

CITY OF EDGEWATER
ORDINANCE NO. 2019-02
SERIES OF 2019

AN ORDINANCE AMENDING CHAPTER 13 OF THE EDGEWATER MUNICIPAL CODE, CONCERNING MUNICIPAL UTILITIES, BY REPEALING SECTION 13-2-290, CONCERNING A DUTY TO MAINTAIN BACKFLOW PREVENTION DEVICES AND PREVENT CROSS CONNECTIONS IN THE PUBLIC WATER SYSTEM, AND ADOPTING A NEW DIVISION 6 OF ARTICLE 2 OF CHAPTER 13, CONCERNING COMPREHENSIVE REGULATIONS INTENDED TO PREVENT CROSS CONNECTIONS IN THE PUBLIC WATER SYSTEM.

WHEREAS, the City of Edgewater operates and maintains a public water system that is subject to regulation by the Colorado Department of Public Health and Environment (“CDPHE”); and

WHEREAS, CDPHE has, through regulations adopted pursuant to Colorado Statutes, mandated that operators of public water systems adopt comprehensive regulations designed to prevent contamination of the public water system by backflow from a customer’s water system through the service connection; and

WHEREAS, the City Council desires to amend certain provisions of the City Code to establish such comprehensive regulations in the form recommended by CDPHE; and

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

Section 1. Section 13-2-290 of the Edgewater Municipal Code, concerning a duty to maintain backflow prevention devices and prevent cross-connection, is hereby repealed and is of no further force or effect.

Section 2. Article 2 of Chapter 13 of the Edgewater Municipal Code, concerning the City’s water system, is hereby amended to add a new Division 6, to read as follows:

Division 6

Cross Connection Control

Sec. 13-2-660. Purpose

The purpose of this *Division 6* is to protect the public water system from contaminants or pollutants that could enter the distribution system by backflow from a customer’s water supply system through the service connection.

Sec. 13-2-670. Applicability

This *Division 6* applies to all commercial, industrial and multi-family residential service connections within the City water system and to any persons outside the City who are, by contract or agreement with the City, users of the public water system. This *Division 6* does not apply to single-family-residential service connections unless the City system becomes aware of a cross connection at the single family connection.

Sec. 13-2-680. Definitions

The following words, terms and phrases, when used in this *Division 6*, shall have the meanings ascribed to them in this Section, except where the context clearly indicates a different meaning:

“ACTIVE DATE” means the first day that a backflow prevention assembly or backflow prevention method is used to control a cross-connection in each calendar year.

“AIR GAP” is a physical separation between the free flowing discharge end of a potable water supply pipeline and an open or non-pressure receiving vessel installed in accordance with standard AMSE A112.1.2.

“BACKFLOW” means the undesirable reversal of flow of water or mixtures of water and other liquids, gases or other substances into the public water systems distribution system from any source or sources other than its intended source.

“BACKFLOW CONTAMINATION EVENT” means backflow into a public water system from an uncontrolled cross connection such that the water quality no longer meets the Colorado Primary Drinking Water Regulations or presents an immediate health and/or safety risk to the public.

“BACKFLOW PREVENTION ASSEMBLY” means any mechanical assembly installed at a water service line or at a plumbing fixture to prevent a backflow contamination event, provided that the mechanical assembly is appropriate for the identified contaminant at the cross connection and is an in-line field-testable assembly.

“BACKFLOW PREVENTION METHOD” means any method and/or non-testable device installed at a water service line or at a plumbing fixture to prevent a backflow contamination event, provided that the method or non-testable device is appropriate for the identified contaminant at the cross connection.

“CERTIFIED CROSS-CONNECTION CONTROL TECHNICIAN” means a person who possesses a valid Backflow Prevention Assembly Tester certification from one of the following approved organizations: American Society of Sanitary Engineering (ASSE) or the American Backflow Prevention Association (ABPA). If a certification has expired, the certification is invalid.

“CONTAINMENT” means the installation of a backflow prevention assembly or a backflow prevention method at any connection to the public water system that supplies an auxiliary water system, location, facility, or area such that backflow from a cross connection into the public water system is prevented.

“CONTAINMENT BY ISOLATION” means the installation of backflow prevention assemblies or backflow prevention methods at all cross connections identified within a customer’s water system such that backflow from a cross connection into the public water system is prevented.

“CONTROLLED” means having a properly installed, maintained, and tested or inspected backflow prevention assembly or backflow prevention method that prevents backflow through a cross connection.

“CROSS CONNECTION” means any connection that could allow any water, fluid, or gas such that the water quality could present an unacceptable health and/or safety risk to the public, to flow from any pipe, plumbing fixture, or a customer’s water system into a public water system’s distribution system or any other part of the public water system through backflow.

“MULTI-FAMILY” means a single residential connection to the public water system’s distribution system from which two or more separate dwelling units are supplied water.

“SINGLE-FAMILY” means:

- i. A single dwelling which is occupied by a single family and is supplied by a separate service line; or
- ii. A single dwelling comprised of multiple living units where each living unit is supplied by a separate service line.

“UNCONTROLLED” means not having a properly installed and maintained and tested or inspected backflow prevention assembly or backflow prevention method, or the backflow prevention assembly or backflow prevention method does not prevent backflow through a cross connection.

“WATER SUPPLY SYSTEM” means a water distribution system, piping, connection fittings, valves and appurtenances within a building, structure, or premises. Water supply systems are also referred to commonly as premise plumbing systems.

Sec. 13-2-690. Survey, control and record-keeping.

The City shall have the authority to survey all service connections within the water distribution system to determine if the connection is a cross-connection. The City shall have the authority to control all service connections within the distribution system if the connection is a cross-connection. The City may control any service connections within the distribution system in lieu of a survey as long as the service connection is controlled with an air gap or reduced pressure zone backflow prevention assembly.

The City shall maintain records of cross-connection surveys and the installation, testing and repair of all backflow prevention assemblies installed for containment and containment by isolation purposes. Except as otherwise provided herein, the City shall administer, implement and enforce the provisions of this *Division 6*.

Sec. 13-2-700. Requirements and limitations.

- (1) No owner or occupant of any property within the City that is used for commercial, industrial or multi-family purposes shall allow any cross-connection to the water system unless there is provided an approved backflow prevention device commensurate to the potential hazard, as determined by the City Manager or his or her designee. No person working on a water line connected to the City water system shall make a cross-connection unless there is provided an approved backflow prevention device commensurate to the potential hazard, as determined by the City Manager or his or her designee. No person shall tamper with, modify or in any way damage any backflow prevention device associated with the City water system.
- (2) Commercial, industrial and multi-family service connections shall be subject to a survey for cross connections. If a cross connection is identified, an appropriate backflow prevention assembly and or method shall be installed at the customer’s water service connection within 120 days of its discovery. The assembly shall be installed downstream of the water meter or as close to that location as deemed practical by the City. If the assembly or method cannot be installed within 120 days, the City shall take action to control or remove the cross connection, suspended service to the cross connection, or receive an alternative compliance schedule from the Colorado Department of Public Health and Environment.

- (3) In no case shall it be permissible to have connections or tees between the meter and the containment backflow prevention assembly. In instances where a reduced pressure principle backflow preventer cannot be installed, the owner must install approved backflow prevention devices or methods at all cross-connections within the owner's plumbing system.
- (4) Backflow prevention assemblies and methods shall be installed in a location which provides access for maintenance, testing and repair.
- (5) Reduced pressure principle backflow preventers shall not be installed in manner subject to flooding.
- (6) Provisions shall be made to provide adequate drainage from the discharge of water from reduced pressure principle backflow prevention assemblies. Such discharge shall be conveyed in a manner which does not impact waters of the state.
- (7) All assemblies and methods shall be protected to prevent freezing. Those assemblies and methods used for seasonal services may be removed in lieu of being protected from freezing. The assemblies and methods must be reinstalled and then tested by a certified cross-connection control technician upon reinstallation.
- (8) Where a backflow prevention assembly or method is installed on a water supply system using storage water heating equipment such that thermal expansion causes an increase in pressure, a device for controlling pressure shall be installed.
- (9) All backflow prevention assemblies shall be tested at the time of installation and on an annual schedule thereafter. Such tests must be conducted by a Certified Cross-Connection Control Technician.
- (10) The City shall require inspection, testing, maintenance and as needed repairs and replacement of all backflow prevention assemblies and methods, and of all required installations within the owner's plumbing system in the cases where containment assemblies and or methods cannot be installed.
- (11) All costs for design, installation, maintenance, testing and as needed repair and replacement are to be borne by the customer.
- (12) The provisions of this *Division 6* shall not apply to fire sprinkler systems where the installation of a backflow prevention assembly or method will compromise the integrity of the fire sprinkler system.
- (13) For new buildings, all building plans must show:

- i. Water service type, size and location
- ii. Meter size and location
- iii. Backflow prevention assembly size, type and location
- iv. Fire sprinkler system(s) service line, size and type of backflow prevention assembly.
 - a. All fire sprinkling lines shall have a minimum protection of an approved double check valve assembly for containment of the system.
 - b. All glycol (ethylene or propylene), or antifreeze systems shall have an approved reduced pressure principle backflow preventer for containment.
 - c. Dry fire systems shall have an approved double check valve assembly installed upstream of the air pressure valve.
 - d. In cases where the installation of a backflow prevention assembly or method will compromise the integrity of the fire sprinkler system, the City will measure chlorine residual at a location representative of the service connection once a month and perform periodic bacteriological testing at the site. If the City suspects water quality issues as a result of such testing, the City may require that the fire sprinkler system be flushed periodically.

Sec. 13-2-710. Inspection, testing and repair.

Backflow prevention assemblies or methods shall be tested by a Certified Cross-Connection Control Technician upon installation and tested at least annually, thereafter. The tests shall be made at the expense of the customer.

- a. Any backflow prevention assemblies or methods that are non-testable, shall be inspected at least once annually by a certified cross-connection control technician. The inspections shall be made at the expense of the customer.
- b. As necessary, backflow prevention assemblies or methods shall be repaired and retested or replaced and tested at the expense of the customer whenever the assemblies or methods are found to be defective.
- c. Testing gauges shall be tested and calibrated for accuracy at least once annually.

Sec. 13-2-720. Reporting and recordkeeping.

Copies of records of test reports, repairs and retests, or replacements of backflow prevention assemblies or methods shall be kept by the customer for a minimum of three (3) years. Copies of records of test reports, repairs

and retests shall be submitted to the public water system by mail, facsimile or e-mail by the testing company or testing technician.

Information on test reports shall include, but may not be limited to:

- i. Assembly or method type;
- ii. Assembly or method location;
- iii. Assembly make, model and serial number;
- iv. Assembly size;
- v. Test date;
- vi. Test results including all results that would justify a pass or fail outcome;
- vii. Certified cross-connection control technician certification agency;
- viii. Technician's certification number;
- ix. Technician's certification expiration date;
- x. Test kit manufacturer, model and serial number; and
- xi. Test kit calibration date.

Sec. 13-2-730. Inspection for cross-connection, and testing of assemblies and methods.

(a) The City Manager or his or her designee shall have the right to enter any private property or structure, upon reasonable notice to the owner or occupant of the property, for the purpose of inspecting for the presence of cross-connections and determining compliance with the requirements and limitations of this *Division 6*. Reasonable notice shall be presumed to have been given if the City provides at least seventy-two (72) hours' written notice by mail, posting of the premises, or personal delivery of the need for the entry and the date and time of the entry. This right of entry shall be a condition of water service in order to protect the health, safety and welfare of customers throughout the City's water system.

(b) Each City employee or official involved in any observation, inspection or checking activity as provided for in Subsection (a) above shall carry an identification card signed containing a picture of the employee or official and shall display such card to the owner or occupant at the time a request for entry is made. The owner or occupant shall not be required to permit entry if the employee or official fails to display such a card.

(c) It is unlawful for any owner or occupant of any private property or structure to fail to permit entry to the property or structure by the City Manager or his or her designee for the purposes and in the manner described in Subsections (a) and (b) above. Upon refusal of entry pursuant to this section, the City Manager or his or her designee shall be entitled to a warrant from the Municipal Court to allow entry to the property for the purposes set forth in subsection (a) above.

Sec. 13-2-740. Compliance.

(a) For any identified uncontrolled cross-connections, the City shall complete one of the following actions within 120 days of its discovery:

- i. Control the cross connection by requiring the customer to install backflow prevention assemblies or methods;
 - ii. Remove the cross connection; or
 - iii. Suspend service to the premises containing the cross connection

- (b) The City shall give notice in writing to any owner whose plumbing system has been found to present a risk to the City's distribution system through an uncontrolled cross connection. The notice and order shall state that the owner must install a backflow prevention assembly or method at each service connection to the owner's premises to contain the water service. The notice and order will give a date by which the owner must comply.
 - i. In instances where a backflow prevention assembly or method cannot be installed, the owner must install approved backflow prevention assemblies or methods at all cross-connections within the owner's water supply system. The notice and order will give a date by which the owner must comply.

Sec. 13-2-750. Conflict with other laws.

In the event of a conflict between the provisions of this *Division 6* and any plumbing, mechanical, building, electrical, fire or other code adopted by the City, then the most stringent provisions of each respective code shall prevail.

Section 3. Severability. If any section, paragraph, sentence, clause, or phrase of this ordinance is held to be unconstitutional or invalid for any reason, such decision shall not affect the validity or constitutionality of the remaining portions of this ordinance. The City Council hereby declares that it would have adopted this ordinance and each part or parts hereof irrespective of the fact that any one part or parts be declared unconstitutional or invalid.

Section 4. Safety Clause. The City Council hereby finds, determines, and declares that this ordinance is promulgated under the general police power of the City, that it is promulgated for the health, safety, and welfare of the public, that this ordinance is necessary for the preservation of health and safety and for the protection of public convenience and welfare, and that this ordinance bears a rational relation to the proper legislative object sought to be attained.

Section 5. Effective Date. This ordinance shall become effective in accordance with the Home Rule Charter of the City of Edgewater.

INTRODUCED, READ, PASSED ON FIRST READING AND ORDERED
PUBLISHED this 15th day of January, 2019.

/s/ Laura Keegan
Laura Keegan, Mayor

ATTEST:

/s/ L Pedroza
Lenore Pedroza, CMC, City Clerk

PASSED AND ADOPTED ON SECOND READING AND ORDERED PUBLISHED
this 5th day of February, 2019.

/s/ Laura Keegan
Laura Keegan, Mayor

ATTEST:

/s/ L Pedroza
Lenore Pedroza, CMC, City Clerk

APPROVED AS TO FORM:

/s/ Thad Redaud
Thad Renaud, City Attorney