

CHAPTER 2

BACKFLOW AND CROSS CONNECTIONS¹

SECTION:

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8-2-1: **PURPOSE:** The purpose of this chapter is to:

- A. Protect the safe drinking water supply of the city from the possibility of contamination or pollution by requiring compliance with this chapter, applicable 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 on the part of consumers for prevention of contaminants and pollutants which could backflow into the public drinking water systems; and
- B. Promote reasonable elimination and control of cross connections in the plumbing fixtures and industrial piping systems 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. 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., 5-7-1991)

1. See section 8-1-11 of this title.

8-2-2: **DEFINITIONS:** As used in this chapter, the following words and terms shall have the meanings ascribed to them in this section:

APPROVED BACKFLOW ASSEMBLY:	A device 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, 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 authority for sanitary control.
BACK PRESSURE:	The flow of water of other liquids, mixtures or substances under pressure into the feeding distribution pipes of a potable water supply system from any sources other than the intended source.
BACK SIPHONAGE:	The flow of water or other liquids, mixtures or substances into the distribution pipes of a potable water supply system from any sources 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), and the cross connection control program for Utah.

CONTAMINATION:	A degradation of the quality of the potable water supply by sewage, industrial fluids, 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 changeover devices or sliding multiport 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 SUPERINTENDENT:	The person designated to be in charge of the water department of Fruit Heights City, is vested with the authority and responsibility of the implementation of an effective cross connection control program and for the enforcement of the provisions of this chapter. (Ord., 5-7-1991)

8-2-3: RESPONSIBILITIES:**A. City:**

1. The city shall be responsible for the protection of the drinking water distribution system from foreseeable conditions leading to possible contamination or pollution of the drinking water system due to the backflow of contaminants or pollutants into the drinking water supply.

2. Drinking water system surveys/inspections of the consumer's water distribution systems 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. It shall be the responsibility of the consumer to comply with this chapter as a term and condition of supply. Consumer's acceptance of service is deemed admittance of his/her awareness.

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

C. Water Superintendent:

1. The water superintendent'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 water superintendent will review all plans and make periodic surveys 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/assembly, in accordance with the Utah plumbing code.

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

D. Certified Backflow Assembly Technicians, Surveyors Or Repair Persons:

1. Whether employed by the city, 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. Ensure that acceptable testing equipment and procedure are used for testing, repairing or overhauling backflow prevention assemblies;

b. Make reports of such testing and/or repair to the consumer, water superintendent and the state bureau of drinking water/sanitation on forms approved for such use by the state bureau of drinking water/sanitation, and within the time frames prescribed by the bureau of drinking water/sanitation. The report shall include the list of materials or replacement parts used.

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

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

e. A certified technician shall perform all tests of the mechanical devices/assemblies and be responsible for the competence and accuracy of all tests and reports.

f. Ensuring his license is current, the testing equipment being used is acceptable to the state, and is in proper operating condition.

g. Be equipped with, and be competent to use, all necessary tools, gauges, and other equipment necessary to properly test, and maintain backflow prevention assemblies.

h. The certified technician conducting the test must keep an accurate record of each double check valve, pressure vacuum breaker, reduced pressure backflow assembly and high hazard air gap, showing the serial number, date tested and by whom tested. (Ord., 5-7-1991)

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 superintendent and the state bureau of drinking water/sanitation. If such a commercially tested assembly is in need of repair, a licensed plumber shall make the actual repair. (Ord., 5-7-1991; amd. 2006 Code)

8-2-4: REQUIREMENTS:

- A. Protection Required: No water service connection shall be installed or maintained by the water superintendent unless the water supply is protected as required by state laws, regulations, codes and this chapter.
- B. Violation; Discontinuance Of Service: Service of water to a consumer found to be in violation of this chapter shall be discontinued by the water superintendent after due process of written notification of violation and an appropriate time period 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 bypassed; or
 3. If an unprotected cross connection exists on the premises;
 4. If the periodic system survey has not been conducted; or
 5. If an auxiliary water supply is available, the use of culinary water for any irrigation purpose is prohibited.

Service will not be restored until such conditions or defects are corrected. A restoral fee shall be set by the city council.

- C. Inspection: The customer's system shall be open for inspection at all reasonable times to authorized representatives of the water superintendent 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.
- D. Hazard Present; Assembly Installation: Whenever the water superintendent 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.
- E. Type Of Assembly: The type of protective assembly required under subsection D of this section shall depend upon the degree of hazard which exists at the point of cross connection (whether direct or indirect) applicable to local and state requirements or resulting from the required survey.
- F. Presently Installed Assemblies: All presently installed backflow prevention assemblies which do not meet the requirements of this section but were approved assemblies for the purpose described herein at the time of installation and which have been properly maintained, shall, except for the inspection and maintenance requirements under subsection G of this section, be excluded from the requirements of these rules so long as the water superintendent 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 superintendent 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.
- G. Surveys/Inspections: It shall be the responsibility of the consumer at any premises where backflow prevention assemblies are installed to have certified surveys/inspections, and operational tests made at least once per year at the consumer's expense. In those instances where the water superintendent deems that hazard to be great, he may require certified surveys/inspections and tests at a more frequent interval. It shall be the duty of the water superintendent to see that these tests are made according to the standards set forth by the state department of health, bureau of drinking water/sanitation.

- H. Testing Upon Installation: All backflow prevention assemblies shall be tested within ten (10) working days of initial installation.
- I. Hazards Prohibited: No backflow prevention assembly shall be installed so as to create a safety hazard. Example: Installed over an electrical panel, steam pipes, boilers, pits, or above ceiling level.
- J. Discontinuance Of Service: If violations of this chapter exist or if there has not been any corrective action taken by the consumer within ten (10) days of the written notification of deficiencies noted within the survey, then the water superintendent shall deny or immediately discontinue service to the premises by providing a physical break in the service line until the customer has corrected the condition in conformance with the state and city statutes relating to plumbing, safe drinking water supplies and the regulations adopted pursuant thereto. (Ord., 5-7-1991)