

ORIGINAL

ORDINANCE NO. 1116

AN ORDINANCE OF THE CITY OF REDMOND, WASHINGTON, CREATING A NEW CHAPTER 13.10 "CROSS-CONNECTION AND BACK FLOW PREVENTION" TO THE REDMOND MUNICIPAL CODE; ENACTING SECTION 13.10.010 PROVIDING DEFINITIONS; ENACTING SECTION 13.10.020 DECLARING CROSS-CONNECTIONS UNLAWFUL; ENACTING SECTION 13.10.030 REQUIRING THE INSTALLATION OF BACKFLOW PREVENTION DEVICES; ENACTING SECTION 13.10.040 ADOPTING CERTAIN STATE REGULATIONS AND SPECIFICATIONS BY REFERENCE; ENACTING SECTION 13.10.050 DECLARING AS PUBLIC NUISANCES VIOLATIONS OF THIS CHAPTER AND PROVIDING FOR ABATEMENT AND ENFORCEMENT PROCEDURES; ENACTING SECTION 13.10.060 AUTHORIZING INSPECTIONS; AND ENACTING SECTION 13.10.070 SETTING FORTH PENALTIES.

WHEREAS, the Redmond City Council finds it necessary in the interests of public health and safety to protect the water supply of the City of Redmond from contamination or pollution from potential cross-connections; to promote the elimination or control of existing or potential cross-connections; and to assure that approved backflow devices are installed where necessary, and

WHEREAS, the City Council finds that any cross-connection now existing or hereafter installed would seriously endanger the potability of the City of Redmond water supply thereby endangering the health and safety of the residents of the City of Redmond, now, therefore,

THE CITY COUNCIL OF THE CITY OF REDMOND, WASHINGTON, DO ORDAIN AS FOLLOWS:

Section 1. There is hereby added a new Chapter 13.10 to the Redmond Municipal Code to be entitled "Cross-connection and Backflow Prevention."

Section 2. A new section 13.10.010 is hereby added to the Redmond Municipal Code to read as follows:

13.10.010 DEFINITIONS

- A. "Backflow" means a flow, other than the intended direction of flow, of any foreign liquids, gases or substances into the distribution system of a public water supply.
- B. "Backflow prevention device" means a device approved by the State of Washington, Department

of Social and Health Services or such other state department as has jurisdiction over the subject matter and by the American Water Works Association, used to counteract back pressure or prevent back siphonage into the distribution system of a public water supply.

- C. "Cross-connection" means any physical arrangement whereby a public water supply is connected, directly or indirectly, with any other water supply system, sewer, drain, conduit, pool, storage reservoir, plumbing fixture or other device which contains or may contain contaminated water, sewage or other wastes or liquids of unknown or unsafe quality, which may be capable of imparting contamination to a public water supply as a result of backflow.

Section 3. A new section 13.10.020 is hereby added to the Redmond Municipal Code to read as follows:

13.10.020 CROSS-CONNECTIONS DECLARED UNLAWFUL

The installation, maintenance, or operation of a cross-connection, which, in the opinion of the Director of Public Works or his designee, will endanger the water quality of the potable water supply of the City of Redmond, is unlawful.

Section 4. A new section 13.10.030 is hereby added to the Redmond Municipal Code to read as follows:

13.10.030 BACKFLOW PREVENTION DEVICES TO BE INSTALLED

Backflow prevention devices, when required to be installed in the opinion of the Director of Public Works or his designated representative, shall be installed and maintained by the service customer on any service connection to the City of Redmond water supply system where the backflow prevention devices are necessary for the protection of the City of Redmond water supply.

Section 5. A new section 13.10.040 is hereby added to the Redmond Municipal Code to read as follows:

13.10.040 ADOPTION OF STATE REGULATIONS

Rules and regulations of the State Board of Health regarding public water supplies, WAC 248-54-820 through WAC 248-54-850, and the American Water Works Association, Pacific Northwest Section's Third Edition of "Accepted Procedure and Practice in Cross-Connection Manual" as they presently exist, and as they may from time to time, be amended in the future, are adopted by this reference as if set forth in full.

Section 6. A new section 13.10.050 is hereby added to the Redmond Municipal Code to read as follows:

13.10.050 ABATEMENT OF UNLAWFUL CROSS-CONNECTIONS AND INSTALLATION OF BACKFLOW PREVENTION DEVICES - PROCEDURES

Cross-connections declared in this chapter to be unlawful whether presently existing or hereinafter installed and/or services requiring backflow prevention devices pursuant to this chapter are public nuisances, and, in addition to any other provisions of this code or the ordinances of the City of Redmond on abatement of public nuisances, shall be subject to abatement in accordance with the following procedure:

- A. In the event that the Director of Public Works or his designee determines that a nuisance as herein provided does exist, written notice shall be sent to the person in whose name the water service is established under the records of the City of Redmond water division, or alternatively, a copy of such written notice shall be posted conspicuously on the premises served by the City of Redmond water division.
- B. The notice shall provide that the nuisance described herein shall be corrected within thirty days of the date the notice is mailed or posted on the premises or water service will be discontinued.
- C. In the event the nuisance is not abated within the prescribed time, water service to the premises shall be discontinued.
- D. In the event that the nuisance, in the opinion of the Director of Public Works, or his designated representative, presents an immediate danger of contamination to the public water supply, service from the city water supply system to the premises may be terminated without prior notice, provided, however, notice will be posted on the premises in the manner heretofore provided at the time the service is terminated.

Section 7. A new section 13.10.060 is hereby added to the Redmond Municipal Code to read as follows:

13.10.060 INSPECTIONS

The Director of Public Works, or his designee, upon showing proper identification shall be allowed access to all portions of the premises, including buildings and structures, to which water is supplied, at reasonable hours of the day and for the sole purpose of inspecting and determining compliance on such property with all provisions of this chapter. Water service may be refused or discontinued to any premises for failure to allow such necessary access and inspections.

Section 8. A new section 13.10.070 is hereby added to the Redmond Municipal Code to read as follows:

13.10.070 PENALTIES

In addition to the remedies set forth herein, any person found guilty of violating any of the provisions of this chapter shall be guilty of a misdemeanor and subject to the penalties as set forth in Section 1.01.110 of this code.

Section 9. The City Clerk is hereby directed to maintain at all times one copy of WAC 248-54-820 through WAC 248-54-850, a copy of which is marked as Exhibit A and attached hereto, and one copy of the American Water Works Association, Pacific Northwest Section's Third Edition of "Accepted Procedure and Practice in Cross-connection Manual," a copy of which is marked as Exhibit B and attached hereto, for public use and inspection during regular City business hours.

Section 10. If any section, sentence, clause, phrase or any provisions adopted by reference of this ordinance should be held to be invalid or unconstitutional by a court of competent jurisdiction, such invalidity or unconstitutionality shall not affect the validity or constitutionality of any other section, sentence, clause, phrase or any provisions adopted by reference of this ordinance.

Section 11. This ordinance shall be in full force and effect thirty (30) days after passage and publication by posting as provided by law.

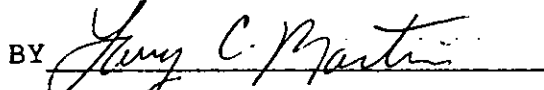
CITY OF REDMOND


MAYOR, CHRISTINE T. HIMES

ATTEST/AUTHENTICATED:


CITY CLERK, PAUL F. KUSAKABE

APPROVED AS TO FORM:
OFFICE OF THE CITY ATTORNEY:

BY 

FILED WITH THE CITY CLERK:	March 31, 1983
PASSED BY THE CITY COUNCIL:	April 5, 1983
SIGNED BY THE MAYOR:	April 5, 1983
POSTED:	April 7, 1983
EFFECTIVE DATE:	May 7, 1983

water system is subjecting any consumer or customer to conditions which may be deleterious to health. [Order 153, § 248-54-810, filed 12/5/77.]

WAC 248-54-820 Cross-connections. (1) Purpose - The purpose of this section is to protect the health of water consumers by the control of actual and/or potential cross-connections through two basic programs:

(a) Through proper installation and surveillance of backflow prevention devices on service lines leading to premises where cross-connections exist, or are likely to occur; and

(b) Through inspection and regulation of plumbing within premises to minimize danger of contamination of the water system on the premises or the public water system itself.

(2) Responsibility - The control of cross-connections requires cooperation between the customer, water purveyor, the health officer, and/or plumbing authority.

(a) The water purveyor has primary responsibility to prevent contamination of the public water system through cross-connections.

(b) The customer served and the municipal, county, or other authority having legal jurisdiction are jointly responsible for preventing contamination of the water system within the customer's premises.

(3) Implementation - A continuing and aggressive program of cross-connection investigation, surveillance and control shall be implemented according to good cross-connection control practice such as *Accepted Procedure and Practice in Cross-Connection Control Manual - Pacific Northwest Section - American Waterworks Association, Second Edition**, or any superceding edition, or other criteria acceptable to the department.

(4) These regulations are to be reasonably interpreted. It is their intent to recognize the varying degrees of hazard and to apply the principle that the degree of protection shall be commensurate with the degree of hazard. These regulations are not to be construed as prohibiting local authorities or water purveyors from establishing more stringent requirements.

*Copies of these standards may be obtained from the Department of Social and Health Services, Water Supply and Waste Section, MS LS-11, Olympia, WA 98504. [Order 153, § 248-54-820, filed 12/5/77.]

WAC 248-54-830 Cross-connection terms. (1) Air gap separation means 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 the receptacle, and shall be at least double the diameter of the supply pipe measured vertically above the flood level rim of the vessel. In no case shall the gap be less than one inch.

(2) Auxiliary supply means any water source or system, other than the public water system, that may be available in the building or premises.

(3) Backflow means the flow other than the intended direction of flow, of any foreign liquids, gases, or substances into the distribution system of a public water system.

(a) Back pressure means backflow caused by a pump, elevated tank, boiler, or other means that could create pressure within the system greater than the supply pressure.

(b) Back siphonage means a form of backflow due to a negative or subatmospheric pressure within a water system.

(4) Backflow prevention device, means a device to counteract back pressures or prevent back siphonage.

(5) Cross-connection means any physical arrangement whereby a public water system is connected, directly or indirectly, with any other nonpotable or water system, sewer, drain, conduit, pool, storage reservoir, plumbing fixture, or other device which contains, or may contain, contaminated water, sewage, or other waste or 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 devices, and other temporary or permanent devices through which, or because of which, backflow could occur are considered to be cross-connections.

(6) Double check valve assembly, means an assembly composed of two single, independently acting check valves, including tightly closing shutoff valves located at each end of the assembly and suitable connections for testing the watertightness of each check valve.

(7) Reduced pressure principle backflow prevention device means a device incorporating two or more check valves and an automatically operating differential relief valve located between the two checks, two shutoff valves, and equipped with necessary appurtenances for testing. The device shall operate to maintain the pressure in the zone between the two check valves, less than the pressure on the public water system side of the device. At cessation of normal flow, the pressure between the check valves shall be less than the supply pressure. In case of leakage of either check valve the differential relief valve shall operate to maintain this reduced pressure by discharging to the atmosphere. When the inlet pressure drops below two pounds per square inch (13.8 kPa), the relief valve shall open to the atmosphere thereby providing an atmospheric zone between the two check valves. [Order 153, § 248-54-830, filed 12/5/77.]

WAC 248-54-840 Cross-connections prohibited. (1) Except as provided in WAC 248-54-850, all cross-connections as defined in WAC 248-54-830(5) whether or not such cross-connections are controlled by automatic devices, such as check valves, or by hand operated mechanisms such as gate valves or stop cocks, are hereby prohibited.

(2) Failure on the part of persons, firms, or corporations to discontinue the use of any and all cross-connections and to physically separate such cross-

connections will be sufficient cause for the discontinuance of the public water service to the premises on which the cross-connection exists.

(3) The purveyor shall, in cooperation with the health officer or the local plumbing inspection authority, make periodic inspections of premises served by the water system to check for the presence of cross-connections. Any cross-connections found in such inspection shall be ordered removed by the responsible agency. If an immediate hazard to health is caused by the cross-connection, water service to the premises shall be discontinued until it is verified that the cross-connection has been removed. [Order 153, § 248-54-840, filed 12/5/77.]

WAC 248-54-850 Use of backflow prevention devices. (1) Backflow prevention devices shall be installed at the service connection or within any premises where in the judgment of the purveyor or the department the nature and extent of activities on the premises, or the materials used in connection with the activities, or materials stored on the premises would present an immediate and dangerous hazard to health should a cross-connection occur, even though such cross-connection does not exist at the time the backflow prevention device is required to be installed. This shall include but not be limited to the following situations:

(a) Premises having an auxiliary water supply, unless the quality of the auxiliary supply is in compliance with WAC 248-54-740 and is acceptable to the purveyor.

(b) Premises having internal cross-connections that are not correctable, or intricate plumbing arrangements which make it impracticable to ascertain whether or not cross-connections exist.

(c) Premises where entry is restricted so that inspections for cross-connections cannot be made with sufficient frequency or at sufficiently short notice to assure that cross-connections do not exist.

(d) Premises having a repeated history of cross-connections being established or reestablished.

(e) Premises on which any substance is handled under pressure so as to permit entry into the public water system, or where a cross-connection could reasonably be expected to occur. This shall include the handling of process waters and cooling waters.

(f) Premises where materials of a toxic or hazardous nature are handled such that if back siphonage should occur, a serious health hazard may result.

(g) The following types of facilities will fall into one of the above categories where a backflow prevention device is required to protect the public water system. A backflow prevention device shall be installed at these facilities as set forth in WAC 248-54-850(3) unless the purveyor and the department determine no hazard exists.

- (i) Hospitals, mortuaries, clinics;
- (ii) Laboratories;
- (iii) Piers and docks;
- (iv) Sewage treatment plants;
- (v) Food or beverage processing plants;
- (vi) Chemical plants using a water process;
- (vii) Metal plating industries;

(viii) Petroleum processing or storage plants;

(ix) Radioactive material processing plants or nuclear reactors;

(x) Car washes;

(xi) Others specified by the department.

(2) The type of protective device required in WAC 248-54-850(1) shall depend on the degree of hazard which exists as follows:

(a) An air-gap separation or a reduced pressure principle backflow prevention device shall be installed where the water supply may be contaminated with sewage, industrial waste of a toxic nature or other contaminant which would cause a health or system hazard.

(b) In the case of a substance which may be objectionable but not hazardous to health, a double check valve assembly, air-gap separation or a reduced pressure principle backflow prevention device shall be installed.

(3) Backflow prevention devices required in this section shall be installed at the meter, at the property line of the premises when meters are not used, or at a location designated by the department or purveyor. The device shall be located so as to be readily accessible for maintenance and testing, and where no part of the device will be submerged.

(4) Backflow prevention devices required in this section shall be installed under the supervision of, and with the approval of, the purveyor.

(5) Any protective device required in this section shall be a model approved by the department. A double check valve assembly or a reduced pressure principle backflow prevention device will be approved if it has successfully passed performance tests of the University of Southern California, Foundation for Cross-Connection Control and Hydraulic Research or other testing laboratories satisfactory to the department, or meet other standards acceptable to the department.

(6) Backflow prevention devices installed under this section shall be inspected and tested annually, or more often where successive inspections indicate repeated failure. The devices shall be repaired, overhauled, or replaced whenever they are found to be defective. Inspections, tests and repairs shall be made under the purveyor's supervision, and records thereof kept as required by the purveyor.

(7) Failure of the customer to cooperate in the installation, maintenance, testing or inspection of backflow prevention devices required by these regulations shall be grounds for the termination of water service to the premises or the requirements for an air-gap separation. [Order 153, § 248-54-850, filed 12/5/77.]

Chapter 248-55 WAC

WATERWORKS OPERATOR CERTIFICATION

WAC	
248-55-010	Purpose.
248-55-020	Definitions.
248-55-030	Applicability.
248-55-040	Certification board.
248-55-050	Classification schedule for public water systems.