

ORDINANCE NO. 3325

AN ORDINANCE OF THE CITY OF MESQUITE, TEXAS, AMENDING CHAPTER 5, BUILDINGS AND CONSTRUCTION, ARTICLE VI OF THE CODE OF THE CITY OF MESQUITE BY ADDING A NEW DIVISION 5.5 ENTITLED "CONTROL OF BACKFLOW AND CROSS-CONNECTIONS" PROVIDING WATER SYSTEM REQUIREMENTS; AMENDING SECTION 16-4 TO ADD FAILURE TO COMPLY WITH SUCH BACKFLOW AND CROSS-CONNECTION PROVISIONS AS GROUNDS FOR TERMINATION OF SERVICES TO CUSTOMER; PROVIDING FOR A PENALTY NOT TO EXCEED TWO THOUSAND DOLLARS (\$2,000.00) FOR EACH OFFENSE; PROVIDING A SEVERABILITY CLAUSE; AND DECLARING AN EMERGENCY.

WHEREAS, the City Council of the City of Mesquite, Texas, has determined that it is in the best interest of the City and its citizens to amend Chapter 5, Article VI of the Code of the City of Mesquite to add provisions for Control of Backflow and Cross-connections.

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

SECTION 1. That Chapter 5, Article VI of the Code of the City of Mesquite, Texas, is hereby amended by adding Division 5.5, Control of Backflow and Cross-connections to read as follows, in all other respects said Code, Chapter, and Article to remain in full force and effect:

DIVISION 5.5 CONTROL OF BACKFLOW
AND CROSS-CONNECTIONS

Sec. 5-281. Definitions.

The following words, terms and phrases, when used in this division, shall have the meanings ascribed to them in this section, except when the context clearly indicates a different meaning:

City Official means the Utilities Superintendent in charge of the Water Department of the City of Mesquite and 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.

Air-gap means 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).

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

Auxiliary Water Supply means any water supply on or available to the premises other than the City of Mesquite'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, spring, river, stream, harbor, and so forth, 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 City of Mesquite does not have sanitary control.

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, or any other means that may cause backflow.

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

Backflow Preventor means an assembly or means designed to prevent backflow, such as an air-gap, reduced-pressure backflow prevention assembly or double check valve assembly.

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.

Controlled Cross-connection means a connection between a potable water system and a non-potable water system with an approved backflow preventor properly installed and maintained so that it will continuously afford the protection commensurate with the degree of hazard.

Cross-connection means a connection or 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.

Cross-connection Control by Containment means the installation of an approved backflow preventor at the water service connection to any customer's premises, where it is physically and economically unfeasible to find and permanently eliminate or control all actual or potential cross-connections within the customer's water system; or it shall mean the installation of an approved backflow preventor on the service line leading to and supplying a portion of a customer's 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 means the approved backflow preventor consisting of two internally loaded check valves, either spring loaded or internally weighted, installed as a unit between two 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).

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. Hazards include, but are not limited to, the following types:

- (1) *health hazard* means 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 has a high probability of causing such effects.
- (2) *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.
- (3) *plumbing hazard* means a plumbing-type cross-connection in a consumer's potable water system that has not been properly protected by an approved air-gap or an approved backflow preventor.
- (4) *system hazard* means an actual or potential threat of severe damage to the physical properties of the public potable water system or the customer's 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 pollution or a health, system,

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 alkali's; 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; oils, gases, glycerin, paraffin's, caustic and acid solutions, and other liquid and gaseous fluids used in industrial or other purposes for fire-fighting purposes.

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

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.

Reduced-pressure Backflow Prevention Assembly means the approved backflow preventor consisting of two 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 two tightly closing resilient-seated shutoff valves as an assembly and 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 City of Mesquite loses jurisdiction and sanitary control over the water at its point of delivery to the customer's 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 preventor located at the point of delivery to the customer's 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.

Used Water means any water supplied by the City of Mesquite or other 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.

Sec. 5-282. Purpose.

The purpose of this ordinance is:

(1) To protect the public potable water supply of the City of Mesquite from the possibility of contamination or pollution by isolating within the customer's internal distribution system(s) or the customer's private water system(s) such contaminants or pollutants that could backflow into the public water system;

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

(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.

Sec. 5-283. Responsibility of City Official.

(a) The City Official or his/her designated agent shall be responsible for the protection of the public potable water distribution system from contamination or pollution due to the backflow of contaminants or pollutants through the water service connection.

(b) If, in the judgment of the City Official, an approved backflow preventor is required at the customer's water service connection or within the customer's private water system for the protection of the water system, the City Official or his/her designated agent shall give notice in writing to said customer to install such an approved backflow preventor(s) at specific location(s) on customer's premises.

(c) The customer shall immediately install an approved backflow preventor at customer's own expense and failure, refusal, or inability on the part of the customer to install, have tested, and maintain said backflow preventor shall constitute grounds for discontinuing water service to the premises until such requirements have been satisfactorily met.

Sec. 5-284. Water system made up of two parts.

(a) The water system shall be considered as made up of two parts: the utility system and the customer system.

(b) The utility system shall consist of the source facilities and the distribution system, and shall include all those facilities of the water system

under the complete control of the utility, up to the point where the customer's system begins.

(c) The source facilities shall include all components of the facilities utilized in the production, treatment, storage, and delivery of water to the distribution system.

(d) The distribution system shall include the network of conduits used for the delivery of water from the source to the customer's system.

(e) The customer's system shall include those parts of the facilities beyond the termination of the utility distribution system that are utilized in conveying utility-delivered domestic water to points of use.

Sec. 5-285. Policy.

No water service connection to any premises shall be installed or maintained unless the water supply is protected as required by state laws and regulations and this division. Service of water to any premises shall be discontinued by the City of Mesquite if a backflow preventor required by this ordinance is not installed, tested, and maintained, or if it is found that a backflow preventor has been removed or bypassed, or if an unprotected cross connection exists on the premises. Service will not be restored until such conditions or defects are corrected.

Sec. 5-286. Inspection of customer's system.

(a) The customer's system should be open for inspection at all reasonable times to authorized representatives of the City Water Department to determine whether cross connections or other structural or health hazards, including violations of these regulations, exist.

(b) When such a hazard becomes known, the City Official shall deny or immediately discontinue service to the premises by providing for a physical break in the service line until the customer has corrected the condition(s) in conformance with state statutes and City ordinances relating to plumbing and water supplies and the regulations adopted pursuant thereto.

Sec. 5-287. Requirements.

(a) An approved backflow preventor shall be installed on each service line to a customer's system at or near the property line or immediately inside the building being served; but in all cases, before the first branch line leading off the service line wherever the following conditions exist:

- (1) In the case of premises having an auxiliary water supply that is not, or may not be, of safe bacteriological or chemical quality; and that is not acceptable as an additional source by the City Official.
 - (2) In the case of premises on which any industrial fluids or any other objectionable substances are handled in such a fashion as to create an actual or potential hazard to the public water system. This shall include the handling of processed waters and waters originating from the utility system that have been subject to deterioration in quality.
 - (3) In the case of premises having:
 - a. internal cross connections that cannot be permanently corrected and controlled, or
 - b. intricate plumbing and piping arrangements or where entry to all portions of the premises is not readily accessible for inspection purposes, making it impracticable or impossible to ascertain whether or not uncontrolled cross connections exist.
- (b) The type of backflow preventor required under subsection (a)(1), (a)(2) and (a)(3) above shall depend upon the degree of hazard that exists as follows:
- (1) In the case of any premises where there is an auxiliary water supply as stated in subsection (a)(1) of this section and it is not subject to any of the following rules, the public water system shall be protected by an approved air-gap separation or an approved reduced-pressure backflow prevention assembly.
 - (2) In the case of any premises where there is water or a substance that would be objectionable, but not a health hazard, if introduced into the public water system, an approved double check valve assembly shall protect the public water system.
 - (3) In the case of any premises where there is any material dangerous to health that is handled in such a fashion as to create an actual or potential hazard to the public water system, the public water system shall be protected by an approved air-gap separation or an approved reduced-pressure backflow prevention assembly. Examples of premises where these conditions may exist include sewage treatment plants, sewage pumping stations,

chemical manufacturing plants, hospitals, mortuaries, and plating plants.

- (4) In the case of any premises where there are "uncontrolled" cross-connections, either actual or potential, the public water system shall be protected by an approved air-gap separation or an approved reduced-pressure backflow prevention assembly at the service connection.
- (5) In the case of any premises where, because of security requirements or other prohibitions or restrictions, it is impossible or impractical to make a complete in-plant cross-connection survey, the public water system shall be protected by either an approved air-gap separation or an approved reduced-pressure backflow prevention assembly on each service to the premises.
- (6) In the case of any premises where, in the opinion of the Utilities Superintendent, an undue health hazard exists because of the presence of extremely toxic substances, the Utilities Superintendent may require an air-gap at the service connection to protect the public water system. This requirement will be at the discretion of the City Official and is dependent on the degree of hazard.

Sec. 5-288. Use of approved backflow prevention assemblies.

(a) Any backflow prevention assembly that is required herein shall be an approved backflow prevention assembly of a model and size approved by the City Official.

(1) The term approved backflow prevention assembly shall mean an assembly that:

a. has been manufactured in full conformance with the standards established by the American Water Works Association ("AWWA") titled:

AWWA C510-89 - Standard for Double Check Valve Backflow Prevention Assembly;

AWWA C511-89 - Standard for Reduced-Pressure Principle Backflow Prevention Assembly; and

b. has met completely the laboratory and field performance specifications of the Foundation for Cross-Connection Control and Hydraulic Research ("FCCHR") of the

University of Southern California established by "Specification of Backflow-Prevention Assemblies" Sec. 10 of the most current issue of the Manual of Cross-Connection Control.

(2) The City of Mesquite has adopted said AWWA and FCCHR standards and specifications.

(b) Final approval shall be evidenced by a "Certificate of Approval" issued by an approved testing laboratory certifying full compliance with said AWWA standards and FCCHR specifications.

(1) The following testing laboratory has been qualified by the Utilities Superintendent to test and certify backflow prevention assemblies:

Foundation for Cross-Connection Control
and Hydraulic Research
University of Southern California
University Park
Los Angeles, CA 90089

(2) Testing laboratories, other than the laboratory listed above, will be added to an approved list as the Utilities Superintendent qualifies them.

(c) Backflow prevention assemblies that may be subjected to backpressure or backsiphonage that have been fully tested and have been granted a Certificate of Approval by a qualified laboratory and are listed on the laboratory's current list of approved backflow-prevention assemblies may be used without further testing or qualification.

Sec. 5-289. Annual inspections and maintenance.

(a) It shall be the duty of the customer at any premises where backflow-prevention assemblies are installed to have certified inspections and operational tests made at least once per year. In those instances where the City Official deems the hazard to be great enough, certified inspections may be required at more frequent intervals.

(b) These inspections and tests shall be at the expense of the customer and shall be performed by a backflow inspector certified to test backflow preventors pursuant to section 5-290 by the City Official.

(c) It shall be the duty of the City Official to see that these tests are made in a timely manner. The customer shall notify the City Official in

advance when the tests are to be undertaken so that the City Official may witness the tests if so desired.

(d) These backflow-prevention assemblies shall be repaired, overhauled, or replaced at the expense of the customer whenever said backflow-prevention assemblies are found to be defective. Records of such tests, repairs, and overhaul shall be kept and made available to the City Official.

Sec. 5-290. Backflow inspector.

(a) It shall be unlawful for any person who is not certified by the City to inspect backflow preventors.

(b) Each applicant for certification shall apply in writing on forms furnished for such purpose, along with a fifty-dollar (\$50.00) certification fee, and filed with the Building Official.

Sec. 5-291. Existing backflow-prevention assemblies.

(a) All presently installed backflow-prevention assemblies that do not meet the requirements of this division but were approved assemblies for the purpose described herein at the time of installation and that have been properly maintained, shall, except for the inspection and maintenance requirements under section 5-289 above, be excluded from the requirements of this division so long as the City Official is assured that they will satisfactorily protect the utility system.

(b) Whenever the existing backflow prevention assembly is moved from the present location, requires more than minimum maintenance, or when the City Official finds that the maintenance constitutes a health hazard, the unit shall be replaced by an approved backflow prevention assembly meeting the requirements of this division.

SECTION 2. That Section 16-4 of the Code of the City of Mesquite, Texas, is hereby amended to read as follows:

Sec. 16-4. Disconnection of service upon failure to pay bills generally; repeated discharge of prohibited waste; and failure to comply with backflow and cross-connection requirements.

The following shall be sufficient cause to disconnect any and all services to the water or sanitary sewer mains of the City of Mesquite:

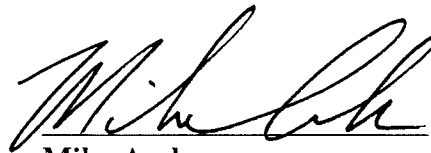
- (1) Failure to pay when due monthly bills for water or sanitary sewer services, including any applicable penalties and charges imposed for failing to pay such services on time;
- (2) Failure to pay the established sewer charge for industrial waste when due, including any surcharge for industrial waste discharged to the sanitary sewer mains as established in section 16-91;
- (3) Repeated discharge of prohibited waste to the sanitary sewer; and
- (4) Failure to install, test, or maintain backflow preventors or comply with any other requirements as set forth in Chapter 5, Article VI, Division 5.5 relating to backflow and cross-connection provisions.

SECTION 3. That should any word, sentence, clause, paragraph or provision of this ordinance be held to be invalid or unconstitutional the remaining provisions of this ordinance shall remain in full force and effect.

SECTION 4. That any person, firm, or corporation violating any of the provisions or terms of this ordinance shall be deemed to be guilty of a Class C Misdemeanor and upon conviction in the Municipal Court shall be punished by a fine not to exceed Two Thousand Dollars (\$2,000.00) for each offense.

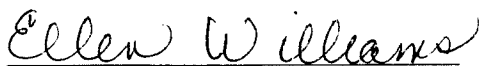
SECTION 4. That the present ordinances of the City of Mesquite are inadequate to adequately regulate Cross-Connections which creates an urgency and an emergency for the preservation of the public health, safety, and welfare and requires that this ordinance shall take effect immediately from and after its passage and publication of said ordinance as the law in such cases provides.

DULY PASSED AND APPROVED by the City Council of the City of Mesquite, Texas, on the 20th day of September, 1999.



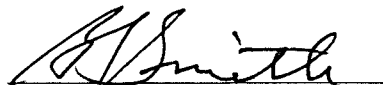
Mike Anderson
Mayor

ATTEST:



Ellen Williams
City Secretary

APPROVED:



B.J. Smith
City Attorney