

ORDINANCE NO. 112221

AN ORDINANCE BY THE CITY COUNCIL OF SHAMROCK, TEXAS, AMENDING THE CITY OF SHAMROCK PUBLIC UTILITIES CODE TO INCLUDE A NEW CROSS-CONNECTION CONTROL PROGRAM TO PREVENT POTABLE WATER CONTAMINATION AND REPEALING ANY AND ALL PREVIOUS ORDINANCES, ORDERS, OR RESOLUTIONS IN CONFLICT AND ESTABLISHING AN EFFECTIVE DATE.

WHEREAS, it is the declared policy of the City of Shamrock, Texas to promote the health, safety, and welfare of the public; and,

WHEREAS, the City Council has found and determined that it is in the best interests of the public to protect the City's potable water system from contamination or pollution by preventing contaminants and pollutants originating from customers water systems from entering into the City's potable water system that may jeopardize the health, safety, and welfare of the customers; and,

WHEREAS, the City of Shamrock is implementing the rules promulgated by the Texas Commission on Environmental Quality in Title 30 Texas Administration Code, Chapter 290, to comply with Texas Health and Safety Code, Chapter 341, subchapter C, and the Federal Safe Drinking Water Act, 42 U.S.C.A. section 300f, et seq; and,

WHEREAS, the City of Shamrock hereby establishes a cross-connection control program of uniform regulations governing the installation, testing, and certification of backflow prevention assemblies and technicians; and,

WHEREAS, the City of Shamrock hereby establishes the requirements to permit and control the installation, routine maintenance, and inspection of backflow prevention assemblies; and,

WHEREAS, the meeting at which this Ordinance is considered is open to the public as required by law, and the public notice of the time, place and purpose of said meeting was given as required by Chapter 551, Texas Government Code, as amended;

NOW, THEREFORE BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF SHAMROCK, TEXAS, THAT:

SECTION 1:

The Public Utilities Code of the City of Shamrock, Texas, is hereby amended to include a Cross-Connection Control Program and is amended to read as according to the following attached pages concerning the cross-connection control program:

SECTION 2:

All ordinances, orders, resolutions or amendments thereto in conflict with the provisions of this ordinance are hereby repealed to the extent of that conflict.

SECTION 3:

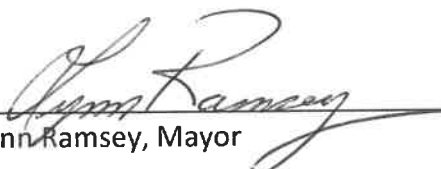
In the event that any section, paragraph, clause or provision of this ordinance shall for any reason be held to be invalid or unenforceable, the invalidity or unenforceability of such section, paragraph, clause or provision shall not affect any of the remaining provisions of this ordinance.

SECTION 4:

This ordinance shall be in full force and effective from and after its date of passage.

PASSED AND APPROVED by the City Council of the City of Shamrock, Texas on this 22nd day of November 2021.

APPROVED:


Lynn Ramsey, Mayor

ATTEST:


April Lilly, City Secretary
City of Shamrock

Cross-connection control program:

(a) Cross-connection control – General policy

(1) Purpose.

The purpose of this ordinance is:

- a. To protect the public potable water supply of the city from the possibility of contamination or pollution by isolating within the customers internal distribution system(s) or the customers private water system(s) such contaminants or pollutants that could backflow into the public water system.
- b. To promote the elimination or control of existing cross connections, actual or potential, between the customers in-plant potable water system(s) and non-potable water systems, plumbing fixtures, and industrial piping systems.
- c. 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.

(2) General.

- a. No water service connection shall be made to any establishment where a potential or actual contamination hazard exists unless the water supply is protected in accordance with the Texas Commission on Environmental Quality Rules and Regulations for Public Water Systems (TCEQ Rules) and this section. The water purveyor shall discontinue water service if a required backflow prevention assembly is not installed, maintained and tested in accordance with the TCEQ Rules and this section.

(b) Definitions

Air gap (AG) means the unobstructed vertical distance through free atmosphere between the lowest opening from any pipe or faucet conveying water or waste to a tank, plumbing fixture, receptor, or other assembly and the flood level rim of the receptacle. These vertical physical separations must be at least twice the diameter of the water supply outlet, never less than 1 inch (25 mm). Local codes and regulations may have more stringent requirements.

Air gap fitting means a physical device engineered to produce an air gap separation as defined above.

Approved means accepted by the authority responsible as meeting an applicable specification as stated or cited in the ordinance, or as suitable for the proposed use.

Assembly means an assemblance of one (1) or more approved body components and including approved shutoff valves.

Atmospheric pressure means the pressure exerted by the atmosphere at any point. Such pressure decreases as the elevation of the point above sea level increases. One (1) atmosphere is equivalent to 14.7 psi (101.4 kPa), 29.92 in. (760 mm) of mercury, or 33.9 (10.1 m) of water column at average sea level.

Auxiliary water supply means any water supply on or available to the premises other than the purveyor's approved public water supply. These auxiliary waters may include water from another purveyor's public potable water supply or any natural source(s), such as a well, lake, spring, river, stream, harbor, and so forth, 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 sanitary control.

Atmospheric vacuum breaker (AVB) means the AVB which consists of a float check, a check seat, and an air inlet port. A shutoff valve immediately upstream may be an integral part of the assembly. The AVB is designed to allow air to enter the downstream water line to prevent backsiphonage. This unit may never be subjected to a backpressure condition or have a downstream shutoff valve or be installed where it will be in continuous operation for more than twelve (12) hours.

Backflow means the undesirable reversal of flow in a potable water distribution system as a result of a cross connection.

Backpressure means a pressure, higher than the supply pressure, caused by a pump, elevated tank, boiler, air/steam pressure, or any other means, which may cause backflow.

Backsiphonage means backflow caused by negative or reduced pressure in the supply piping.

Backflow preventer means an assembly or means designated to prevent backflow in the potable water supply as follows:

Air gap. The unobstructed vertical distance through the free atmosphere between the lowest opening from any pipe or faucet conveying water or waste to a tank, plumbing fixture, receptor, or other assembly and the flood level rim of the receptacle. These vertical, physical separations must be at least twice the diameter of the water supply outlet, never less than 1 inch (25 mm).

Reduced-pressure backflow-prevention assembly. The approved reduced-pressure principle backflow-prevention assembly consists of two (2) independently acting approved check valves together with a hydraulically operation, mechanically independent pressure differential relief valve located between the check valves and below the first check valve. These units are located between two (2) tightly closing resilient-seated shutoff valves as an assembly and equipped with properly located resilient-seated test cocks.

Double check valve assembly. The approved double check valve assembly consists of two (2) internally loaded check valves, either spring loaded or internally weighted, installed as a unit between two (2) tightly closing resilient-seated shutoff valves and fittings with properly located resilient-seated test cocks. This assembly shall only be used to protect against a non-health hazard (that is, a pollutant).

Certified backflow-prevention assembly tester means a person who is certified by the approving authority to test, repair, and maintain backflow-prevention assemblies.

Consumer means the owner or operator having a service from a public potable water system.

Contamination means an impairment of a potable water supply by the introduction or admission of any foreign substance that degrades the quality and creates a health hazard.

Critical level means a reference line representing the level of the check valve seat within a backsiphonage control unit. It is used to establish the height of the unit above the highest outlet or flood level rim.

Cross connection means a connection or a potential connection between any part of a potable water system and any other environment containing other substances in a manner that, under any circumstances, would allow such substances to enter the potable water system. Other substances may be gases, liquids, or solids, such as chemicals, waste products, steam, water from other sources (potable or non-potable), or any matter that may change the color or add odor to the water. By-pass arrangements, jumper connections, removable sections, swivel or changeover assemblies, or any other temporary or permanent connecting arrangement through which backflow may occur are considered to be cross connections.

Cross connections – controlled means a connection between a potable water system and a non-potable 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.

Cross connection control by containment means the installation of an approved backflow-prevention assembly at the water service connection to any customers premises, where

it is physically and economically unfeasible to find and permanently eliminate or control all actual or potential cross connections within the customers 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 customers water system where there are actual or potential cross connections that cannot be effectively eliminated or controlled at the point of the cross connection.

Double check valve assembly (DCVA) means an assembly composed of two (2) independently acting, approved check valves, including tightly closing resilient-seated shutoff valves located at each end of the assembly and fitting with properly located resilient-seated test cocks. This assembly shall only be used to protect against a non-health hazard (that is, a pollutant).

Effective opening means the minimum cross-sectional area at the point of water supply discharge, measured or expressed in terms of the diameter of a circle, or if the opening is not circular, the diameter of a circle of equivalent cross-sectional area.

Flood level rim means that level from which liquid in plumbing fixtures, appliances, or vats could overflow to the floor, when all drain and overflow openings built into the equipment are obstructed.

Hazard, degree of. The term is derived from an evaluation of the potential risk to public health and the adverse effect of the hazard upon the potable water system and includes the following:

- (1) Hazard – health. A cross connection or potential cross connection involving any substance that could, if introduced in the potable water supply, cause death, illness, spread disease, or have a high probability of causing such effects.
- (2) Hazard – plumbing. A plumbing-type cross connection in a consumers potable water system that has not been properly protected by an approved air gap or an approved backflow-prevention assembly.
- (3) Hazard – non-health. A cross connection or potential cross connection involving any substance that generally would not be a health hazard but would constitute a nuisance or be aesthetically objectionable, if introduced into the potable water supply.
- (4) Hazard – system. An actual or potential threat of sever damage to the physical properties of the public potable water system or the consumers potable water system or of a pollution or contamination that would have a protracted effect on the quality of the potable water in the system.

Industrial fluids system means any system containing a fluid or solution that may be chemically, biologically, or otherwise contaminated or polluted in a form or concentration, such as would constitute a health, system, pollution, or plumbing hazard, if introduced into an approved water supply. This may include, but not be limited to: Polluted or contaminated waters; all types of process waters and used waters originating from the public potable water system that may have deteriorated in sanitary quality; chemicals in fluid form; plating acids and alkalizers; circulating cooling waters connected to an open cooling tower; and/or cooling towers that are chemically or biologically treated or stabilized with toxic substances; contaminated natural waters, such as wells, springs, streams, rivers, bays, harbors, seas, irrigation canals or systems, and so forth; pits, gases, glycerin, paraffins, caustic and acid solutions, and other liquid and gaseous fluids used in industrial or other purposes for fire-fighting purposes.

Internal isolation means fixture isolation and/or isolation of an area or zone. Isolation at the fixture means installing an approved backflow preventer at the source of the potential contamination. Area or zone isolation is confining the potential source of contamination within a specific area.

Non-health hazard means a cross-connection or potential cross-connection involving any substance that generally would not be a health hazard but would constitute a nuisance, or be aesthetically objectionable, if introduced into the potable water supply.

Pollution means the presence of any foreign substance in water that tends to degrade its quality so as to constitute a non-health hazard or impair the usefulness of the water.

Potable water means water that is safe for human consumption as described by the public health authority having jurisdiction.

Premises isolation means preventing backflow into a public water system from a user's premises by installing a suitable backflow preventer at the user's connection.

Pressure vacuum breaker assembly (PVB) means an assembly consisting of an independently operating internally loaded check valve, an independently operating loaded air inlet valve located on the discharge side of the check valve, with properly located resilient-seated test cocks and tightly closing resilient-seated shutoff valves attached at each end of the assembly designed to operate under pressure for prolonged periods of time to prevent backsiphonage. The pressure vacuum breaker may not be subjected to any backpressure.

Reduced-pressure principle backflow-prevention assembly (RPBA) means the approved reduced-pressure principle backflow-prevention assembly consisting of two (2) independently acting approved check valves together with a hydraulically operating,

mechanically independent pressure differential relief valve located between the check valves and below the first check valve. These units are located between the two (2) tightly closing resilient-seated shutoff valves as an assembly and are equipped with properly located resilient-seated test cocks.

Service connection means the terminal end of a service connection from the public potable water system, that is, where the water purveyor loses jurisdiction and sanitary control over the water at its point of delivery to the customers water system. If a meter is installed at the end of the service connection, then the service connection shall mean the downstream end of the meter. There should be no unprotected takeoffs from the service line ahead of any meter or backflow-prevention assembly located at the point of delivery to the customers water system. Service connection shall also include water service connection from a fire hydrant and all other temporary or emergency water service connections from the public potable water system.

Water – non-potable means water that is not safe for human consumption or that is of questionable quality.

Water official means the city administrator or his/her designated representative in charge of the water department is invested with the authority and responsibility for the implementation of an effective cross-connection control program and for the enforcement of the provisions of this ordinance.

Water purveyor means the owner or operator of a public potable waterworks system.

Water – used means any water supplied by a water purveyor from a public potable water system to a consumer's water system after it has passed through the point of delivery and is no longer under the sanitary control of the water purveyor.

(c) Backflow prevention assembly installation, testing and maintenance

- (1) All backflow prevention assemblies shall be tested upon installation by a recognized backflow prevention assembly tester and certified to be operating within specifications. Backflow prevention assemblies which are installed to provide protection against health hazards must also be tested and certified to be operating within specifications at least annually by a recognized backflow prevention assembly tester.
- (2) All backflow prevention assemblies shall be installed and tested in accordance with the manufacturer's instructions, the American Water Works Association's Recommended Practice for Backflow Prevention and Cross-Connection Control (Manual M14) or The University of Southern California Manual of Cross-Connection Control.

- (3) Assemblies shall be repaired, overhauled, or replaced at the expense of the customer whenever said assemblies are found to be defective. Original forms of such tests, repairs, and overhauls shall be kept and submitted to the City of Shamrock within five (5) working days of the test, repair or overhaul of each backflow prevention assembly.
- (4) No backflow prevention assembly or device shall be removed from use, relocated, or other assembly or device substituted without the approval of the city. Whenever the existing assembly or device is moved from the present location or cannot be repaired, the backflow assembly or device shall be replaced with a backflow prevention assembly or device that complies with this section. The American Water Works Association's Recommended Practice for Backflow Prevention and Cross-Connection Control (Manual M14), current addition, University of Southern California Manual of Cross-Connection Control, current addition, or the current Plumbing Code adopted by the City of Shamrock, whichever is more stringent.
- (5) Test gauges used for backflow prevention assembly testing shall be calibrated at least annually in accordance with The American Water Works Association's Recommended Practice for Backflow Prevention and Cross-Connection Control, current addition. A copy of the current calibration form must be submitted to the city along with the completed report of each test, repair, or overhaul of the backflow prevention assembly.
- (6) A recognized backflow prevention assembly tester must hold a current endorsement from the Texas Commission on Environmental Quality.