 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:

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

37.5

(b) There is piping for conveying 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;

(c) There is intricate plumbing which makes it impractical to ascertain whether or not cross connections exist;

(d) There is backsiphonage potential.

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

(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 (RP) device shall be installed where the substance which could backflow is hazardous to health, e.g., 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 pressure vacuum breaker or an atmospheric vacuum breaker shall be installed where the substance which could backflow is objectionable but does not pose an unreasonable risk to health and where there is no possibility of back pressure in the downstream piping. A shutoff valve may be installed on the line downstream of a pressure vacuum breaker but shall not be installed downstream of an atmospheric vacuum breaker.

3.2.5 Any backflow prevention device required herein shall be of a type and model approved by the State of Oregon.

3.2.6 It shall be the duty of the customer-user at any premise where backflow prevention devices are installed to have certified inspections and operational tests made at least once per year. In those instances where the Public Works Director deems the hazard to be great enough he 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, by Public Works Department personnel, or by a certified tester approved by the Public Works Director. The Public Works Director shall maintain a current list of individuals who are certified. It shall be the duty of the Public Works Director to see that these timely tests are made. The customer-user shall notify the Public Works Director in advance when the tests are to be undertaken so that he or his 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. Copies of records of such tests, repairs and overhaul shall be mailed to the Public Works Director within three days of the test.

3.2.7 All presently installed backflow prevention devices which do not meet the requirements of this section but where 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 Public Works Director is assured that they will satisfactorily protect the utility system. Whenever the existing device is moved from the present location or reuqires more than minimum maintenance or when the Public Works Director finds that the maintenance constitutes a hazard to health, the unit shall be replaced by a backflow prevention device meeting the requirements of this section.

Section 4. Remedies.

4.1 Failure to comply with the provisions of these ordinances within seven (7) days of the postmark date of a notice of violation shall constitute sufficient cause for the City to seek the following remedies:

4.1.1 The City may shut off water and sewer services to the property.

4.1.2 The notice given by the City to the property owner informing him/her of the ordinance violation must contain the name of the owner of the property, the address of the property, and the date of the notice.

4.1.3 The property owner shall have the right to a hearing before the City Council to establish compliance with the ordinance. In the event the property owner delivers his written request for such a hearing prior to the shutting off of water and sewer service, then, service shall remain on until the

hearing is held and a written decision is made and mailed to the property owner.

Passed by the Common Council of the City of Gearhart this 11th day of July, 1990.

YEAS: 4

NAYS:

ABSENT:

ABSTAIN:

Signed and approved by the Mayor of the City of Gearhart this 11th day of July, 1990.

Candy Russo

Candy Russo, Mayor

ATTEST:

Bruce F Maltman

Bruce Maltman, Auditor