

Cross Connection Ordinance for the Selmer Water System

No 654

This Ordinance sets forth uniform requirements for the protection of the public water system for the Selmer Water System from possible contamination, and enable the Selmer Water System to comply with all applicable local, State and Federal laws, regulations, standards or requirements, including the Safe Drinking Water Act of 1996, TCA 68-221-701 to 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.

**Objectives.**

The objectives of this Ordinance are to:

- (1) To protect the public potable water system of Selmer Water System 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;
- (2) To 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 systems;
- (3) To 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.

**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 article:

- (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 six (6") inches. 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 six (6") inches.
- (2) **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.
- (3) **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.
- (4) **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.
- (5) **Backpressure** shall mean any elevation of pressure in the downstream piping system (caused by pump, elevated tank or piping, steam 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.
- (6) **Backsiphonage** shall mean the flow of water or other liquids, mixtures or substances into the potable water system from any source other than its intended source, caused by the reduction of pressure in the potable water system.
- (7) **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.



## Cross Connection Ordinance for the Selmer Water System

(14) **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.

(15) **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.

(16) **Public water supply** shall mean the Selmer 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.

(17) **Reduced pressure principle backflow prevention device** shall mean an assembly consisting of two (2) independently operating approved check valves with an automatically operating differential relief valve located between the two 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 valve.

(18) **Manager** shall mean the Manager of the Selmer Water System or his duly authorized deputy, agent or representative.

(19) **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.

### **Compliance with T.C.A.**

The Selmer Water System 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 Selmer Water System shall comply with Section 68-221-711 of the Tennessee Code Annotated, 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.

### **Regulated**

(1) No water service connection to any premises shall be installed or maintained by the Selmer Water System unless the water supply system is protected as required by state laws and this Ordinance. Service of water to any premises shall be discontinued by the Selmer Water System if a backflow prevention device required by this Ordinance 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.

(2) 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 Selmer Water System.





## Cross Connection Ordinance for the Selmer Water System

(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 Selmer Water System shall require that immediate corrective action 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 system 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 Ordinance and Tennessee Code Annotated, Section 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 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.

### 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 Selmer Water System that the water use and protective 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 premise 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 or other water source enters the premises served by the public water system.

(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 Selmer Water System, as to manufacture, model, size and application. The method of installation of backflow prevention devices shall be approved by the Selmer Water System prior to installation and shall comply with the criteria set forth in this Ordinance. The installation and maintenance of backflow prevention devices shall be at the expense of the owner or occupant of the premises.

### **(3) Premises Requiring Reduced Pressure Principle Assemblies or Air Gap Separation**

#### **High Risk High Hazards**

Establishments which pose significant risk of contamination or may create conditions which pose an extreme hazard of immediate concern (High Risk High Hazards), the cross-connection control inspector shall require immediate or a short amount of time (14 days maximum), depending on conditions, for corrective action to be taken. In such cases, if corrections have not been made within the time limits set forth, water service will be discontinued.



## Cross Connection Ordinance for the Selmer Water System

a. Class 1, Class 2 and Class 3 fire protection systems shall generally require a double check valve assembly; except 1) a double check detector assembly shall be required where a hydrant or other point of use exists on the system; or 2) a reduced pressure backflow prevention device shall be required where:

- i. Underground fire sprinkler lines are parallel to and within ten (10) feet horizontally of pipes carrying sewage or significantly toxic materials;
- ii. Premises have unusually complex piping systems;
- iii. 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 devices.

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 device shall be required.

d. 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.

(5) 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.

(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 Ordinance, by a person approved by the Selmer Water System who is knowledgeable in the proper installation. Only licensed sprinkler contractors may install, repair or test backflow prevention devices on fire protection systems.

(b) 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 Selmer Water System, and shall permit direct connection to department test equipment.

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

d. All devices shall be placed in the upright position in a horizontal run of pipe.

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

(f) Reduced Pressure Backflow Prevention devices shall be located a minimum of twelve (12") inches plus the nominal diameter of the device above either; 1) the floor, 2) the top of opening(s) in the enclosure or 3) maximum flood level, whichever is higher. Maximum height above the floor surface shall not exceed sixty (60") inches.

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

(h) 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.

(i) 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 (1") inch.

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

(k) 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.





## Cross Connection Ordinance for the Selmer Water System

### Non-potable Supplies

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 Ordinance. 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***

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

### 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 Selmer Water System 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.

### Penalty; Discontinuance of water supply

(1) Any person who neglects or refuses to comply with any of the provisions of this Ordinance 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 may 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 has been eliminated.

### Provision Applicable

The requirements contained in this Ordinance shall apply to all premises served by the Selmer Water System and are hereby made part of the conditions required to be met for the Selmer Water System to provide water services to any premises. The provisions of this Ordinance 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 Ordinance is entitled to a due process hearing upon timely request.



Cross Connection Ordinance for the Selmer Water System

Selmer Water System

Adoption Date

March 8, 2016

1<sup>st</sup> Reading passed

February 9<sup>th</sup>, 2016

2<sup>nd</sup> Reading passed

March 8<sup>th</sup>, 2016

Town of Selmer Mayor

John Smith

This the 8<sup>th</sup> day of March, 2016

Attest:

Ann Henderson

Title:

City Recorder Town of Selmer, TN