

**CITY OF EVANS, COLORADO**

**ORDINANCE NO. 726-20**

**AN ORDINANCE AMENDING CHAPTER 13.24 OF THE EVANS MUNICIPAL CODE TO PROTECT THE PUBLIC WATER SYSTEM FROM CONTAMINANTS OR POLLUTANTS THAT COULD ENTER THE DISTRIBUTION SYSTEM BY BACKFLOW**

**WHEREAS**, the City Council of the City of Evans, Colorado (the “City Council”), pursuant to Colorado statute and the Evans City Charter, is vested with the authority of administering the affairs of the City of Evans, Colorado (the “City”); and

**WHEREAS**, on February 18, 2020, the Field Services Section of the Colorado Department of Public Health & Environment’s Water Quality Control Division (CDPHE) performed a sanitary survey at the City of Evans in accordance with the Colorado Primary Drinking Water Regulations, 5 CCR 1002-11 (Regulation 11), Sections 11.38(1)(b) and 11.38(2); and

**WHEREAS**, the CDPHE recommended that the City address several items identified in the survey, including implementing written Backflow Prevention and Cross-Connection Control Program procedures that include all the requirements specified under Regulation 11, Section 11.39(2)(a); and

**WHEREAS**, in furtherance of the CDPHE recommendations following the survey, City staff recommends amending Chapter 13.24 of the Code by repealing and replacing Chapter 13.24; and

**WHEREAS**, by the provisions of this Ordinance, it is the City’s intention to repeal Chapter 13.24 of the Code in its entirety and to adopt a new Chapter 13.24 to adopt updated an Backflow Prevention and Cross-Connection Control Program 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.

**NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF EVANS, COLORADO AS FOLLOWS:**

Section 1. Repeal and Readoption: Chapter 13.24 of the Evans Municipal Code is hereby repealed in its entirety and readopted to read as follows:

Chapter 13.24 - Plumbing Cross Connection Control

13.24.010 - Purpose.

The purpose of this Ordinance 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.

#### 13.24.020 - Authority.

- A. The authority to implement this program is contained in the following statute, legislation and regulations and acts:
  - 1. Section 1-114 and Section 1-114.1 of Title 25 of the Colorado Revised Statutes (CRS);
  - 2. Section 39 of 5 CCR 1002-11, Colorado Primary Drinking Water Regulations;
  - 3. Colorado Plumbing Code.
- B. The public water system supplier shall have the authority to survey all service connections within the distribution system to determine if the connection is a cross-connection.
- C. The public water system supplier may control any service connections within the distribution system in lieu of a survey if the service connection is controlled with an air gap or reduced pressure zone backflow prevention assembly.
- D. The public water system supplier may collect fees for the administration of this program.
- E. The public water system supplier 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.
- F. Except as otherwise provided herein, the public water system supplier shall administer, implement, and enforce the provisions of this Ordinance.

#### 13.24.030 - Applicability.

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

#### 13.24.040– Definitions.

- A. “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.

- B. “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 ASME A112.1.2.
- C. “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.
- D. “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.
- E. “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.
- F. “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.
- G. “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.
- H. “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.
- I. “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.
- J. “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.
- K. “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.

- L. "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.
- M. "SINGLE-FAMILY" means:
  - 1. A single dwelling which is occupied by a single family and is supplied by a separate service line; or
  - 2. A single dwelling comprised of multiple living units where each living unit is supplied by a separate service line.
- N. "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.
- O. "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.

#### 13.24.050– Requirements.

- A. Commercial, industrial, and multi-family service connections shall be subject to a survey for cross connections. If a cross connection has been 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 public water system supplier. If the assembly or method cannot be installed within 120 days the public water system supplier must 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.
- B. In no case shall it be permissible to have connections or tees between the meter and the containment backflow prevention assembly.
- C. 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.

- D. Backflow prevention assemblies and methods shall be installed in a location that provides access for maintenance, testing and repair.
- E. Reduced pressure principle backflow preventers shall not be installed in a manner subject to flooding.
- F. 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 that does not impact waters of the state.
- G. 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.
- H. 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.
- I. 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.
- J. The public water system supplier 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.
- K. All costs for design, installation, maintenance, testing and as needed repair and replacement are to be borne by the customer.
- L. No grandfather clauses exist except for fire sprinkler systems where the installation of a backflow prevention assembly or method will compromise the integrity of the fire sprinkler system.
- M. For new buildings, all building plans must be submitted to the public water system supplier and approved prior to the issuance of water service. Building plans must show:
  - 1. Water service type, size, and location
  - 2. Meter size and location
  - 3. Backflow prevention assembly size, type, and location
  - 4. Fire sprinkler system(s) service line, size, and type of backflow prevention assembly.

5. All fire sprinkling lines shall have a minimum protection of an approved double check valve assembly for containment of the system.
6. All glycol (ethylene or propylene), or antifreeze systems shall have an approved reduced pressure principle backflow preventer for containment.
7. Dry fire systems shall have an approved double check valve assembly installed upstream of the air pressure valve.
8. In cases where the installation of a backflow prevention assembly or method will compromise the integrity of the fire sprinkler system the public water system supplier can choose to not require the backflow protection. The public water system supplier will measure chlorine residual at location representative of the service connection once a month and perform periodic bacteriological testing at the site. If the public water system supplier suspects water quality issues the public water system supplier will evaluate the practicability of requiring that the fire sprinkler system be flushed periodically.

13.24.060– Inspection, Testing and Repair.

- A. 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.
  1. 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.

13.24.070– Reporting and Recordkeeping.

- A. Copies of records of test reports, repairs and retests, or replacements shall be kept by the customer for a minimum of three (3) years.
- B. Copies of records of test reports, repairs and retests shall be submitted to the public water system supplier by uploading results to Backflow Solutions Inc. website at [www.bsionline.com](http://www.bsionline.com) by the testing company or testing technician.
- C. Information on test reports shall include, but may not be limited to:
  1. Assembly or method type
  2. Assembly or method location
  3. Assembly make, model and serial number
  4. Assembly size

5. Test date
6. Test results including all results that would justify a pass or fail outcome
7. Certified cross-connection control technician certification agency
8. Technician's certification number
9. Technician's certification expiration date
10. Test kit manufacturer, model, and serial number
11. Test kit calibration date

#### 13.24.080– Right of entry.

A properly credentialed representative of the public water system supplier shall have the right of entry to survey all buildings and premises for the presence of cross-connections for possible contamination risk and for determining compliance with this section. This right of entry shall be a condition of water service to protect the health, safety, and welfare of customers throughout the public water system's distribution system.

#### 13.24.090– Compliance.

- A. Customers shall cooperate with the installation, inspection, testing, maintenance, and as needed repair and replacement of backflow prevention assemblies and with the survey process. For any identified uncontrolled cross-connections, the public water system supplier shall complete one of the following actions within 120 days of its discovery:
  1. Control the cross connection
  2. Remove the cross connection
  3. Suspend service to the cross connection
- B. The public water system supplier shall give notice in writing to any owner whose plumbing system has been found to present a risk to the public water system'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. 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.

#### 13.24.100 – Violations and Penalties.

Any violation of the provisions of this ordinance, shall, upon conviction be punishable as provided in all applicable statutes, laws, and regulations.

#### 13.24.110 – Conflict with other codes.

If a dispute or conflict arises between the Colorado Plumbing Code as adopted herein, and any plumbing, mechanical, building, electrical, fire or other code adopted by the State, then the most stringent provisions of each respective code shall prevail.

Section 2. Publication and Effective Date. This Ordinance, after its passage on final reading, shall be numbered, recorded, published, and posted as required by the City Charter and the adoption, posting, and publication shall be authenticated by the signature of the Mayor and City Clerk, and by the Certificate of Publication. This Ordinance shall become effective upon final passage.

Section 3. Severability. If any article, 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 passed this ordinance and each part or parts thereof irrespective of the fact that any one part or parts be declared unconstitutional or invalid.

Section 4. Repeal. Existing ordinances or parts of ordinances covering the same matters embraced in this ordinance are hereby repealed and all ordinances or parts of ordinances inconsistent with the provisions of this ordinance are hereby repealed except that this repeal shall not affect or prevent the prosecution or punishment of any person for any act done or committed in violation of any ordinance hereby repealed prior to the effective date of this ordinance.

**INTRODUCED AND PASSED AT A REGULAR MEETING OF THE CITY COUNCIL OF THE CITY OF EVANS ON THIS 7TH DAY OF JULY 2020.**

**ATTEST:**

**CITY OF EVANS, COLORADO**

BY: \_\_\_\_\_  
Karen Frawley, City Clerk

By: \_\_\_\_\_  
Brian Rudy, Mayor

**PASSED AND ADOPTED ON A SECOND READING THIS \_\_\_\_ DAY OF \_\_\_\_\_, 2020.**

**ATTEST:**

**CITY OF EVANS, COLORADO**

BY: \_\_\_\_\_  
Karen Frawley, City Clerk

BY: \_\_\_\_\_  
Brian Rudy, Mayor

