TITLE 18

WATER AND SEWERS

CHAPTER

CHAPTER 1

CROSS-CONNECTIONS, AUXILIARY INTAKES, ETC.

SECTION

18-101. Background and purpose, limitations, record keeping duration, omissions and objectives. (1) In order for the Spencer Utility Department to serve the public and to comply with the regulations of the Environmental Protection Agency and the Tennessee Department of Environment and Conservation and other state and federal regulations, the Spencer Utility Department must establish a cross-connection program to protect the public's water supply.

The Spencer Utility Department is run for the benefit of all present and future customers, and while no customer shall intentionally be treated unfairly, no customer shall be treated in a way that compromises the interests of other current and future customers.

(2) Limitations. The Spencer Utility Department is subject to various city, county, state, federal, or other governmental agency requirements and has

no discretion to provide service in a manner which would violate such regulations or requirements.

(3) Record keeping duration. All records regarding cross-connections shall be kept indefinitely.

(4) Omissions. In the absence of specific rules or policies, the governing board in accordance with its usual and customary practices shall make the disposition of situations involving service. This chapter sets forth uniform requirements for the protection of the public water system from possible contaminations, and enables the water system to comply with all applicable local, state, and federal laws, regulations, standards, or requirements, including the Safe Drinking Water Act of 1996, Tennessee Code Annotated, § 68-221-720 and the Rules and Regulations for Public Water Systems and Drinking Water Quality issued by the Tennessee Department of Environment and Conservation, Division of Water Supply.

(5) Objectives. The objectives of this chapter are to:

(a) Protect the public potable water system of Spencer Utility Department from the possibility of contamination or pollution by isolating within the customer's internal distribution system such contaminants or pollutants that could backflow or backsiphon into the public water system;

(b) Promote the elimination or control of existing cross-connections, actual or potential, between the customer's in-house potable water system and non-potable water systems, plumbing fixtures, and industrial piping system;

(c) Provide for the maintenance of a continuing program of cross-connection control that will systematically and effectively prevent the contamination or pollution of all potable water systems. (Ord. #65-4, March 1965, as replaced by Ord. #2011-1, Jan. 2011)

18-102. Definitions. The following words, terms, and phrases shall have the meanings ascribed to them in this section when used in the interpretation and enforcement of this chapter.

(1) "Air-gap" shall mean a vertical, physical separation between a water supply and the overflow rim of a non-pressurized receiving vessel. An approved air-gap separation shall be at least twice the inside diameter of the water supply line, but in no case less than two inches (2"). Where a discharge line serves as receiver, the air-gap shall be at least twice the diameter of the discharge line, but not less than two (2") inches.

(2) "Annually." Shall mean twelve (12) months.

(3) "Atmospheric vacuum breaker" shall mean a device which prevents backsiphonage by creating an atmospheric vent when there is either a negative pressure or sub-atmospheric pressure in the water system.

(4) "Auxiliary intake" shall mean any water supply, on or available to a premises, other than that directly supplied by the public water system. These

auxiliary waters may include water from another purveyor's public water system, any natural source, such as a well, spring, river, stream, and so forth; used, reclaimed or recycled waters, or industrial fluids.

(5) "Backflow" shall mean the undesirable reversal of the intended direction of flow in a potable water distribution system as a result of a cross-connection.

(6) "Backpressure" shall mean any elevation of pressure in the downstream piping system (caused by pump, elevated tank or piping, stream and/or air pressure) above the water supply pressure at the point which would cause, or tend to cause, a reversal of the normal direction of flow.

(7) "Backsiphonage" shall mean the flow of water or other liquids, mixtures or substances into the potable water system from any other source other than its intended source, caused by the reduction of pressure in the potable water system.

(8) "Bypass" shall mean any system of piping or other arrangement whereby water from the public water system can be diverted around a backflow prevention device.

(9) "Contamination." The introduction or admission of any foreign substances that cause illness or death.

(10) "Contaminant." Any substance introduced into the public water system that will cause illness or death.

(11) "Cross-connection" shall mean any physical connection or potential connection whereby the public water system is connected, directly or indirectly, with any other water supply system, sewer, drain, conduit, pool, storage reservoir, plumbing fixture 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 or backsiphonage. Bypass arrangements, jumper connections, removable sections, swivel or changeover devices, through which or because of which backflow could occur, are considered to be cross-connections.

(12) "Double check valve assembly" shall mean an assembly of two (2) independently operating, approved check valves with tightly closing resilient seated shut-off valves on each side of the check valves, fitted with properly located resilient seared test cocks for testing each check valve.

(13) "Double check detector assembly" shall mean an assembly of two (2) independently operating, approved check valves with an approved water meter (protected by another double check valve assembly) connected across the check valves, with tightly closing resilient seated shut-off valves on each side of the check valves, fitted with properly located resilient seated test cocks for testing each part of the assembly.

(14) "Failed" shall mean the status of a backflow prevention assembly determined by a performance evaluation based on the failure to meet all minimums set forth by the approved testing procedure.

(15) "Fire protection systems" shall be classified in six (6) different classes in accordance with AWWA Manual M14--Second Edition 1990. The six (6) classes are as follows:

Class 1 shall be those with direct connections from public water mains only - no pumps, tanks, or reservoirs; no physical connection from other water supplies; no antifreeze or other additives of any kind; all sprinkler drains discharging to the atmosphere, dry wells or other safe outlets.

Class 2 shall be the same as Class 1, except that booster pumps may be installed in the connections from the street mains.

Class 3 shall be those with direct connections from public water supply mains, plus one (1) or more of the following: elevated storage tanks, fire pumps taking suction from above ground covered reservoirs or tanks, and/or pressure tanks (all storage facilities are filled from or connected to public water only, and the water in the tanks is to be maintained in a potable condition).

Class 4 shall be those with direct connection from the public water supply mains, similar to Class 1 and Class 2 with an auxiliary water supply dedicated to fire department use and available to the premises, such as an auxiliary supply located within one thousand seven hundred feet (1,700') of the pumper connection.

Class 5 shall be those directly supplied from public water mains and interconnected with auxiliary supplies, such as pumps taking suction from reservoirs exposed to contamination, or rivers and ponds; driven wells, mills or other industrial water systems, or where antifreeze or other additives are used.

Class 6 shall be those with combined industrial and fire protection systems supplied from the public water mains only, with or without gravity storage or pump suction tanks.

(16) "Hazard, health." A cross-connection or potential cross-connection involving any substance that could, if introduced in the public water supply, cause death, illness, and spread disease also known as a high hazard.

(17) "Hazard, non-health." A cross-connection or potential cross-connection involving any substance that would not be a health hazard but would constitute a nuisance or be aesthetically objectionable if introduced into the public water supply also known as low hazard.

(18) "Interconnection" shall mean any system of piping or other arrangements whereby the public water supply is connected directly with a sewer, drain, conduit, pool, storage reservoir, or other device which does or may contain sewage or other waste or liquid which would be capable of imparting contamination to the public water system.

(19) "Manager" shall mean the manager of the water system or his duly authorized deputy, agent or representative.

(20) "Passed." The status of a backflow prevention assembly determined by a performance evaluation in which the assembly meets all minimums set forth by the approved testing procedure.

(21) "Performance evaluation." An evaluation of an approved double check valve assembly or reduced pressure principle assembly (including approved detector assemblies) using the latest approved testing procedures in determining the status of the assembly.

(22) "Person" shall mean any and all persons, natural or artificial, including any individual, firm or association, and any municipal or private corporation organized or existing under the laws of this or any other state or country.

(23) "Pollutant." A substance in the public water system that would constitute a non-health hazard and would be aesthetically objectionable if introduced into the public water supply.

(24) "Potable water" shall mean water, which meets the criteria of the Tennessee Department of Environment and Conservation and the United States Environmental Protection Agency for human consumption.

(25) "Pressure vacuum breaker" shall mean an assembly consisting of a device containing one (1) or two (2) independently operating spring loaded check valves and an independently operating spring loaded air inlet valve located on the discharge side of the check valve(s), with tightly closing shut-off valves on each side of the check valves and properly located test cocks for the testing of the check valves and relief valve.

(26) "Public water supply" shall mean the water system which furnishes potable water to the public for general use and which is recognized as the public water supply by the Tennessee Department of Environment and Conservation.

(27) "Reduced pressure principle backflow prevention device" shall mean any assembly consisting of two (2) independently operating approved check valves with an automatically operating differential relief valve located between the two (2) check valves, tightly closing resilient seated shut-off valves, plus properly located resilient seated test cocks for the testing of the check valves and the relief valves.

(28) "Service connection" shall mean the point of delivery to the customer's water system; the terminal end of a service connection from the public water system where the water department loses jurisdiction and control over the water. "Service connection" shall include connections to fire hydrants and all other temporary or emergency water service connections made to the public water system.

(29) "Survey." An evaluation of a premise by a water system performed for the determination of actual or potential cross-connection hazards and the appropriate backflow prevention needed.

(30) "Water system" shall be considered as made up of two (2) parts, the utility system and the customer system.

(a) The utility system shall consist of the facilities for the storage and distribution of water and shall include all those facilities of the water system under the complete control of the utility system, up to the point where the customer's system begins (i.e. the water meter);

(b) The customer system shall include those parts of the facilities beyond the termination of the utility system distribution system that are utilized in conveying domestic water to points of use. (Ord. #65-4, March 1965, as replaced by Ord. #2011-1, Jan. 2011)

18-103. Compliance with Tennessee Code Annotated. The Spencer Utility Department shall be responsible for the protection of the public water system from contamination or pollution due to the backflow of contaminants through the water service connection. The Spencer Utility Department shall comply with Tennessee Code Annotated, § 68-221-711(6), as well as the Rules and Regulations for Public Water Systems and Drinking Water Quality, legally adopted in accordance with this code, which pertain to cross-connections, auxiliary intakes, bypasses and interconnections; and shall establish an effective, on-going program to control these undesirable water uses. (Ord. #65-4, March 1965, as replaced by Ord. #2011-1, Jan. 2011)

18-104. Regulated. (1) No person shall cause a cross-connection, auxiliary intake, bypass, or interconnection to be made, or allow one to exist for any purpose whatsoever unless the construction and operation of same has been approved by the Tennessee Department of Environment and Conservation and the operation of such cross-connection, auxiliary intake, bypass, or interconnection is at all times under the direct supervision of the cross-connection control manager/coordinator of the public water system.

(2) No water service connection to any premise shall be installed or maintained by the Spencer Utility Department unless the water supply system is protected as required by state laws and this chapter. Service of water to any premises shall be discontinued by the utility system if a backflow prevention device required by this chapter is not installed, tested, and/or maintained; or if it is found that a backflow prevention device has been removed, bypassed, or if an unprotected cross-connection exists on the premises. Service shall not be restored until such conditions or defects are corrected.

(3) It shall be unlawful for any person to cause a cross-connection to be made or allow one to exist for any purpose whatsoever unless the construction and operation of same have been approved by the Tennessee Department of Environment and Conservation, and the operation of such cross-connection is at all times under the direction of the manager of the Spencer Utility Department.

(4) If, in the judgment of the manager or his designated agent, an approved backflow prevention device is required at the water service connection to a customer's premises, or at any point(s) within the premises, to protect the

potable water supply, the manager shall compel the installation, testing and maintenance of the required backflow prevention device(s) at the customer's expense.

(5) An approved backflow prevention assembly shall be installed on each water service line to a customer's premises 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.

(6) For new installations, the manager or his designated agent shall inspect the site and/or review plans in order to assess the degree of hazard to determine the type of backflow prevention assembly, if any, that will be required, and to notify the owners in writing of the required assembly and the installation criteria. All required assemblies shall be installed and operational prior to the initiation of water service.

(7) For existing premises, personnel from the water system shall conduct inspections and evaluations, and shall require correction of violations in accordance with the provisions of this chapter.

(8) For existing installations, the cross-connection manager/ coordinator may cause water service to be discontinued until such time as the customer complies with all requirements of state law and this chapter. (Ord. #65-4, March 1965, as replaced by Ord. #2011-1, Jan. 2011)

18-105. Statement required. Any person whose premises are supplied with water from Spencer Utility Department, and who also has on the same premises a separate source of water in an uncovered or unsanitary storage reservoir from which the water stored therein is circulated through a piping system, shall file with Spencer Utility Department a statement of the nonexistence of unapproved or unauthorized cross-connections, auxiliary intakes, bypasses, or interconnections. Such statement shall also contain an agreement that no cross-connection, auxiliary intake, bypass, or interconnection will be permitted on the premises. (Ord. #65-4, March 1965, as replaced by Ord. #2011-1, Jan. 2011)

18-106. New installations. No installation, alteration, or change shall be made to any backflow prevention device connected to the public water supply for water service, fire protection or any other purpose without first contacting the Spencer Utility Department for approval. (as added by Ord. #2011-1, Jan. 2011)

18-107. Existing installations. No alteration, repair, testing or change shall be made on any existing backflow prevention device connected to the public water supply for water service, fire protection or any other purpose without first securing the appropriate approval from the Spencer Utility Department. (as added by Ord. #2011-1, Jan. 2011)

18-108. Inspections. The manager or his designated agent shall inspect all properties served by the public water supply where cross-connections with the public water supply are deemed possible. The frequency of inspection and re-inspection shall be based on potential health hazards involved, and shall be established by the Spencer Utility Department in accordance with guidelines acceptable to the Tennessee Department of Environment and Conservation. Residential sites shall be inspected upon any suspicion of cross-connection. (as added by Ord. #2011-1, Jan. 2011)

18-109. Right of entry for inspections. The manager or his authorized representative shall have the right to enter, at any reasonable time, any property served by a connection to the Spencer Utility Department public water system for the purpose of inspecting the piping system therein for cross-connections, auxiliary intakes, bypasses or interconnections, or for the testing of backflow prevention devices. Upon request, the owner, lessee, or occupant of any property so served shalt furnish any pertinent information regarding the piping system(s) on such property. The refusal of such information or refusal of access, when requested, shall be deemed evidence of the presence of cross-connections and shall be grounds for disconnection of water service. (as added by Ord. #2011-1, Jan. 2011)

18-110. Correction of violations. (1) Any person found to have cross-connections, auxiliary intakes, bypasses or interconnections in violation of the provisions of this chapter shall be allowed a reasonable time within which to comply with the provisions of this chapter. After a thorough investigation of the existing conditions and an appraisal of the time required to complete the work, an appropriate amount of time shall be assigned by the manager or his representative, but in no case shall the time for corrective measures exceed forty-five (45) days with the exception of high risk high hazards which will be no more than fifteen (15) days.

(2) Where cross-connections, auxiliary intakes, bypasses or interconnections are found that constitute an extreme hazard with the immediate possibility of contaminating the public water system, the Spencer Utility Department shall require that immediate corrective action to be taken to eliminate the threat to the public water system. Expeditious steps shall be taken to disconnect the public water system from the on-site piping systems unless the imminent hazard is immediately corrected, subject to the right to a due process hearing upon timely request. The time allowed for preparation for a due process hearing shall be relative to the risk of hazard to the public health and may follow disconnection when the risk to the public health and safety, in the opinion of the manager, warrants disconnection prior to a due process hearing.

(3) The failure to correct conditions threatening the safety of the public water system as prohibited by this chapter and Tennessee Code Annotated, § 68-221-711, within the time limits established by the manager or his representative shall be grounds for denial of water service. If proper protection has not been provided after a reasonable time, the manager shall give the customer legal notification that water service is to be discontinued, and shall physically separate the public water system from the customer's on-site piping in such a manner that the two (2) systems cannot again be connected by an unauthorized person, subject to the right of a due process hearing upon timely request. The due process hearing may follow disconnection when the risk to the public health and safety, in the opinion of the manager, warrants disconnection prior to a due process hearing. (as added by Ord. #2011-1, Jan. 2011)

18-111. Required devices. (1) An approved backflow prevention assembly shall be installed downstream of the meter on each service line to a customer's premises 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, when any of the following conditions exist:

(a) Impractical to provide an effective air-gap separation;

(b) The owner/occupant of the premises cannot or is not willing to demonstrate to the utility that the water use and protection features of the plumbing are such as to pose no threat to the safety or potability of the water;

(c) The nature and mode of operation within a premises are such that frequent alterations are made to the plumbing;

(d) There is likelihood that protective measures may be subverted, altered or disconnected;

(e) The nature of the premises is such that the use of the structure may change to a use wherein backflow prevention is required;

(f) The plumbing from a private well enters the premises served by the public water system, then the utility shall require the use of an approved protective device on the water service line serving the premises to assure that any contamination that may originate in the customer's premises is contained therein;

(g) Establishments containing potential cross-connection hazards as listed in Appendix A.[1]

(2) The protective devices shall be of the reduced pressure zone type (except in the case of certain fire protection systems and swimming pools with no permanent plumbing installed) approved by the Tennessee Department of Environment and Conservation and the Spencer Utility Department, as to manufacture, model, size and application. The method of installation of backflow

[1]Included at the end of this chapter.

prevention devices shall be approved by the Spencer Utility Department prior to installation and shall comply with the criteria set forth in this chapter. The installation and maintenance of backflow prevention devices shall be at the expense of the owner or occupant of the premises.

(3) Applications requiring backflow prevention devices shall include, but shall not be limited to, domestic water service and/or fire flow connections for all medical buildings, construction sites, all fountains, wells, water softeners and other treatment systems, swimming pools, lawn irrigation systems and on all fire hydrant connections other than those by the fire depmtment in combating fires. Those facilities deemed by Spencer Utility Department as needing protection:

(a) Class 1, Class 2, Class 3 fire protection systems shall generally require a double check valve assembly except:

(i) A double check detector shall be required where a hydrant or other point of use exists on the system; or

(ii) A reduced pressure backflow prevention assembly shall be required where:

(A) Underground fire sprinkler lines are parallel to and within ten feet (10') horizontally of pipes carrying sewage or significantly toxic materials;

(B) Premises have unusually complex piping system;

(C) Pumpers connecting to the system have corrosion inhibitors or other chemicals added to the tanks of the fire trucks.

(b) Class 4, Class 5, and Class 6 fire protection systems shall require reduced pressure backflow prevention assemblies.

(c) Wherever the fire protection system piping is not an acceptable potable water system material, or chemicals such as foam concentrates or antifreeze additives are used, a reduced pressure backflow prevention assembly shall be required.

(d) Suggested: Swimming pools with no permanent plumbing and only filled with hoses will require a hose bibb vacuum breaker be installed on the faucet used for filling and filling with an appropriate air-gap.

(4) The manager or his representative may require additional and/or internal backflow prevention devices wherein it is deemed necessary to protect potable water supplies within the premises.

(5) Approved backflow prevention assemblies and methods. All backflow prevention assemblies shall be fully approved and listed as acceptable by the State of Tennessee as to manufacture, model, size, application, orientation, and alterations. The installed assembly must have a status of passed determined by performance evaluations to suffice as an approved backflow prevention assembly. The method of installation of backflow

prevention devices shall comply with installation criteria set forth by this chapter and the State of Tennessee. Installation shall be at the sole expense of the owner or occupant of the premises.

The type of protective assembly required by this chapter shall depend on the degree of hazard that exists. Reduced pressure principle assemblies (and/or detector) may be used for health hazards and non-health hazards. Double check valve assemblies (and/or detector) may only be used for non-health hazards and is limited to Class 1-3 fire systems only.

Pressure vacuum breakers, spill-resistant vacuum breakers, and atmospheric vacuum breakers are not allowed for premise isolation and will not satisfy the requirements of this chapter for adequate backflow prevention due in part to the inability to protect against backpressure.

(6) Installation criteria. The minimum acceptable criteria for the installation of reduced pressure backflow prevention devices, double check valve assemblies or other backflow prevention devices requiring regular inspection or testing shall include the following:

(a) All required devices shall be installed in accordance with the provisions of this chapter by a person approved by the Spencer Utility Department who is knowledgeable in the proper installation. Only licensed sprinkler contractors may install, repair or test backflow prevention devices on fire protection systems.

(b) An approved backflow prevention assembly shall be installed on each service line to a customer's premises and in all cases, before the first branch line leading off the service line, if it is impractical or easily altered to provide an effective air-gap separation, when any of the following conditions exist.

(c) All devices shall be installed in accordance with the manufacturer's instructions and shall possess appropriate test cocks, fittings and caps required for the testing of the device (except hose bibb vacuum breakers). All fittings shall be of brass construction, unless otherwise approved by the water system, and shall permit direct connection to department test equipment.

(d) The entire device, including valves and test cocks, shall be easily accessible for testing and repair.

(e) All devices shall be placed in the upright position in a horizontal run of pipe.

(f) Devices shall be protected from freezing, vandalism, mechanical abuse and from any corrosive, sticky, greasy, abrasive or other damaging environment.

(g) Reduced pressure backflow prevention devices shall be located a minimum of twelve inches (12") plus the nominal diameter of the device above either:

(i) The floor;

(ii) The top of opening(s) in the enclosure; or

(iii) Maximum flood level, whichever is higher. Maximum height above the floor surface shall not exceed sixty inches (60").

(h) Clearance from wall surfaces or other obstructions shall be at least six inches (6"). Devices located in non-removal enclosures shall have at least twenty-four inches (24") of clearance on each side of the device for testing and repairs.

(i) Devices shall be positioned where a discharge from the relief port will not create undesirable conditions. The relief port must never be plugged, restricted or solidly piped to a drain.

(j) An approved air-gap shall separate the relief port from any drainage system. An approved air-gap shall be at least twice the inside diameter of the supply line, but never less than one inch (1").

(k) An approved strainer shall be installed immediately upstream of the backflow prevention device, except in the case of a fire protection system.

(l) Devices shall be located in an area free from submergence or flood potential, therefore never in a below grade pit or vault. All devices shall be adequately supported to prevent sagging.

(m) Adequate drainage shall be provided for all devices. Reduced pressure backflow prevention devices shall be drained to the outside whenever possible.

(n) Fire hydrant drains shall not be connected to the sewer, nor shall fire hydrants be installed such that backflow/backsiphonage through the drain may occur.

(o) Enclosures for outside installations shall meet the following criteria:

(i) All enclosures for backflow prevention devices shall be as manufactured by an AWWA approved company or an approved equal.

(ii) For backflow prevention devices up to and including two inches (2"), the enclosure shall be constructed of adequate material to protect the device from vandalism and freezing, and shall be approved by the water system. The complete assembly, including valve stems and hand wheels, shall be protected by being inside the enclosure.

(iii) To provide access for backflow prevention devices up to and including two inches (2"), the enclosures shall be completely removable. Access for backflow prevention devices two and one-half inches (2 1/2") and larger shall be provided through a minimum of two (2) access panels. The access panels shall be of the same height as the enclosure and shall be completely removable. All access panels shall be provided with built-in locks.

(iv) The enclosure shall be mounted to a concrete pad as specified by the manufacturer, but in no case less than four inches

(4") thick. The enclosure shall be constructed, assembled and/or mounted in such a manner that it will remain locked and secured to the pad even if any outside fasteners are removed. All hardware and fasteners shall be constructed of 300 series stainless steel.

(v) Heating equipment, if required, shall be designed and furnished by the manufacturer of the enclosure to maintain an interior temperature of forty degrees (+40°) F with an outside temperature of negative thirty degrees (-30°) F and a wind velocity of one hundred fifteen (115) miles per hour.

(p) Where the use of water is critical to the continuance of normal operations or the protection of life, property, or equipment, duplicate backflow prevention devices shall be provided to avoid the necessity of discontinuing water service to test or repair the protective device. Where it is found that only one (1) device has been installed and the continuance of service is critical, the Spencer Utility Department shall notify, in writing, the occupant of the premises of plans to interrupt water services and arrange for a mutually acceptable time to test the device. In such cases, the utility may require the installation of a duplicate device.

(q) The utility shall require the occupant of the premises to keep any backflow prevention devices working properly and to make all indicated repairs promptly. Repairs shall be made by qualified personnel acceptable to the Spencer Utility Department. Expense of such repairs shall be borne by the owner or occupant of the premises. The failure to maintain a backflow prevention device in proper working condition shall be grounds for discontinuance of water service to premises. Likewise the removal, bypassing or alteration of a backflow prevention device or the installation thereof, so as to render a device ineffective, shall constitute a violation of this chapter and shall be grounds for discontinuance of water service. Water service to such premises shall not be restored until the customer has corrected or eliminated such conditions or defects to the satisfaction of the Spencer Utility Department. (as added by Ord. #2011-1, Jan. 2011)

18-112. <u>Testing of devices</u>. Assemblies shall be tested at least once in a twelve (12) month period (on or before three hundred sixty-five (365) days from last test) by the Spencer Utility Department by a qualified person possessing a valid certification from the Tennessee Department of Environment and Conservation, Division of Water Supply for the testing of such devices. A record of this test will be on file with the Spencer Utility Department and a copy of the report will be supplied to the customer. Water service shall not be disrupted to test a device without the knowledge of the occupant of the premises. There will be no charge for annual testing, but retesting of failed devices will be the responsibility of the customer.

(1) If any test does not meet the minimum requirements set forth in the approved testing procedure, the assembly is deemed failed and does not suffice as an approved backflow prevention device. If conditions around the assembly do not allow the assembly to be tested, the assembly fails the assembly performance evaluation and is marked failed on test report. (Examples would include assembly is submerged, test cocks missing or plugged, relief valve continually discharging).

(2) Each location requiring an assembly will have a documented backflow prevention assembly. If the assembly at the address cannot be identified or is not the same, the water provider will be notified and a determination of which assembly is used for protection of the water system. (All areas that need protection will be listed by address and location along with the serial number of device)

(3) Assemblies must be tested when installed and after every repair. Backflow prevention assemblies on lawn irrigation systems must be tested when assemblies are placed in service after winterization (to prevent testing just prior to winterization). If lawn irrigation backflow assemblies are taken removed to winterize the system, upon startup of the system, the assemblies must be retested.

(4) Failure to maintain a backflow prevention assembly that is deemed passed shall be grounds for discontinuance of water service. The removal, bypassing, or altering of a protective device or installation, without the approval of the cross-connection control coordinator or designee, thereof so as to render a device ineffective shall constitute grounds for discontinuance of water service. Water service to such premises shall not be restored until the customer has corrected or eliminated such conditions or defects to the satisfaction of this policy/chapter and the cross-connection control coordinator or designee.

Spencer Utility Department shall require the occupant of the premises to keep the backflow prevention assembly working properly and a status of passed. Repairs shall be made by qualified personnel acceptable to the water system within the time limits set forth by this chapter. Expense of such repairs shall be borne by the owner or occupant of the premises. The failure to maintain a backflow prevention assembly in proper working order and a status of passed shall be grounds for discontinuance of water service.

(5) The backflow prevention assembly must be tested after every repair and have a status of passed to be in compliance with this chapter.

(6) Cross-connection control coordinator or designee shall have the right to inspect and test any assemblies whenever it is deemed necessary. Water service shall not be disrupted to the assembly without the knowledge of the occupant of the premises.

(7) All performance evaluations must be performed with an annually certified test kit. (as added by Ord. #2011-1, Jan. 2011)

18-113. Non-potable supplies. (1) The potable water supply made available to a premises served by the public water system shall be protected from contamination as specified in the provisions of this chapter. Any water pipe or outlet which could be used for potable or domestic purposes and which is not supplied by the potable water system must be labeled in a conspicuous manner such as:

WATER UNSAFE FOR DRINKING

(2) The minimum acceptable sign shall have black letters at least one inch (1") high located on a red background. Color coding of pipelines, in accordance with Occupational Safety and Health Act (OSHA) guidelines, shall be required in locations where in the judgment of the utility, such coding is necessary to identify and protect the potable water supply.

(3) Statement required. Any person whose premises are supplied with water from the public water system, and who also has on the same premises a well or other separate source of water supply, or who stores water in an uncovered or unsanitary storage reservoir from which the water is circulated through a piping system, shall file with the Spencer Utility Department a statement of the nonexistence of unapproved or unauthorized cross-connections, auxiliary intakes, bypasses or interconnections. Such statement shall contain an agreement that no cross-connections, auxiliary intakes, bypasses or interconnections will be permitted upon the premises. Such statement shall also include the location of all additional water sources utilized on the premises and how they are used. Maximum backflow protection shall be required on all public water sources supplied to the premises. (as added by Ord. #2011-1, Jan. 2011)

18-114. Penalty; discontinuance of water supply. (1) Any person who neglects or refuses to comply with any of the provisions of this chapter may be deemed guilty of a misdemeanor and subject to a fine.

(2) Independent of and in addition to any fines or penalties imposed, the manager will discontinue the public water supply service to any premises upon which there is found to be a cross-connection, auxiliary intake, bypass or interconnection; and service shall not be restored until such cross-connection, auxiliary intake, bypass or interconnection or noncompliance with this chapter has been eliminated, corrected, or approved backflow protection is installed within time limits set forth by this chapter. (as added by Ord. #2011-1, Jan. 2011)

18-115. Provision applicable. The requirements contained in this chapter shall apply to all premises served by the Spencer Utility Department and are hereby made part of the conditions required to be met for the Spencer Utility Department to provide water services to any premises. The provisions of this chapter shall be rigidly enforced since it is essential for the protection of the

public water distribution system against the entrance of contamination. Any person aggrieved by the action of the chapter is entitled to a due process hearing upon timely request. (as added by Ord. #2011-1, Jan. 2011)

18-116. Conflicting provisions. If any provision of this chapter is found to conflict with any provision of any other ordinance, then the provision of this chapter shall control. That should any part, or parts of this chapter be declared invalid for any reason, no other part, or parts, of this chapter shall be affected thereby. (as added by Ord. #2011-1, Jan. 2011)

Appendix A

Equipment posing significant risk of creating cross-connections

Establishments with equipment list will normally require premise isolation with a reduced pressure principle assembly depending on hazard unless otherwise found to have an appropriate air-gap.

Many devices or equipment below may be designed and constructed with approved air-gaps that would adequately protect the water system. However, the cross-connection control inspector should consider and make judgments on the amount of risk that the establishment poses to the distribution and not solely on the presence or absence of the devices, situations, or equipment listed below.

The following is an incomplete list of equipment normally requiring backflow prevention assemblies. It is to be noted that any connection with piping, equipment, or devices that contain or may contain substances that are pollutants or contaminants will require premises isolation.

Air-conditioning systems (using water for processing)
Aspirators
Air lines
Autoclaves and sterilizers
Auxiliary systems
Baptismal tanks
Bathtubs (hard piped)
Bedpan washers
Bidets
Booster pumps
Brine tanks, softeners
Boilers
Car wash equipment
Chemical feeders
Chillers
Chlorination equipment
Coffee urns
Commercial cookers
Condensers
Compressors
Cooling systems
Cooling towers
Culture vats
Cuspidor, dental

Developing equipment
Dishwashers (commercial)
Display fountains
Drinking fountains
Ejectors, steam or water
Extractors
Fire protection systems, standpipes, sprinkler systems and drain lines
Fish tanks, ponds
Floor drains
Food mixing tanks
Frost-free toilets, hydrants, and fountains
Garbage grinders
Garbage can washers
Garden sprayers
Heat exchangers
Humidity controls
Hydraulic equipment
Hydraulic insecticide or fertilizer applicators
Hydraulic lifts
Ice makers
Irrigation systems, lawn sprinklers
Kitchen equipment
Laboratory equipment
Laundry equipment
Lavatories
Lawn sprinklers
Liquid handling systems
Lubrication, pump bearings
Medical equipment
Pest control equipment
Photo laboratory sinks
Potato peelers
Pressure cookers
Process water circulation systems
Pump, priming systems
Sewer flush tanks
Shampoo sinks, basins
Showers, telephone type shower heads
Sinks, slop sinks
Soda fountains
Solar water and space heating equipment
Steam boilers
Steam tables
Stop and waste vales

Swimming pools, ponds, fountains
Tank and vats
Therapeutic tanks, spas, and hot tubs
Threaded hose bibbs
Toilets, flushometer, flush tank, ball cock, flush valve siphon jet
Vegetable peelers
Vacuum systems
Urinals (siphon set blowout)
Vacuum systems (water operated with water seals)
Water treatment devices
Water troughs
Water-using mechanical equipment
Water jacketed tanks, vats, cookers

CHAPTER 2

WATER AND SEWER RATES

SECTION

18-201. Purpose. The following rate and fee structures are adopted so that safe and efficient water and sewer services may be provided to Spencer Utility District, and in other circumstances where services may be provided as have been or will be approved by the Spencer Board of Mayor and Aldermen. (as added by Ord. #2006-5, Aug. 2006)

18-202. Water rates, sewer rates and service tap fees.[1] Water, sewer and service tap fees shall be established by ordinance. (as added by Ord. #2006-5, Aug. 2006)

[1]Ordinances amending water, sewer and service tap fees (and any amendments thereto) are available in the office of the city recorder.