

CHAPTER 3

BACKFLOW AND CROSS CONNECTIONS

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8-3-1: **GENERAL PURPOSES:** The purpose of this Chapter are as follows:

- A. Protection of Water Supply: To protect the safe drinking water supply of the City from the possibility of contamination or pollution by requiring compliance or pollution by requiring compliance with State and local plumbing codes, health regulations, OSHA and other applicable industry standards for water system safety within the consumer's internal distribution system or private water system. Compliance with these minimum safety codes will be considered reasonable vigilance for prevention of contaminants or pollutants which could backflow into the public drinking water systems; and
- B. Elimination or Control of Cross-Connections: To promote reasonable elimination or control of cross-connections in the plumbing fixtures and industrial piping system of the consumer, as required by State and local plumbing codes, health regulations, OSHA and other applicable industry standards to assure water system safety; and
- C. Administration of Backflow Prevention: To provide for the administration of a continuing program of backflow prevention which will systematically and effectively prevent the contamination or pollution of all drinking water systems. (Ord. 14-300, 1-23-1991)

8-3-2: **DEFINITIONS:** As used in this Chapter, the following terms shall have the meanings specified, unless a different meaning is clearly evident from the context:

**APPROVED
BACKFLOW
ASSEMBLY:**

Accepted by the Utah Department of Health, Bureau of Drinking Water/Sanitation, as meeting an applicable specification or as suitable for the proposed use.

**AUXILIARY WATER
SUPPLY:**

Any water supply on or available to the premises other than the purveyor's 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 such as a well, spring, river, stream, lake, 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 authority for sanitary control.

BACK PRESSURE:

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 the intended source, caused by the reduction of pressure in the potable water supply system.

BACKFLOW:

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

**BACKFLOW
PREVENTION
ASSEMBLY:**

An assembly or means designed to prevent backflow. specifications for backflow prevention assemblies are contained within the Utah Plumbing Code, chapter 10, (appendix J), or subsequently adopted substitute provisions, and the Cross-Connection Control Program for Utah.

CONTAMINATION:

A degradation of the quality of the potable water supply by nonpotable water, sewage, industrial fluids or waste liquids, compounds or other materials.

CROSS-CONNECTION:

Any physical connection or arrangement of piping or fixtures which may allow nonpotable water or industrial fluids or other material of questionable quality to come in contact with potable water inside a distribution system. This would include any temporary connections, such as swing connections, removable sections, four (4) way plug valves, spools, dummy sections of pipe, swivel or change-over devices or sliding multi-part tubes or other plumbing arrangements.

CROSS-CONNECTION, CONTAINMENT: The installation of an approved backflow 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 (isolation).

CROSS-CONNECTION, CONTROLLED: A connection between a potable water system and a nonpotable 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.

WATER PURVEYOR: Providence City and the person designated to be in charge of the Providence City Water Department and who is invested with the authority and responsibility for the implementation of effective cross-connection control program and for the enforcement provisions of this Chapter (Ord. 14-300, 1-23-1991)

8-3-3: RESPONSIBILITIES:

A. City And Water System:

1. The City shall be responsible for the protection of the drinking water distribution system from foreseeable conditions leading to the possible contamination or pollution of the drinking water system due to the backflow contaminants or pollutants into the drinking water supply.
2. Drinking water system surveys or inspections of the consumer's water distribution system shall be conducted or caused to be conducted by individuals deemed qualified by and representing the City. Survey records shall indicate compliance with the aforementioned health and safety standards. All such records will be maintained by the City.
3. The City shall notify in writing, all consumers of the need for the periodic system

survey to ensure compliance with existing applicable minimum health and safety standards.

4. Selection of an approved backflow prevention assembly for containment control required at the service entrance shall be determined from the results of the system survey.

B. Consumer:

1. To comply with this Chapter as a term and condition of supply and consumer's acceptance of service is admittance of his/her awareness.

2. It shall be the responsibility of the customer or consumer to purchase, install, test and maintain any backflow prevention device or assembly required to comply with this Chapter.

C. Building Inspector:

1. The Building Inspector's responsibility to enforce the applicable sections of the Plumbing Code begins at the point of service (downstream or consumer side of the meter) and continues throughout the developed length of the consumer's water system.

2. The Building Inspector will review all plans to ensure that unprotected cross-connections are not an integral part of the consumer's water system. If a cross-connection cannot be eliminated, it must be protected by the installation of an air gap or an approved backflow prevention device or assembly in accordance with the Utah Plumbing Code.

3. Water vacating the drinking water supply must do so by an approved air gap or approved mechanical backflow prevention assembly, properly installed and in accordance with the Utah Plumbing Code.

D. Technician, Surveyor Or Repair Person:

1. Whether employed by the consumer or a utility to survey, test, repair, or maintain backflow prevention assemblies, the certified backflow technicians, surveyors or repair persons will have the following responsibilities:

a. Ensuring acceptable testing equipment and procedures are used for testing, repairing or overhauling backflow prevention assemblies.

b. Make reports of such testing and/or repair to the consumer, water purveyor, and the Bureau of Drinking Water/Sanitation within the time frames prescribed by the Bureau of Drinking Water/Sanitation.

c. The reports shall include the list of materials or replacement parts used.

d. Ensuring replacement parts are equal in quality to parts originally supplied by the manufacturer of the assembly being repaired.

e. Not changing the design, material or operational characteristics of the assembly during testing, repair or maintenance.

2. In the case of a consumer requiring a commercially available technician, any certified technician is authorized to make the test and report the results of that test to the consumer, water purveyor and the Bureau Division of Drinking Water/Sanitation. If such a commercially tested assembly is in need of repair, a licensed plumber shall make the actual repair. (Ord. 14-300, 1-23-1991; 1998 Code)

8-3-4: REQUIREMENTS:

A. Protection of Water Supply: No water service connection to any premises shall be installed or maintained by the public water purveyor unless the water supply is protected as required by State laws, regulations, codes, and this Chapter. Service of water to a consumer found to be in violation of this Chapter shall be discontinued by the water purveyor after due process of written notification of violation and an appropriate time suspense for voluntary compliance, if:

1. A backflow prevention assembly required by this Chapter for control of backflow and cross-connections is not installed, tested, and maintained; or

2. If it is found that a backflow prevention assembly has been removed or by-passed; or

3. If an unprotected cross-connection exists on the premises; or

4. If the periodic system survey has not been conducted.

Service will not be restored until such conditions or defects are corrected.

- B. Inspection of Customer's System: The customer's system shall be open for inspection at all reasonable times to authorized representatives of the water purveyor to determine whether cross-connections or other structural or sanitary hazards, including violation of this Chapter, exist and to audit the results of the required survey (subsection 8-3-3A2 of this Chapter).
- C. Installation of Approved Prevention Assembly: Whenever the public water purveyor deems a service connection's water usage contributes a sufficient hazard to the water supply, an approved backflow prevention assembly shall be installed on the service line of the identified consumer'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.
- D. Type of Protective Assembly: The type of protective assembly required under subsection C of this Section, shall depend upon the degree of hazard which exists at the point of cross connection (whether direct or indirect), applicable local and State requirements and/or determinations resulting from the required survey.
- E. Previously Approved Assemblies: All presently install backflow prevention assemblies which do not meet the requirements of this Section but were approved assemblies 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 F of this Section, be excluded from the requirements of these rules so long as the water purveyor is assured that they will satisfactorily protect the public water system. Whenever the existing assembly is moved from the present location, or requires more than minimum maintenance, or when the water purveyor finds that the operation or maintenance of this assembly constitutes a hazard to health, the unit shall be replaced by an approved backflow prevention assembly meeting the local and State requirements.
- F. Inspection and Maintenance Requirements: It shall be the responsibility of the consumer at any premises where backflow prevention assemblies are installed to have certified surveys or inspections, and operational tests made at least once per year at the consumer's expense. In those instances where the public water purveyor deems the hazard to be great, he may require certified surveys or inspections and test at a more frequent interval. It shall be the duty of the public water purveyor to see that these tests are made according to the standards set forth by the State Department of Health, Bureau of Drinking Water/Sanitation.
- G. Testing Backflow Prevention Assemblies: All backflow prevention assemblies shall be tested within ten (10) working days of initial installation.

- H. Safety Hazards: No backflow prevention assembly shall be installed so as to create a safety hazard. Example: installed over any electrical panel, steam pipes, boilers, pits, or above ceiling level. (Ord. 14-300, 1-23-1991)

8-3-5: **DISCONTINUANCE OF SERVICE:**

- A. Authority: If violations of this Chapter exist or if there has not been any corrective action by the consumer within ten (10) days of the written notification of deficiencies noted within the survey, then the public water purveyor shall deny or immediately discontinue service to the premises by providing a physical break in the service line until the customer has corrected the conditions in conformance with the State and City statutes relating to plumbing, safe drinking water supplies and the regulations adopted pursuant thereto.
- B. Emergency: If an emergency situation develops or is found to exist which in the opinion of the public water purveyor requires the immediate discontinuation of water service and/or an immediate physical break in the service line before written notice can be given, then such immediate action is authorized and such prior notice as can be given, if any, shall be given and written notice shall thereafter be given to the consumer and other appropriate steps taken as soon as is practicable. (Ord. 14-300, 1-23-1991)

8-3-6: **PENALTY:** Any person violating, allowing or causing the violation of the provisions of this Chapter shall be guilty of a Class B misdemeanor, subject to the penalty provisions as provided in Section 1-4-1 of this Code, and such person shall be deemed to be guilty of a separate offense for each and every day, or portion thereof, during which any violation of this Chapter is committed, allowed or permitted to continue by such person. (Ord. 14-300, 1-23-1991)