

Chapter 705

WATER REGULATIONS

ARTICLE I

Cross-Connection Control

Section 705.010. Cross-Connection Control — General Policy. [Ord. No. 828 §I, 10-3-1991]

A. *Purpose.* The purpose of this Article is:

1. To protect the public potable water supply from contamination or pollution by containing within the consumer's internal distribution system or private water system contaminants or pollutants which could backflow through the service connection into the public potable water supply system.
2. To promote the elimination, containment, isolation or control of existing cross-connections, actual or potential, between the public or consumer's potable water system and non-potable water systems, plumbing fixtures and industrial-process systems.
3. To provide for the maintenance of a continuing program of cross-connection control which will systematically and effectively prevent the contamination or pollution of all portable water systems.

B. *Applications.* This Article shall apply to all premises served by the public potable water system of the City of Mound City, Missouri.

C. *Policy.*

1. This Article will be reasonably interpreted by the Water Purveyor. It is the Water Purveyor's 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.
2. The Water Purveyor shall be primarily responsible for protection of the public potable water distribution system from contamination or pollution due to backflow or contaminants or pollutants through the water service connection. The cooperation of all consumers is required to implement and maintain the program to control cross-connections. The Water Purveyor and consumer are jointly responsible for preventing contamination of the water system.
3. If, in the judgment of the Water Purveyor or his/her authorized representative, cross-connection protection is required through either piping modification or installation or an approved backflow prevention device, due notice shall be given to the consumer. The consumer shall immediately comply by providing the required protection at his/her own expenses; and failure, refusal or inability on the part of the

consumer to provide such protection shall constitute grounds for discontinuing water service to the premises until such protection has been provided.

Section 705.020. Definitions. [Ord. No. 828 §II, 10-3-1991]

The following definitions shall apply in the interpretation and enforcement of this Article:

AIR-GAP SEPARATION — 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 overflow 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, but in no case less than one (1) inch.

AUXILIARY WATER SUPPLY — Any water source or system, other than the public water supply, that may be available in the building or premises.

BACKFLOW — The flow, other than the intended direction of flow, of any foreign liquids, gases or substances into the distribution system of a public water supply.

BACKFLOW PREVENTION DEVICE — Any device, method or type of construction intend to prevent backflow into a potable water system.

CONSUMER — The owner or person in control of any premises supplied by or in any manner connected to a public water system.

CONTAINMENT — Protection of the public water supply by installing a backflow prevention assembly or air-gap separation on the main service line to a facility.

CONTAMINATION — An impairment of the quality of the water by sewage, process fluids or other wastes to a degree which could create an actual hazard to the public health through poisoning or through spread of disease by exposure.

CROSS-CONNECTION — Any physical link between a potable water supply and any other substance, fluid or source which makes possible contamination of the potable water supply due to the reversal of flow of the water in the piping or distribution system.

HAZARD, DEGREE OF — An evaluation of the potential risk to public health and the adverse effect of the hazard upon the potable water system.

1. **HAZARD, HEALTH:** Any condition, device or practice in the water supply system and its operation which could create or may create a danger to the health and well-being of the water consumer.
2. **HAZARD, PLUMBING:** A plumbing type cross-connection in a consumer's potable water system that has not been properly protected by a vacuum breaker, air-gap separation or backflow prevention device.
3. **HAZARD, POLLUTIONAL:** An actual or potential threat to the physical properties of the water system or to the potability of the public or the consumer's potable water system but which would constitute a nuisance or be aesthetically objectionable or could cause damage to the system or its appurtenances, but would not be dangerous to health.

4. *HAZARD, SYSTEM*: An actual or potential threat of severe damage to the physical properties of the public potable water system or the consumer's potable water system or of a pollution or contamination which would have a protracted effect on the quality of the potable water in the system.

INDUSTRIAL PROCESS SYSTEM — Any system containing a fluid or solution which may be chemically, biologically or otherwise contaminated or polluted in a form or concentration such as would constitute a health, system, pollutional or plumbing hazard if introduced into a potable water supply.

ISOLATION — Protection of a facility service line by installing a cross-connection control device or air-gap separation on an individual fixture, appurtenance or system.

POLLUTION — The presence of any foreign substance (organic, inorganic or biological) in water which tends to degrade its quality so as to constitute a hazard or impair the usefulness of the water to a degree which does not create an actual hazard to the public health but which does adversely and unreasonably affect such waters for domestic use.

PUBLIC POTABLE WATER SYSTEM — Any publicly or privately owned water system supplying water to the general public which is satisfactory for drinking, culinary and domestic purposes and meets the requirements of the Missouri Department of Natural Resources.

SERVICE CONNECTION — The terminal end of a service line from the public water system. If a meter is installed at the end of the service, then the service connection means the downstream end of the meter.

WATER PURVEYOR — The owner, operator or individual in responsible charge of a public water system.

Section 705.030. Cross-Connections Prohibited. [Ord. No. 828 §III, 10-3-1991]

- A. No water service connection shall be installed or maintained to any premises where actual or potential cross-connections to the public potable or consumer's water system may exist unless such actual or potential cross-connections are abated or controlled to the satisfaction of the Water Purveyor and as required by the laws and regulations of the Missouri Department of Natural Resources.
- B. No connection shall be installed or maintained whereby an auxiliary water supply may enter a public potable or consumer's water system unless such auxiliary water supply and the method of connection and use of such supply shall have been approved by the Water Purveyor and the Missouri Department of Natural Resources.
- C. No water service connection shall be installed or maintained to any premises in which the plumbing system facilities and fixtures have not been constructed and installed using acceptable plumbing practices considered by the Water Purveyor as necessary for the protection of health and safety.

Section 705.040. Survey and Investigations. [Ord. No. 828 §IV, 10-3-1991]

- A. The consumer's premises shall be open at all reasonable times to the Water Purveyor or his/her authorized representative for the conduction of surveys and investigations of water

use practices within the consumer's premises to determine whether there are actual or potential cross-connections to the consumer's water system through which contaminants or pollutants could backflow into the public potable water system.

- B. On request by the Water Purveyor or his/her authorized representative, the consumer shall furnish information on water use practices within his/her premises.
- C. It shall be the responsibility of the water consumer to conduct periodic surveys of water use practices on his/her premises to determine whether there are actual or potential cross-connections to his/her water system through which contaminants or pollutants could backflow into his/her or the public potable water system.

Section 705.050. Type of Protection Required. [Ord. No. 828 §V, 10-3-1991]

- A. The type of protection required by this Article shall depend on the degree of hazard which exists, as follows:
 - 1. An approved air-gap separation shall be installed where the public potable water system may be contaminated with substances that could cause a severe health hazard.
 - 2. An approved air-gap separation or an approved reduced pressure principle backflow prevention assembly shall be installed where the public potable water system may be contaminated with a substance that could cause a system or health hazard.
 - 3. An approved air-gap separation or an approved reduced pressure principle backflow prevention assembly or an approved double-check valve assembly shall be installed where the public potable water system may be polluted with substances that could cause a pollutional hazard not dangerous to health.

Section 705.060. Where Protection Is Required. [Ord. No. 828 §VI, 10-3-1991]

- A. An approved backflow prevention device shall be installed on each service line to a consumer's water system serving premises where, in the judgment of the Water Purveyor or the Missouri Department of Natural Resources, actual or potential hazards to the public potable water system exist. The type and degree of protection required shall be commensurate with the degree of hazard.
- B. An approved air-gap separation or reduced pressure principle backflow prevention device shall be installed at the service connection or within any premises where, in the judgment of the Water Purveyor or the Missouri Department of Natural Resources, 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 may not exist at the time the backflow prevention device is required to be installed. This includes, but is not limited to, the following situations:
 - 1. Premises having an auxiliary water supply, unless the quality of the auxiliary supply is acceptable to the Water Purveyor and the Missouri Department of Natural Resources.
 - 2. Premises having internal cross-connections that are not correctable or intricate

- plumbing arrangements which make it impractical to ascertain whether or not cross-connections exist.
3. Premises where entry is restricted so that inspection for cross-connections cannot be made with sufficient frequency or at sufficiently short notice to assure the cross-connections do not exist.
 4. Premises having a repeated history of cross-connections being established or re-established.
 5. Premises which, due to the nature of the enterprise therein, are subject to recurring modification or expansion.
 6. Premises on which any substance is handled under pressure so as to permit entry into the public water supply or where a cross-connection could reasonably be expected to occur. This shall include the handling of process waters and cooling waters.
 7. Premises where materials of a toxic or hazardous nature are handled such that if backsiphonage or backpressure should occur, a serious health hazard may result.
- C. The types of facilities listed below fall into one (1) or more of the categories of premises where an approved air-gap separation or reduced pressure principle backflow prevention device is required by the Water Purveyor and the Missouri Department of Natural Resources to protect the public water supply and must be installed at these facilities unless all hazardous or potentially hazardous conditions have been eliminated or corrected by other methods to the satisfaction of the Water Purveyor and the Missouri Department of Natural Resources:
1. Aircraft and missile manufacturing plants;
 2. Automotive plants, including those plants which manufacture motorcycles, automobiles, trucks, recreational vehicles and construction and agricultural equipment;
 3. Potable water dispensing stations which are served by a public water system;
 4. Beverage bottling plants including dairies and breweries;
 5. Canneries, packing houses and reduction plants;
 6. Car washes;
 7. Chemical, biological and radiological laboratories including those in high schools, trade schools, colleges, universities and research institutions;
 8. Hospitals, clinics, medical buildings, autopsy facilities, morgues, mortuaries and other medical facilities;
 9. Metal or plastic manufacturing, fabrication, cleaning, plating or processing facilities;
 10. Plants manufacturing paper and paper products;
 11. Plants manufacturing, refining, compounding or processing fertilizer, film, herbicides, natural or synthetic rubber, pesticides, petroleum or petroleum products,

- pharmaceuticals, radiological materials or any chemical which would be a contaminant to the public water system;
12. Commercial facilities that use herbicides, pesticides, fertilizers or any chemical which would be a contaminant to the public water system;
 13. Plants processing, blending or refining animal, vegetable or mineral oils;
 14. Commercial laundries and dye works;
 15. Sewage, stormwater and industrial waste treatment plants and pumping stations;
 16. Waterfront facilities including piers, docks, marinas and shipyards;
 17. Industrial facilities which recycle water;
 18. Restricted or classified facilities or other facilities closed to the supplier of water or the department;
 19. Fire sprinkler systems using any chemical additives;
 20. Auxiliary water systems;
 21. Irrigation systems with facilities for injection or pesticides, herbicides or other chemicals or with provisions for creating back pressure. The backflow assembly may be installed between the customer service line and the irrigation system;
 22. Portable tanks for transporting water taken from a public water system;
 23. Facilities which have pumped or repressurized cooling or heating systems that are served by a public water system; and
 24. Facilities which contain any boiler system and are served by a public water system. The backflow assembly may be installed on the water service line to the boiler.

Section 705.070. Backflow Prevention Devices. [Ord. No. 828 §VII, 10-3-1991]

- A. Any backflow prevention device required by this Article shall be of a model or construction approved by the Water Purveyor and the Missouri Department of Natural Resources.
 1. Air-gap separation to be approved shall be at least twice the diameter of the supply pipe, measured vertically above the top rim of the vessel, but in no case less than one (1) inch.
 2. A double-check valve assembly or a reduced pressure principle backflow prevention device shall be approved by the Water Purveyor and shall appear on the current "list of approved backflow prevention devices" established by the Missouri Department of Natural Resources.
- B. Existing backflow prevention devices approved by the Water Purveyor at the time of installation and properly maintained shall, except for inspection and maintenance requirements, be excluded from the requirements of this Article so long as the Water Purveyor is assured that they will satisfactorily protect the water system. Whenever the

existing device is moved from its present location or requires more than minimum maintenance or when the Water Purveyor finds that the maintenance constitutes a hazard to health, the unit shall be replaced by a backflow prevention device meeting the requirements of this Article.

Section 705.080. Installation. [Ord. No. 828 §VIII, 10-3-1991]

- A. Backflow prevention devices required by this Article shall be installed at a location and in a manner approved by the Water Purveyor and shall be installed at the expense of the water consumer.
- B. Backflow prevention devices installed on the service line to the consumer's water system shall be located on the consumer's side of the water meter as close to the meter as is reasonably practical and prior to any other connection.
- C. Backflow prevention devices shall be located so as to be readily accessible for maintenance and testing, protected from freezing, and where no part of the device will be submerged or subject to flooding by any fluid.

Section 705.090. Inspection and Maintenance. [Ord. No. 828 §IX, 10-3-1991]

- A. It shall be the duty of the consumer at any premises on which backflow prevention devices required by this Article are installed to have inspection, tests and overhauls made in accordance with the following schedule or more often where inspections indicate a need.
 - 1. Air-gap separations shall be inspected at the time of installation and at least every twelve (12) months thereafter.
 - 2. Double-check valve assemblies shall be inspected and tested for tightness at the time of installation and at least every twelve (12) months thereafter. They shall be dismantled, inspected internally, cleaned and repaired whenever needed and at least every thirty (30) months.
 - 3. Reduced pressure principle backflow prevention devices shall be inspected and tested for tightness at the time of installation and at least every twelve (12) months thereafter. They shall be dismantled, inspected internally, cleaned and repaired whenever needed and at least every five (5) years.
- B. Inspections, tests and overhauls of backflow prevention devices shall be made at the expense of the water consumer and shall be performed by a State of Missouri certified backflow prevention device tester.
- C. Whenever backflow prevention devices required by this Article are found to be defective, they shall be repaired or replaced at the expense of the consumer without delay.
- D. The water consumer must maintain a complete record of each backflow prevention device from purchase to retirement. This shall include a comprehensive listing that includes a record of all tests, inspections and repairs. Records of inspections, tests, repairs and overhauls shall be made available to the Water Purveyor upon request.
- E. Backflow prevention devices shall not be by-passed, made inoperative, removed or

otherwise made ineffective without specific authorization by the Water Purveyor.

Section 705.100. Violations. [Ord. No. 828 §X, 10-3-1991]

- A. The Water Purveyor shall deny or discontinue, after reasonable notice to the occupants thereof, the water service to any premises wherein any backflow prevention device required by this Article is not installed, tested and maintained in a manner acceptable to the Water Purveyor or if it is found that the backflow prevention device has been removed or by-passed or if an unprotected cross-connection exists on the premises.
- B. Water service to such premises shall not be restored until the consumer has corrected or eliminated such conditions or defects in conformance with this Article to the satisfaction of the Water Purveyor.

ARTICLE II
Lead Ban Policy

Section 705.110. Lead Ban — General Policy. [Ord. No. 916 §1, 12-5-1996]

- A. *Purpose.* The purpose of this Article is:
 - 1. To ban the use of lead materials in the public drinking water system and private plumbing connected to the public drinking water system; and
 - 2. To protect City residents from lead contamination in the City's public drinking water system and their own private plumbing systems.
- B. *Application.* This Article shall apply to all premises served by the public drinking water system of the City of Mound City.
- C. *Policy.*
 - 1. This Article will be reasonably interpreted by the Water Purveyor. It is the purveyor's intent to ban the use of lead base material in the construction or modification of the City's drinking water system or private plumbing connected to the City system. The cooperation of all consumers is required to implement the lead ban.
 - 2. If, In the judgment of the Water Purveyor or his/her authorized representative, lead base materials have been used in new construction or modifications after January 1, 1989, due notice shall be given to the consumer. The consumer shall immediately comply by having the lead base materials removed from the plumbing system and replaced with lead-free materials. If the lead base materials are not removed from the plumbing system, the Water Purveyor shall have the right to discontinue water service to the premises.

Section 705.120. Definitions. [Ord. No. 916 §2, 12-5-1996; Ord. No. 1250 §§1 — 2, 12-9-2014]

The following definitions shall apply in the interpretation and enforcement of this Article:

CONSUMER — The owner or person in control of any premises supplied by or in any manner connected to a public water system.

EXEMPTIONS

1. Pipes, pipe fittings, plumbing fittings, or fixtures, including backflow preventers, that are used exclusively for non-potable services such as manufacturing, industrial processing, irrigation, outdoor watering, or any other uses where the water is not anticipated to be used for human consumption; or
2. Toilets, bidets, urinals, fill valves, flush-o-meter valves, tub fillers, shower valves, service saddles, or water distribution main gate valves that are two (2) inches in diameter or larger.

LEAD-BASED MATERIALS — Any material containing lead in excess of the quantities specified in the definition of "lead free."

LEAD FREE

1. *In general.*
 - a. When used with respect to solder and flux, refers to solders and flux containing not more than 0.2 percent (0.2%) lead; and
 - b. When used with respect to pipes and pipe fittings, refers to pipes and pipe fittings containing not more than 0.25 percent (0.25%) lead.
2. *Calculation.* The weighted average lead content of a pipe, pipe fitting, plumbing fitting, or fixture shall be calculated by using the following formula: For each wetted component, the percentage of lead in the component shall be multiplied by the ratio of the wetted surface area of that component to the total wetted surface area of the entire product to arrive at the weighted percentage of lead of the component. The weighted percentage of lead of each wetted component shall be added together, and the sum of these weighted percentages shall constitute the weighted average lead content of the product. The lead content of the material used to produce wetted components shall be used to determine compliance with Subsection (1)(b). For lead content of materials that are provided as a range, the maximum content of the range shall be used.

PUBLIC DRINKING WATER SYSTEM — Any publicly or privately owned water system supplying water to the general public which is satisfactory for drinking, culinary and domestic purposes and meets the requirements of the Missouri Department of Natural Resources.

WATER PURVEYOR — The owner, operator or individual in responsible charge of a public water system.

Section 705.130. Lead Banned From Drinking Water Plumbing. [Ord. No. 916 §3, 12-5-1996]

- A. No water service connection shall be installed or maintained to any premises where lead base materials were used in new construction or modifications of the drinking water plumbing after January 1, 1989.
- B. If a premises is found to be in violation of Subsection (A), water service shall be discontinued until such time that the drinking water plumbing is lead free.