

CITY OF KENEDY, TEXAS
ORDINANCE NO. 14-3

AN ORDINANCE OF THE CITY OF KENEDY, TEXAS ESTABLISHING RULES AND REGULATIONS TO PROTECT THE PUBLIC POTABLE WATER SUPPLY SYSTEM FROM CONTAMINATION OR POLLUTION BY CROSS CONNECTION OR BACKFLOW FROM PRIVATE WATER SYSTEMS; PROVIDING DEFINITION OF TERMS; DESCRIBING CONDITIONS THAT REQUIRE A BACKFLOW PREVENTION DEVICE AND THE TYPE REQUIRED; PROVIDING REQUIREMENTS FOR ANNUAL TESTING; ESTABLISHING AN EFFECTIVE DATE; PROVIDING A PENALTY FOR VIOLATION; CONTAINING A SAVINGS CLAUSE; AND, REPEALING ALL ORDINANCES IN CONFLICT HEREWITH.

SECTION 1. CROSS-CONNECTION CONTROL – GENERAL POLICY

1.1 Purpose: The purpose of this Ordinance is:

- 1.1.1 To protect the public potable water supply of the City of Kenedy, Texas from the possibility of contamination or pollution by isolating within the consumer's internal distribution system(s) or the consumer's private water supply system(s) such contaminants or pollutants which could backflow into the public water systems; and,
- 1.1.2 To promote the elimination or control of existing cross-connections, actual or potential, between the consumer's in-plant potable water system(s) and non-potable water system(s), plumbing fixtures and industrial piping systems; and,
- 1.1.3 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 potable water systems.

1.2 Responsibility: The City Manager or his 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. If, in the judgment of said City Manager or his designated agent an approved backflow prevention assembly is required (at the consumer's water service connection, or within the consumer's private water system) for the safety of the water system, the City Manager or his designated agent shall give notice in writing to said consumer to install such an approved backflow prevention assembly(s) at a specific location(s) at the consumer's own expense; and, failure, refusal or inability on the part of the consumer to install, have tested and maintained said assembly(s), shall constitute grounds for discontinuing water service to the premises until such requirements have been satisfactorily met.

SECTION 2. DEFINITIONS

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

- 2.1 *Air Gap* means a physical separation between the free flowing discharge ends of a potable water supply pipeline and open or non-pressure receiving vessel. An "approved air gap" shall be at least twice the diameter of the supply pipe measured vertically above the overflow rim of the receiving vessel; in no case less than 1 inch.

- 2.2 *Approved Backflow Prevention Assembly* means an assembly that has been investigated and approved by the administrative authority having jurisdiction. The approval of backflow prevention assemblies by the administrative authority shall be on the basis of a favorable laboratory and field evaluation report by an approved testing laboratory recommending such approval.
- 2.3 *Approved Testing Laboratory* means The Foundation for Cross-Connection Control and Hydraulic Research of the University of Southern California or other laboratory having equivalent capabilities for both the laboratory and field evaluation of backflow prevention assemblies.
- 2.4 *Atmospheric Vacuum Breaker Backsiphonage Prevention Assembly (AVB)*: An assembly containing an air inlet valve, a check seat and an air inlet port (s). (Also known as the non-pressure type vacuum breaker.) The flow of water into the body causes the air inlet valve to close the air port (s). When the flow of water stops the air inlet valve falls and forms a check valve against backsiphonage. At the same time it opens the air inlet port(s) allowing air to enter and satisfy the vacuum. A shutoff valve immediately upstream may be an integral part of the assembly, but there shall be no shutoff valves or obstructions downstream. The assembly shall not be subjected to operating pressure for more than twelve (12) hours in any twenty-four (24) hour period. An atmospheric vacuum breaker is designed to protect against a non-health hazard (i.e. pollutant) or a health hazard (i.e., contaminant) under a backsiphonage condition only.
- 2.5 *Backflow* the undesirable reversal of flow of water or mixtures of water and other liquids, gases or other substances into the distribution pipes of the potable supply of water from any source or sources. See terms Backpressure and Backsiphonage.
- 2.6 *Backflow Prevention Assembly*: any effective assembly used to prevent backflow into a potable water system. The type of assembly used shall be based on the existing or potential degree of hazard and backflow condition. The types of backflow prevention assemblies are:
- Atmospheric Vacuum Breaker Backsiphonage Prevention Assembly
 - Double Check Valve Backflow Prevention Assembly
 - Double Check Detector Backflow Prevention Assembly
 - Double Check Detector Backflow Prevention Assembly– Type II
 - Pressure Vacuum Breaker Backsiphonage Prevention Assembly
 - Reduced Pressure Principle Backflow Prevention Assembly
 - Reduced Pressure Principle Detector Backflow Prevention Assembly
 - Reduced Pressure Principle Detector Backflow Prevention Assembly – Type II
 - Spill-Resistant Pressure Vacuum Breaker Backsiphonage Prevention Assembly
- 2.7 *Backpressure*: Any elevation of pressure in the downstream piping system (by pump, elevation of piping, stream pressure, air pressure, etc.) above the supply pressure at the point of consideration, which would cause or tend to cause a reversal of the normal direction of flow.
- 2.8 *Backsiphonage*: A form of backflow due to a reduction in system pressure, which causes a sub-atmospheric pressure to exist in the water system.
- 2.9 *Certified Backflow Prevention Assembly Tester*: A person who has proven ability in field testing backflow prevention assemblies to the satisfaction of the administrative authority having jurisdiction, either directly or through a third party certification program. Each person who is certified to perform field tests and prepare reports on backflow prevention assemblies shall be

conversant in applicable laws, rules and regulations and have had experience in plumbing or pipe fitting or have other equivalent qualifications in the opinion of the administrative authority having jurisdiction.

- 2.10 *City* means the City of Kenedy, Texas.
- 2.11 *City Manager* means the City Manager appointed by the Kenedy City Council.
- 2.12 *Consumer*: The owner or operator of an on-sit water system(s) having a service from a public potable water system.
- 2.13 *Consumer's Water System(s)*: Any water system located on the consumer's premises whether supplied by a public potable water system or an auxiliary water supply. The system or systems may be either a potable water system or an industrial piping system.
- 2.14 *Contaminant*: Any substance that shall impair the quality of water, in such a way as to create an actual hazard to the public health through poisoning, the spread of disease, etc.
- 2.15 *Cross-Connection*: Any actual or potential connection or structural arrangement between a public or a consumer's potable water system and any other source or system through which it is possible to introduce into any part of the potable system any used water, industrial fluid, gas, or substance other than the intended potable water with which the system is supplied. Bypass arrangements, jumper connections, removable sections, swivel or change-over devices and other temporary or permanent devices through which or because of which backflow can occur are considered to be cross-connections.
- A *direct cross-connection* is a cross-connection which is subject to both backsiphonage and backpressure.
- An *indirect cross-connection* is a cross-connection which is subject to backsiphonage only.
- 2.16 *Degree of Hazard*: Either a pollutant (non-health) or contaminant (health hazard); derived from the assessment of the materials, which may come in contact with the distribution system through a cross-connection.
- 2.17 *Double Check Valve Backflow Prevention Assembly (DC)*: An assembly composed of two independently acting, approved check valves, including tightly closing resilient seated shutoff valves attached at each end of the assembly and fitted with properly located resilient seated test cocks. This assembly shall only be used to protect against a non-health hazard (i.e., pollutant)
- 2.18 *Double Check Detector Backflow Prevention Assembly DCDS*: A specially designed assembly composed of a line-size approved double check valve assembly with a bypass containing a specific water meter and an approved double check valve assembly. The meter shall register accurately for rates of flow up to 2 gpm (gallons per minute) and shall show a registration for all rates of flow. This assembly shall only be used to protect against a non-health hazard (i.e., pollutant). The DCDA is primarily used on fire sprinkler systems.
- 2.19 *Double Check Detector Backflow Prevention Assembly-Type II (DCDA-II)*: A specially designed assembly composed of a line-sized approved double check valve assembly with a bypass around the second check containing a specific water meter and a check valve. The meter shall register

accurately for rates of flow up to 33 gpm and shall show a registration for all rates of flow. This assembly shall only be used to protect against a non-health hazard (i.e., pollutant). The DCDA-II is primarily used on fire sprinkler systems.

- 2.20 *Hospital:* Any institution, place, building, or agency which maintains and operates facilities for one or more persons for the diagnosis, care and treatment of human illness, including convalescence and care during and after pregnancy or which maintains and operates organized facilities for any such purpose, and to which persons may be admitted for overnight stay or longer. The term hospital includes sanitarium, nursing home and maternity home.
- 2.21 *Industrial Fluids:* Any fluid or solution, which may be chemically, biologically or otherwise contaminated or polluted in a form or concentration, which would constitute a hazard if introduced into an approved water supply.
- 2.22 *Industrial Piping System:* Any system used for transmission of or to confine or store any fluid, solid or gaseous substance other than an approved water supply. Such a system would include all pipes, conduits, tanks, receptacles, fixtures, equipment and appurtenances used to produce, convey or store substances which are or may be polluted or contaminated.
- 2.23 *Pollution:* An impairment of the quality of the water to a degree which does not create a hazard to the public health but which does adversely and unreasonable affect the aesthetic qualities of such waters for domestic use.
- 2.24 *Potable Water:* Water from any source which has been investigated by the health agency having jurisdiction, and which has been approved for human consumption.
- 2.25 *Pressure:* A uniform force applied over a surface, measured as a force per unit area. Typically water pressure is measured in pounds per square inch or psi.
- 2.26 *Pressure Vacuum Breaker Backsiphonage Prevention Assembly (PVB):* An assembly containing an independently operating internally loaded check valve and an independently operating loaded air inlet valve located on the discharge side of the check valve. The assembly is to be equipped with properly located resilient seated test cocks and tightly closing resilient seated shutoff valves attached at each end of the assembly. This assembly is designed to protect against a non-health hazard (i.e. pollutant) or a health hazard (i.e., contaminant) under a backsiphonage condition only.
- 2.27 *Public Potable Water System:* Any publicly or privately owned water system operated as a public utility under a valid health permit to supply water for domestic purposes. This system will include all sources, facilities and appurtenances between the source and the point of delivery such as valves, pumps, pipes, conduits, tanks, receptacles, fixtures, equipment and appurtenances used to produce, convey treat or store potable water for public consumption or use.
- 2.28 *Readily Accessible:* Capable of being reached for testing and/or maintenance, without the need of removing any access panel, door, or similar obstruction.
- 2.29 *Reduced Pressure Principle Backflow Prevention Assembly (RP):* An assembly containing two independently acting approved check valves together with a hydraulically operating, mechanically independent pressure differential relief valve located between the check valves and at the same time below the first check valve. The unit shall include properly located resilient seated test cocks and tightly closing resilient seated shutoff valves at each end of the assembly. This assembly is designed to protect against a

non—health hazard (i.e., pollutant) or a health hazard (i.e., contaminant). This assembly shall not be used for backflow protection of sewage or reclaimed water. (Note: Check with local administrative authority for acceptable uses.)

- 2.30 *Reduced Pressure Principle Detector Backflow Prevention Assembly (RPDA)*: A specially designed assembly composed of a line-size approved reduced pressure principle backflow prevention assembly with a specific bypass containing a specific water meter and an approved reduced pressure principle backflow prevention assembly. The meter shall register accurately for rates of flow up to 2 gpm and shall show a registration for all rates of flow. This assembly shall be used to protect against a non-health hazard (i.e., pollutant) or a health hazard (i.e., contaminant). The RPDA is primarily used on fire sprinkler systems.
- 2.31 *Reduced Pressure Principle-Detector Backflow Prevention Assembly – Type LL (RPDA-II)*: A specially designed assembly composed of a line-size approved reduced pressure principle backflow prevention assembly with a specific bypass around the second check valve containing a specific water meter and an approved check valve. The meter shall register accurately for rates of flow up to 2 gpm and shall show a registration for all rates of flow. This assembly shall be used to protect against a non-health hazard (i.e., pollutant) or a health hazard (i.e., contaminant). The RPDA-II is primarily used on fire sprinkler systems.
- 2.32 *Service Connection*: The terminal end of a service connection from the public potable water system, (i.e., when the water purveyor may lose jurisdiction and sanitary control of the water at its point of delivery to the consumer's water system). If a water meter is installed at the end of the service connection, then the service connection shall mean the downstream end of the water meter.
- 2.33 *Spill-Resistant Pressure Vacuum Breaker Backsiphonage Prevention Assembly (SVB)*: An assembly containing an independently operating internally loaded check valve and independently operating loaded air inlet valve located on the discharge side of the check valve. The assembly is to be equipped with a properly located resilient seated test cock, a properly located bleed/vent port, and tightly closing resilient seated shutoff valves attached at each end of the assembly. This assembly is designed to protect against a non-health hazard (i.e., pollutant) or a health hazard (i.e., contaminant) under a backsiphonage condition only.
- 2.34 *Water Supervisor*. The consumer or a person on the premises appointed by the consumer charged with the responsibility of maintaining the consumer's water system(s) on the property free from unprotected cross-connections and other sanitary defects, as required by regulations and laws.
- 2.35 *Water Supplier*. The public or private owner or operator of the potable water system supplying an approved water supply to the public.

SECTION 3. REQUIREMENTS

3.1 Water System

- 3.1.1 The water system shall be considered to be made up of two (2) parts: The Water Supplier's System and the Consumer's System.
- 3.1.2 Water Supplier's System shall consist of the source facilities and the distributions system; and shall include all those facilities of the water system under the complete control of the utility, up to the point where the consumer's system begins.

- 3.1.3 The source shall include all components of the facilities utilized in the production, treatment, storage, and delivery of water to the distribution system.
- 3.1.4 The distribution system shall include the network of waterlines used for the delivery of water from the source to the consumer's system.
- 3.1.5 The consumer's system shall include those parts of the facilities beyond the termination of the water supplier distribution system which are utilized in conveying potable water to points of use.

3.2 Policy

- 3.2.1 No Water service connection to any premise shall be installed or maintained by the City unless the supply is protected as required by the City's laws and regulations and this Ordinance. Service of water to any premises shall be discontinued by the City if a backflow prevention assembly required by this Ordinance is not installed, tested, and maintained, or if it is found that a backflow prevention assembly has been re-moved, bypassed, or if an unprotected cross-connection exists on the premises. Service will not be restored until such conditions or defects are corrected.
- 3.2.2 The consumer's system should be open for inspection at all reasonable times to authorized representatives of the City to determine whether unprotected cross-connections or other structural or sanitary hazards, including violations of these regulations exist. When such a condition becomes known, the City shall deny or immediately discontinue service to the premises by providing for a physical break in the service line until the consumer has corrected the condition(s) in conformance with the City's ordinances relating to plumbing and water supplies and the regulations adopted pursuant thereto.
- 3.2.3 An approved backflow prevention assembly shall also be installed on each service line to a consumer's water 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:
 - a. In the case of premises having an auxiliary water supply which is not or may not be of safe bacteriological or chemical quality and which is not acceptable as an additional source by the City, the public water system shall be protected against backflow from the premises by installing an approved backflow prevention assembly in the service line commensurate with the degree of hazard.
 - b. In the case of premises on which any industrial fluids or any other objectionable substance is handled in such a fashion as to create an actual or potential hazard to the public water system, the public system shall be protected against backflow from the premises by installing an approved backflow prevention assembly in the service line commensurate with the degree of hazard. This shall include the handling of process waters and waters originating from the water supplier's system which have been subject to deterioration in quality.
 - c. In the case of premises having (1) internal cross-connections that cannot be permanently corrected or protected against, or (2) intricate plumbing and piping arrangements or where entry to all portions of the premises is not readily accessible for inspection 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 dangerous cross-connections exist, the public water system shall be protected against backflow from the premises by installing an approved backflow prevention assembly in the service line.

3.2.4 The type of protective assembly required under subsections 3.2.3a, b, and c shall depend upon the degree of hazard which exists as follows:

- a. In the case of any premises where there is an auxiliary water supply as stated in subsection 3.2.3 a. 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 or an approved reduced pressure principle backflow prevention assembly.
- b. In the case of any premise where there is water or substance that would be objectionable but not hazardous to health, if introduced into the public water system, the public water system shall be protected by an approved double check valve backflow prevention assembly.
- c. In the case of any premise where there is any material dangerous to health, which 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 or an approved reduced pressure principle backflow prevention assembly. Examples of premises where these conditions will exist include sewage treatment plants, sewage pumping stations, chemical manufacturing plants, hospitals, and mortuaries and plating plants.
- d. In the case of any premise where there are unprotected cross-connections, either actual or potential, the public water system shall be protected by an approved air gap or an approved reduced pressure principle backflow prevention assembly at the service connection.
- e. In the case of any premise 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 against backflow from the premises by either an approved air gap or an approved reduced pressure principle backflow prevention assembly on each service to the premise.

3.2.5 Any backflow prevention assembly required herein shall be a make, model and size approved by the City. The term "Approved Backflow Prevention Assembly" shall mean an assembly that has been manufactured in full conformance with the standards established by the American Water Works Association entitled: AWWZ/ANSI C10-2007 Standard for Double Check Valve Backflow Prevention Assemblies; AWWA/ANSI C511-2007 Standard for Reduced Pressure Principle Backflow Preventions Assemblies; and, have met completely the laboratory and field performance standard of the Foundation for Cross-Connection Control and Hydraulic Research of the University of Southern California (USC FCCCHR) established in Standards of Backflow Prevention Assemblies Chapter 10 of the most current edition of the Manual of Cross-Connection Control. Said AWWA and SEC FCCCHR standards have been adopted by the City. Final approval shall be evidenced by a "Certificate of Compliance" for the said AWWA standards; or the appearance of the specific make and size on the List of Approved Backflow Prevention Assemblies published by the USC FCCCHR along with a "Certificate of Approval" for the said USC FCCCHR Standards; issued by an approved

testing laboratory. The following testing laboratory has been qualified by the City to test and approve backflow prevention assemblies:

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

Testing laboratories other than the laboratory listed above will be added to an approved list as they are qualified by the City.

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

- 3.2.6 It shall be the duty of the consumer at any premise where backflow prevention assemblies are installed to have a field test performed by a certified backflow prevention assembly tester upon installation and at least once per year. In those instances where the City deems the hazard to be great enough he may require field tests at more frequent intervals, these tests shall be at the expense of the water user and shall be performed by City's personnel or by a certified tester approved by the City. It shall be the duty of the City to see that these tests are made in a timely manner. The consumer shall notify the City in advance when the tests are to be undertaken so that an official representative may witness the field tests if so desired. These assemblies shall be repaired, overhauled or replaced at the expense of the consumer whenever said assemblies are found to be defective. Records of such tests, repairs and overhaul shall be kept and made available to the City.
- 3.2.7 All presently installed backflow prevention assemblies which do not meet the requirements of this section but were approved devices for the purposes described herein at the time of installation and which have been properly maintained, shall, except for the field testing and maintenance requirements under subsection 3.2.6, be excluded from the requirements of these rules so long as the City is assured that they will satisfactorily protect the water purveyor's system. Whenever the existing device is moved from the present location or requires more than minimum maintenance or when the City finds that the maintenance constitutes a hazard to health, the unit shall be replaced by an approved backflow prevention assembly meeting the requirements of this section.
- 3.2.8 The City is authorized to make all necessary and reasonable rules and policies with respect to the enforcement of this ordinance. All such rules and policies shall be consistent with the provisions of this ordinance and shall be effective ten (10) days after being filed with the City Secretary of the City of Kenedy, Texas.

SECTION 4. In addition to the "discontinuation of water service" as prescribed in Sections 1.2 and 3.2.1 herein, any person who shall violate any of the provisions of this Ordinance shall be deemed guilty of a misdemeanor and upon conviction shall be fined in an amount not to exceed \$2,000.00 per occurrence as further described in Section 1-13 of the City's Code of Ordinances.

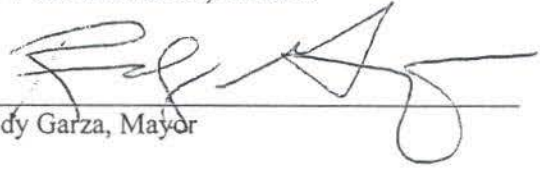
SECTION 5. If any provision of this Ordinance or the application thereof to any person or circumstance is held invalid, such invalidity shall not affect other provisions or applications of this Ordinance which can be effective without the invalid provision or application, and to this end the provisions of this Ordinance are declared to be severable.

SECTION 6. All Ordinances or parts of Ordinances or policies adopted by the City and in conflict with the provisions of this Ordinance hereby adopted are repealed.

SECTION 7. This Ordinance shall become effective upon adoption by the Kenedy City Council.

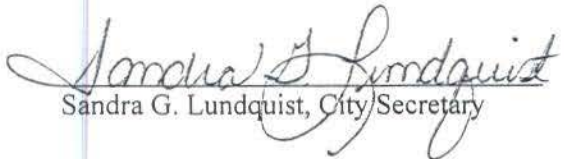
PASSED AND APPROVED by the Kenedy City Council this 11th day of February, 2014.

CITY OF KENEDY, TEXAS



Randy Garza, Mayor

ATTEST:



Sandra G. Lundquist, City Secretary