

ORDINANCE NO. 1250

AN ORDINANCE REQUIRING BACKFLOW PREVENTION
AND THE CONTROL OF CROSS-CONNECTION
IN THE CITY OF BANDON WATER SYSTEM

THE CITY OF BANDON 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 the City of Bandon 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), plumbing fixtures and industrial piping systems(s); 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. City of Bandon, and Customer;

- 1.2.1 The City of Bandon 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 of Bandon, 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 City of Bandon or its designated agent shall give notice in writing to said customer to install such an approved backflow prevention assembly(s) at specific locations) 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 of discontinuing water service to the premises until such requirements have been satisfactorily met.

- 1.2.2 The customer shall make his premises and water system reasonable available for inspection for cross-connection hazards by designated agent(s) of the City of Bandon;
- 1.2.3 The customer shall install required backflow prevention device(s) in accordance with the City of Bandon instructions at the customer's expense;
- 1.2.4 The customer shall maintain the device in good working order including required testing at the customers expense.

1.3 Authority. City of Bandon;

- 1.3.1 The City of Bandon shall have the authority ot inspect and classify all customer water system(s) according to cross-connection status at the City of Bandon's expense;

Assure that the proper backflow measures are installed and maintained by the customer;

Terminate water service for non-compliance with provisions of the ordinance.

Section 2. DEFINITIONS

- 2.1 Approved Device - a backflow preventer listed as approve by the USC Foundation For Cross Connection Control Research, the Oregon State health Division or approved in writing by the City of Bandon.

- 2.2 **Auxillary Water Supply** - any water supply that is or may be cross-connected to the domestic water supply system. Auxillary water supplies include, but are not limited to, private wells, ponds, lakes, springs, streams, used water or industrial fluids on or available to the property served, storage tanks, holding tanks, processing equipment, plumbing fixtures or any other vessel or piping system where the physical or chemical quality of the water contained is not under the direct supervision and control of the City of Bandon.
- 2.3 **Backflow** - the reversal of the normal flow of water caused by either backpressure or backsiphonage.
- 2.4 **Backpressure** - the flow of water or other liquids, mixtures or substances under pressure into the distribution pipes of the City of Bandon's potable water supply from any source other than the intended source.
- 2.5 **Backsiphonage** - the flow of water or other liquids, mixtures or substances into the distribution pipes of the City of Bandon's potable water supply from any source other than the intended source caused by the reduction of pressure in the potable water supply system.
- 2.6 **Backflow Preventer** - an assembly or means designed to prevent backflow.
- 2.6.1 **Air-Gap.** A physical break between a supply pipe and a receiving vessel. The air gap shall be at least twice the inside diameter of the supply pipe, measured vertically above the overflow rim of the vessel; but in no case less than one inch (1").
- 2.6.2 **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. To be approved these assemblies must be readily accessible for in-line testing, maintenance and be installed in a location where no part of the assembly will be submerged.
- 2.6.3 **Pressure Vacuum Breaker.** An assembly consisting of a spring loaded check valve (3" and larger consists of two), an independently operating air inlet valve with tightly closing shut-off valves on each end of the device, plus properly located test cocks for the testing of each check valve.

They are designed to protect against backsiphonage only.

- 2.6.4 **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 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. To be approved these assemblies must be readily accessible for in-line testing, maintenance and be installed in a location where no part of the assembly will be submerged.
- 2.6.5 **Vacuum Breakers.** An assembly consisting of an independently operating air inlet valve. They are effective against backsiphonage only and cannot be used where positive pressure can be developed on the downstream side of the device or where the device is subject to flooding.
- 2.7 **Contaminant** - any physical, chemical, biological, or radiological substance or matter in water which creates a actual or potential hazard. A contaminant may or may not create a health hazard.
- 2.8 **Cross-Connection** - an actual or potential connection, link or channel between the City of Bandon water supply system and a pipe or piping system used or intended to be used for some other purpose; or between the City of Bandon water supply system and a plumbing fixture, appliance, receptacle, vessel or other service; or a source other than the intended source of water supply whereby it may be possible for contaminated water or water of questionable or unsafe quality, or fluid substance other than potable water, to enter any part of the domestic water supply system.
- 2.9 **Degree of Hazard** - an evaluation of the potential risk to public health and the effect of the hazard upon the potable water system.
- 2.9.1 **Health Hazard.** Any condition or practice in the water system and its operation which could create, or may create a danger to the health of the water consumer.
- 2.9.2 **Plumbing Hazard.** 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.

2.9.3 **Pollutional Hazard.** 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 but would not be dangerous to health.

2.9.4 **System Hazard.** An actual or potential threat of damage to the physical properties of the public potable water system or to the consumer's potable water system or of a pollution or contamination which would have an effect on the quality of the potable water in the system.

2.10 **Non Potable Water** - water which is not safe for human consumption or which is of questionable potability.

2.11 **Potable Water** - any water which, according to recognized standards, is safe for human consumption.

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 Consumers 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 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 City of Bandon unless the water supply is protected as required by State laws and regulations, the current Manual of Cross-Connection Control and this ordinance. Service of water to any premises shall be discontinued by the City of Bandon if a backflow prevention assembly required by this ordinance 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 City of Bandon to determine whether cross-connections or other sanitary hazards, including violations of these regulations exists.

3.2.3 An approved backflow prevention assembly shall 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 Where an auxiliary water supply exists.

3.2.3.b Where any substance is handled under pressure in a manner that may permit its entry into the potable system. This includes process water and water originating from the potable system which may have deteriorated in quality.

3.2.3.c Where internal piping cross-connection exists that is not correctable or where an intricate plumbing arrangement makes it impractical to determine whether or not a cross-connection may exist.

3.2.3.d Where the customer's water system is not available for inspection.

3.3 Type of Backflow Prevention to be Required.

3.3.1 Where there is an auxiliary water supply as stated in Subsection 3.2.3.a or where the customer's system is not available for inspection

as is Subsection 3.2.3.d, the City of Bandon's system shall be protected by an approved air gap separation or an approved reduced pressure principle backflow prevention device.

3.3.2 Where a substance that would be objectionable but not hazardous to health, if introduced into the City of Bandon's distribution system, is handled in a manner which may permit entry into the potable water system, an approved double check valve assembly shall be installed.

3.3.3 Where a substance that would produce a health hazard, if introduced into the City of Bandon's distribution system, is handled in a manner which may permit entry into the potable water system, an approved air gap separation or an approved reduced pressure principle backflow preventer shall be installed.

3.3.4 Where there is a fire system one and one half (1 1/2") inches or more in size, the minimum protection required would be an approved double check valve assembly.

3.3.5 Where there is an underground irrigation system an approved atmospheric-type or pressure type vacuum breaker shall be installed where one or more of the following do not exist:

3.3.5.a The device may be subjected to positive back pressure;

3.3.5.b A chemical injection system is used in the customer's system;

3.3.5.c An auxiliary water supply exists.

3.3.6 Vacuum breakers must be approved as defined in Subsection 2.1.

3.4 Methods of installation.

3.4.1 Installation shall be in accordance with the City of Bandon's instructions and the current Accepted Procedure and Practice in Cross Connection Control Manual.

3.4.2 Backflow preventers shall be installed in the customer's service line between the meter and the first branch line or point of use, except that the City of Bandon shall allow isolation of a cross-connection within a customer's water system to provide protection for the remainder of the

customer system, as well as the City of Bandon's system.

- 3.4.3 Generally, backflow preventers shall be installed in a manner and location which provides ample space for access and testing. A pit or structure housing a device shall be drained to daylight. Additional directions for installation will be provided by the City of Bandon on a case-by-case basis.

3.5 Existing Backflow Preventers.

- 3.5.1 All backflow prevention devices presently installed which do not meet the requirements of this Ordinance but were approved devices for the purposes described herein at the time of installation and which have been properly maintained, shall, except for the requirements of Subsection 3.6, "Testing and Inspection," be exempt from the requirements of this Ordinance so long as they satisfactorily protect the water system. Whenever the existing device is moved or requires more than minimum maintenance or constitutes a health hazard, the device shall be replaced by a backflow preventer which meets the requirements of this Ordinance.

3.6 Testing and Inspection.

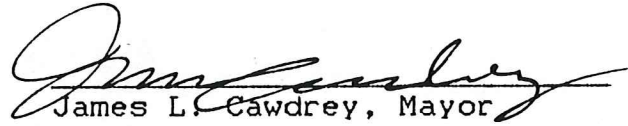
- 3.6.1 Backflow prevention devices shall be tested and inspected by persons certified as competent by the State of Oregon Health Division at least annually or whenever:
 - 3.6.1.a A device is moved or replaced;
 - 3.6.1.b A device requires maintenance;
 - 3.6.1.c A history of repeated failures indicates more frequent testing is necessary.
- 3.6.2 Customer water systems shall be subject to, and available for, inspection by authorized City of Bandon personnel upon request.

3.7 Failure To Comply With This Ordinance.

- 3.7.1 Failure to comply with the provisions of this Ordinance shall result in termination of water service until such time as the violation has been corrected.

PASSED to the second reading this 25th day of July, 1989.

ADOPTED by the Common Council and APPROVED by the Mayor of
the City of Bandon this 22nd day of August, 1989.


James L. Cawdrey, Mayor

ATTEST:



DENISE M. SKILLMAN, City Recorder