



TOWN BOARD WORK SESSION

May 18, 2020 - 4:00 PM

Zoom Meeting, Click on the link

https://windsorgov.zoom.us/webinar/register/WN_lmDEHM8pQxGWaDS5RNabZA

OR join by phone 877-853-5247 or 888-788-0099 Webinar ID: 976 5518 1558

GOAL of this Work Session is to have the Town Board receive information on topics of Town business from the Town Manager, Town Attorney and Town staff in order to exchange ideas and opinions regarding these topics.

Members of the Public in attendance are asked to be recognized by the Mayor before participating in any discussions of the Town Board

AGENDA

1. Weld County Community Development Block Grant (CDBG) IGA Discussion
2. Face Mask Requirement Considerations
3. Backflow Prevention and Cross Connection Controls Discussion
4. Future Meetings Agenda

The Town of Windsor will make reasonable accommodations for access to Town services, programs, and activities and will make special communication arrangements for persons with disabilities. Please call (970) 674-2400 by noon on the Thursday prior to the meeting to make arrangements.



MEMORANDUM

Date: May 18, 2020
To: Mayor and Town Board
Via: Shane Hale, Town Manager
From: Don Sandoval, Weld County CDBG Manager
Re: CDBG Discussion
Item #: 1.

ATTACHMENTS:

- ▢ CDBG Flyer

CDBG Urban County Entitlement

What does your municipality need?

What is the CDBG program?

Weld County is eligible to become an Urban County according to the U.S. Department of Housing and Urban Development (HUD) because our population is over 200,000.

Weld County will receive Community Development Block Grant (CDBG) funds of approximately \$960,200 in 2021.

Funds must meet three national objectives:

- Principally benefit low- and moderate-income persons
- Prevent and/or eliminate slums and blights
- Satisfy an urgent need in a community

What does this mean for you?

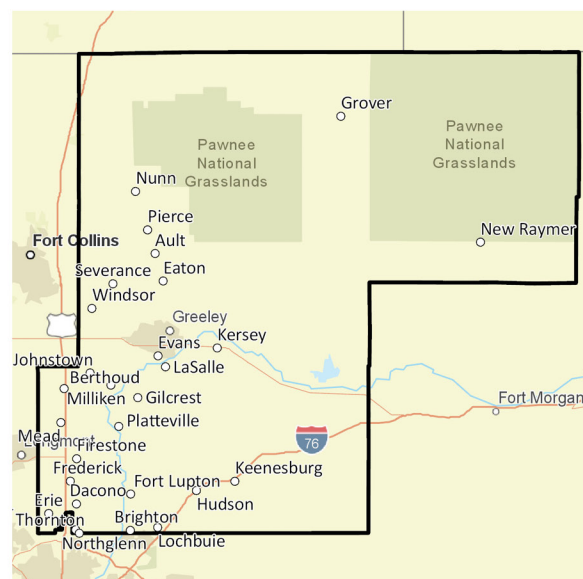
Your municipality might have areas where improvements are needed.

Funds may be used to improve infrastructure and housing related to sidewalks, roofing, utilities and more.

At least 70% of funds county receives must benefit low- and moderate-income persons.

Why should you sign on?

- You'll be working with people you know, people you understand and municipalities you share borders with.
- You won't be competing with other counties across the state to receive funding for improvement projects.
- You can help your neighboring communities and come together to improve our county. It's simply the Weld County way.



What's next?

Weld County will submit a Consolidation Plan and Action Plan along with Cooperation Agreements with municipalities.

Municipalities must let HUD know of its intent to participate or not participate in Weld County's Urban County designation. Those participating may apply for funds through the county CDBG program for eligible activities. This participation means the municipality will be exempt from applying for state CDBG funds.

We welcome the opportunity to meet with each municipality to discuss all aspects of this opportunity as well as needs in your communities.



Don Sandoval, Weld County CDBG Manager
(970) 400-4480 • dosandoval@weldgov.com



MEMORANDUM

Date: May 18, 2020
To: Mayor and Town Board
Via: Shane Hale, Town Manager
From: Rick Klimek, Chief of Police
Re: Face Mask Requirement Consideration Discussion
Item #: 2.



MEMORANDUM

Date: May 18, 2020
To: Mayor and Town Board
Via: Shane Hale, Town Manager
From: Eric Lucas, Director of Public Services
Re: Discussion on Proposed Backflow / Cross Connection Ordinance
Item #: 3.

Background / Discussion:

Windsor Municipal Code (WMC) established a Water Department in the Town, for the purpose of management, maintenance, care and operation of the water works of the Town. Specifically, the Town delivers potable water (Drinking Water) to its users, and is responsible for complying with all Federal and State Regulations concerning the Safe Drinking Water Act (SDWA). The SDWA authorizes the United States Environmental Protection Agency (US EPA) to set national health-based standards for drinking water to protect against both naturally-occurring and man-made contaminants that may be found in drinking water.

The Town currently addresses backflow prevention and cross connection controls in Chapter 13, Article II. These ordinances satisfied the State regulations until 2015, when the State of Colorado Water Quality Control Commission (WQCC) revised Section 11.39 and Regulation 11 which became the Backflow Prevention and Cross-Connection Control Rule, effective January 1, 2017.

This rule increased the reporting requirements for any violations, and required the establishment of a written Backflow Prevention and Cross-connection Control program, implemented by the State, and made applicable to the Town.

Since the Regulation 11.39 (see attached regulation), focus is on non-single-family-residential connections, staff has identified commercial users as the first priority to address in the annual surveys and inspections required. Our current process for residential violations are addressed as we become aware of a connection, such as when a complaint comes in or when a cross-connection device is observed, complies with 11.39(3)(c)(ii).

11.39(3) Treatment Technique Requirements for the Control of Cross Connections

(c) The supplier must survey all non-single-family-residential connections to the public water system to determine if the connection is a cross connection unless the supplier controls that connection with the most protective backflow prevention assembly or backflow prevention method. The supplier must survey all connections within the supplier's waterworks to determine if the connection is a cross connection.

(ii) If the supplier becomes aware of a single-family-residential connection to the public water system that is a cross connection, the supplier must determine the type of backflow prevention assembly or backflow prevention method to control the cross connection.

Thus, the focus is upon non-single-family-residential connections, and we address single family residential as we become aware, which is our current practice.

In order to come into compliance with the State, the first step is to have a complete and comprehensive written policy (see attached proposed ordinance) addressing the Town's role as a Public Drinking Water supplier's ability to inspect, report and enforce the standards set forth in both the federal and state requirements. We are required to implement different Tiers in notice requirements for violations and other situations. (see attached Tiered Public Notice Instructions.) Finally, the Town is required to submit an Annual written report focused on non-single-family-residential connections.

To summarize, the intent of this ordinance is to protect the public water system from contaminants or pollutants that could enter the distribution system by a backflow from a customer's water supply system through the service connection.

At the May 13, 2020 meeting of the Water & Sewer Board this information was presented and discussed with the Board. After discussion the Board unanimously voted to recommend adoption of the proposed ordinance to the Town Board.

Financial Impact:

The financial impact will be minimal this fiscal year. The Town currently has two staff members that are certified backflow testers which is a prerequisite for the survey training. We are performing required record keeping in house. At a later date, the Town may need to consider hiring a dedicated backflow technician to administer the program as the number of devices increase with Windsor's growth.

Recommendation:

Staff in seeking Board input from discussion at work session. Our intention is to make any necessary modifications and return at a future Board meeting asking consideration of the adoption of the proposed ordinance.

ATTACHMENTS:

- ▢ Draft Ordinance
- ▢ CDPHE Regulation 11.39
- ▢ Tier Notices
- ▢ CDPHE Regulation 11.39 Guidance

TOWN OF WINDSOR

ORDINANCE NO. 2020-[##]

AN ORDINANCE ADDING ARTICLE VI, CHAPTER 13 TO THE WINDSOR MUNICIPAL CODE CONCERNING BACKFLOW PREVENTION AND CROSS-CONNECTION CONTROLS WITHIN THE TOWN OF WINDSOR, COLORADO

WHEREAS, the Town of Windsor (“Town”) is a home rule municipality with all powers conferred under Colorado law; and

WHEREAS, pursuant to Article II, Chapter 13 of the *Windsor Municipal Code* (“WMC”), the Town is responsible for the management, care and operation of the water works of the Town within its corporate limits; and

WHEREAS, the Town is required 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; and

WHEREAS, Section 39 of 5 CCR 1002-11, *Colorado Primary Drinking Water Regulations* (“Regulations”), sets forth standards and rules adopted by the Water Quality Control Commission, that applies to the Town’s public water system; and

WHEREAS, the Town has adopted the *International Plumbing Code* in Article VI, Chapter 18 of the WMC; and

WHEREAS, failure to follow these *Regulations* could result in civil or criminal actions pursuant to sections 25-1-114 and 25-1-114.1, *Colorado Revised Statutes*, (“CRS”); and

WHEREAS, the Town desires to implement and enforce the required rules and regulations pursuant to the above-mentioned Regulations and Statutes; and

WHEREAS, the Water and Sewer Board reviewed this ordinance on May 13, 2020 and recommends its adoption; and

WHEREAS, the Town Board has concluded that adoption of this Ordinance promotes the public health, safety and welfare.

NOW, THEREFORE, BE IT ORDAINED BY THE TOWN BOARD OF THE TOWN OF WINDSOR, COLORADO, AS FOLLOWS:

Section 1. Chapter 13 of the *Windsor Municipal Code* shall be amended by the addition of a new Article VI, which shall read as follows:

ARTICLE VI

BACKFLOW PREVENTION AND CROSS-CONNECTION CONTROL

Sec. 13-6-10 – Intent.

The intent of this Article 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, as regulated by federal and state law, in order to protect the drinking water supplied through the Town's water utility. The objectives of this Article are:

- (a) To authorize the survey of all service connections within the distribution system to determine if the connection is a cross-connection;
- (b) To authorize control over all service connections within the distribution system if the connection is a cross-connection;
- (c) To authorize control of 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;
- (d) To authorize the collection of fees for the administration of this program;
- (e) To require the Town to 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 Water Department of the Town shall administer, implement and enforce the provisions of this Ordinance.

Sec. 13-6-20. Applicability.

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

Sec. 13-6-30. 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. *Operator in Responsible Charge* means a certified operator who is designated by the owner of the water or wastewater facility and has supervisory responsibility for the operation of the facility and for the operational activities and functions of other facility operators.

n. *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.

o. *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.

p. *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. 13-6-40. Unprotected cross-connection prohibited.

It shall be unlawful to make, install, maintain or permit any cross-connection with the water system without providing protection against backflow by proper installation and maintenance of an approved backflow prevention device to insure that it is in proper working order.

Sec. 13-6-50. Requirements.

- a. Commercial, industrial and multi-family service connections, and any irrigation connections utilizing potable water, 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. If the assembly or method cannot be installed within 120 days the public water system must affirmatively act 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. Any backflow prevention device required shall be of a model and size approved by the Operator in Responsible Charge, and meet the standards for approval pursuant to the American Water Works Association (AWWA), the American Society of Sanitary Engineering and the Foundation of Cross-Connection Control and Hydraulic Research (FCC & HR) of the University of Southern California in their present form and as may be amended from time to time. Any backflow prevention devices not subject to the approval of the above-listed laboratories (in-line dual checks, atmospheric vacuum breakers or hose bibb vacuum breakers) shall have full approval by appropriate organizations such as the American Society of Sanitary Engineering, International Association of Plumbing and Mechanical Officials or Los Angeles Mechanical Laboratory.
- c. The backflow prevention device shall be installed after the water meter. There shall be no connections or tees between the meter and the containment backflow prevention assembly.
 - i. 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 which provides access for maintenance, testing and repair, preferably at or near the property line or immediately inside the structure being served before the first branch line leading off the water service line.
- 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 which 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. All test reports shall be sent to the Town within 30 days of test completion.
- j. The public water system 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 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.
 - i. All fire sprinkling lines shall have a minimum protection of an approved double check valve assembly for containment of the system.
 - ii. All glycol (ethylene or propylene), or antifreeze systems shall have an approved reduced pressure principle backflow preventer for containment.
 - iii. Dry fire systems shall have an approved double check valve assembly installed upstream of the air pressure valve.
 - iv. 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 can chose to not require the backflow protection. The public water system 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 suspects water quality issues the public water system will evaluate the practicability of requiring that the fire sprinkler system be flushed periodically.

Sec. 13-6-60. Required types of backflow prevention devices.

(a) In the case of any premises where there is an auxiliary water supply, as stated in preceding paragraphs of this Article and it is not subject to any of the following rules, the Town's water system shall be protected by an approved air-gap separation or an approved reduced pressure principal backflow prevention device.

(b) In the case of any premises where there is water or a substance that would be objectionable but not hazardous to health, if introduced into the public water system, the Town's water system shall be protected by an approved double check valve assembly.

(c) In the case of any premises 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 Town's water system, the water system shall be protected by an approved air-gap separation or an approved reduced pressure principal backflow prevention device. Examples of premises where these conditions will exist include sewage treatment plants, sewage pumping stations, chemical manufacturing plants, hospitals, mortuaries and plating plants.

(d) 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 principal backflow prevention device at the service connection.

(e) 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 against backflow or back-siphonage from the premises by the installation of a backflow prevention device in the service line. In this case, maximum protection will be required; that is, an approved reduced pressure principal backflow prevention device shall be installed in each service to the premises.

(f) The following guidelines relating to backflow prevention devices for irrigation systems shall apply:

- (1) Atmospheric vacuum breakers shall be installed after the last control valve of each sprinkler circuit and at a minimum of six (6) inches above the highest irrigation circuits with heads that will not return any pressure in the circuit when the circuit control valve is closed.
- (2) Pressure vacuum breakers shall be installed at the beginning of each irrigation circuit and at a minimum of twelve (12) inches above the highest irrigation head

on the circuit. Individual irrigation circuits having quick coupling valves or other similar typeheads that will permit pressure to be retained in the circuit shall have a pressure vacuum breaker installed as a minimum requirement for each circuit. Irrigation systems using the subsurface drip method shall have a pressure vacuum breaker on each circuit. A pressure vacuum breaker may not be installed where a double check valve assembly, reduced pressure principal backflow prevention device or air-gap separation is required.

- (3) A double check valve assembly may be installed to serve multiple irrigation circuits in lieu of vacuum breakers on each individual irrigation circuit.
 - (4) Reduced pressure principal backflow device or air-gap separation shall be required before any piping network in which fertilizers, pesticides and other chemical or toxic contaminants are injected or siphoned into the irrigation system.
- (g) Water systems for fighting fire, derived from a supply that cannot be approved as safe or potable for human use, shall be kept wholly separate from drinking water pipelines and equipment. In cases where the domestic water system is used for both drinking and fire-fighting purposes, approved backflow prevention devices shall be installed to protect such individual drinking water lines as are not used for fire-fighting purposes.
- (h) The use of a Town fire hydrant shall only be done with the approval of the Operator in Responsible Charge. Any time water is taken out of a fire hydrant for the purpose of filling a tank or container, this will require the use of an air-gap or an approved reduced pressure principal backflow prevention device, which will be installed on the line connection the fire hydrant.

Sec. 13-6-70. Premises requiring backflow prevention devices.

- (a) Auxiliary water supply: In the case of premises having an auxiliary water supply which is not or may not be safe of bacteriological, radiological or chemical quality and which is not acceptable as an additional source by the Operator in Responsible Charge, the Town's water system shall be protected by an approved backflow prevention device in the service line appropriate to the degree of hazard.
- (b) Industrial fluids: 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 Town's water system, the Town's system shall be protected against backflow from the premises by an approved backflow prevention device in the water service line appropriate to the degree of hazard. This shall include the handling of process waters and waters originating from the Town's water system which have been subject to deterioration in quality.
- (c) Internal cross-connections:

- (1) In the case of premises having internal cross-connections that cannot be permanently corrected and controlled;
- (2) Intricate plumbing and piping arrangements;
- (3) 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.

Sec. 13-6-80. 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.
 - i. 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. 13-6-90. 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 by mail, facsimile or e-mail by the testing company or testing technician.
- c. 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; and
 - 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

- xi. Test kit calibration date

Sec. 13-6-100. Right of entry.

A properly credentialed representative of the Town shall have the right of entry to survey, inspect, and enter into and upon, any and 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 in order to protect the health, safety and welfare of customers throughout the public water system's distribution system.

Sec. 13-6-110. 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 shall complete one of the following actions within 120 days of its discovery:
 - i. Control the cross-connection
 - ii. Remove the cross-connection
 - iii. Suspend service to the cross-connection
- b. The public water system 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.
 - 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. 13-6-120. Violations and Penalties.

Any violation of the provisions of this Article, shall, upon conviction be punishable as provided in all applicable statutes, laws, and regulations, including, but not limited to those provided in Chapter 1, Article IV of the *Windsor Municipal Code*.

Sec. 13-6-130. Conflict with other codes.

If a dispute or conflict arises between the *International 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. *Windsor Municipal Code* Section 13-2-330 shall be repealed in its entirety.

Section 3. *Windsor Municipal Code* Section 13-2-340 shall be repealed in its entirety.

Section 4. *Windsor Municipal Code* Section 13-2-350 shall be repealed in its entirety.

Section 5. *Windsor Municipal Code* Section 13-2-360 shall be repealed in its entirety.

Section 6. *Windsor Municipal Code* Section 13-2-370 shall be repealed in its entirety.

Section 7. *Windsor Municipal Code* Section 13-2-380 shall be repealed in its entirety.

Section 8. *Windsor Municipal Code* Section 13-2-390 shall be repealed in its entirety.

Section 9. *Windsor Municipal Code* Section 13-2-400 shall be repealed in its entirety.

Introduced, passed on first reading and ordered published this June 8, 2020.

TOWN OF WINDSOR, COLORADO

Paul Rennemeyer, Mayor

ATTEST:

Krystal Eucker, Town Clerk

[Seal]

Introduced, passed on second reading and ordered published this June 22, 2020.

TOWN OF WINDSOR, COLORADO

Paul Rennemeyer, Mayor

ATTEST:

[Seal]

Krystal Eucker, Town Clerk

11.38(5) Special Public Notice Requirements

- (a) For non-community groundwater systems, if the supplier fails to complete corrective action for significant deficiencies, under 11.38(3), within one year of receiving written notice of significant deficiency, or earlier if required by the Department, the supplier must distribute special public notice to inform consumers of the uncorrected significant deficiency.
 - (i) The special public notice must include all of the following:
 - (A) The nature of the significant deficiency and the date the significant deficiency was identified by the Department.
 - (B) The Department-approved plan and schedule for corrective action, including interim measures, progress to date, and any interim measures completed.
 - (C) For systems supplying a large proportion of non-English speaking consumers, as determined by the Department, the supplier must include one or more of the following:
 - (I) Information in the appropriate language(s) regarding the importance of the special public notice.
 - (II) A telephone number or address where the consumer may contact the supplier to obtain a translated copy of the special public notice or request assistance in the appropriate language.
 - (ii) The supplier must redistribute the special public notice annually until the significant deficiency is corrected.
- (b) For non-community water systems with significant deficiencies that have been corrected, if required by the Department, the supplier must distribute special public notice to inform consumers of the significant deficiencies, how the deficiencies were corrected, and the dates of correction.

11.39 BACKFLOW PREVENTION AND CROSS-CONNECTION CONTROL RULE

11.39(1) Applicability and Definitions

- (a) All public water systems must comply with the requirements specified in this rule.
- (b) "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.
- (c) "BACKFLOW" means the reverse flow of water, fluid, or gas caused by back pressure or back siphonage.
- (d) "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.
- (e) "BACKFLOW PREVENTION ASSEMBLY ANNUAL TESTING COMPLIANCE RATIO" means the number of backflow prevention assemblies tested during the calendar year divided by the number of backflow prevention assemblies installed at a cross connection that were used during the calendar year.

- (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) "BACKFLOW PREVENTION METHOD ANNUAL INSPECTION COMPLIANCE RATIO" means the number of backflow prevention methods inspected during the calendar year divided by the number of backflow prevention methods installed at a cross connection that were used during the calendar year.
- (h) "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.
- (i) "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.
- (j) "SINGLE-FAMILY-RESIDENTIAL" means:
 - (i) A single living unit that is supplied by its own separate service line; or
 - (ii) Multiple living units where each individual living unit is supplied by a separate service line; or
 - (iii) Two separate single living units supplied by a common service line.
- (k) "SURVEY COMPLIANCE RATIO" means the total number of connections surveyed, including the number of all non-single-family-residential connections to the public water system with the most protective backflow prevention assembly or method that was not surveyed as specified in 11.39(3)(c), divided by the total number of non-single-family-residential connections to the public water system and connections within the supplier's waterworks.
 - (i) The supplier is not required to include any non-single-family-residential connections identified after October 31 of the calendar year in the total number of non-single-family-residential connections to the public water system until the following calendar year.
- (l) "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.

11.39(2) Backflow Prevention and Cross-Connection Control Program Requirements

- (a) The supplier must develop a written backflow prevention and cross-connection control program. The written backflow prevention and cross-connection control program must include all of the following:
 - (i) The supplier's process for conducting surveys.
 - (ii) The supplier's legal authority to perform a survey of a customer's property to determine whether a cross connection is present unless the supplier controls all non-single-family-residential connections to the public water system with the most protective backflow prevention assembly or backflow prevention method.

- (iii) The process the supplier will use to select a backflow prevention assembly or backflow prevention method to control a cross connection.
 - (iv) The supplier's legal authority to install, maintain, test, and inspect backflow prevention assemblies and/or backflow prevention methods and/or require customers to install, maintain, test, and inspect backflow prevention assemblies and/or backflow prevention methods.
 - (v) The process the supplier will use to track the installation, maintenance, testing, and inspection of all backflow prevention assemblies and backflow prevention methods used to control cross connections.
 - (vi) The process the supplier will use to ensure backflow prevention assemblies are tested by a Certified Cross-Connection Control Technician.
- (b) The Department may review and revise the written backflow prevention and cross-connection control program.

11.39(3) Treatment Technique Requirements for the Control of Cross Connections

- (a) If the supplier learns of a suspected or confirmed backflow contamination event, the supplier must notify and consult with the Department on any appropriate corrective measures no later than 24 hours after learning of the backflow contamination event.
- (b) The supplier is prohibited from installing or permitting any uncontrolled cross connection to the distribution system or within the supplier's waterworks.
- (c) The supplier must survey all non-single-family-residential connections to the public water system to determine if the connection is a cross connection unless the supplier controls that connection with the most protective backflow prevention assembly or backflow prevention method. The supplier must survey all connections within the supplier's waterworks to determine if the connection is a cross connection.
 - (i) If the supplier identifies a cross connection during a survey, the supplier must determine the type of backflow prevention assembly or backflow prevention method to control the cross connection.
 - (ii) If the supplier becomes aware of a single-family-residential connection to the public water system that is a cross connection, the supplier must determine the type of backflow prevention assembly or backflow prevention method to control the cross connection.
 - (iii) The supplier must achieve the survey compliance ratios as specified in Table 11.39-I.

TABLE 11.39-I Survey Compliance Ratio	
Compliance Date	Compliance Ratio
By December 31, 2016	Greater than 0.60
By December 31, 2017	Greater than 0.70
By December 31, 2018	Greater than 0.80
By December 31, 2019	Greater than 0.90
By December 31, 2020 and each year after	1.0

- (iv) The supplier may apply to the Department for alternative survey compliance ratios for the compliance dates from December 31, 2016 through December 31, 2019 specified in Table 11.39-I.

- (A) In the application, the supplier must include all of the following information:
 - (I) An explanation of why the supplier is unable to comply with the survey compliance ratios specified in Table 11.39-I.
 - (II) The proposed alternative survey compliance ratios for the compliance dates from December 31, 2016 through December 31, 2019 specified in Table 11.39-I.
 - (a) The proposed alternative survey compliance ratios must meet the survey compliance ratio of 1.0 by December 31, 2020.
 - (III) A discussion of the supplier's strategy to achieve the proposed alternative survey compliance ratios and the survey compliance ratio of 1.0 by December 31, 2020.
 - (B) The Department will only grant alternative compliance ratios for the compliance dates from December 31, 2016 through December 31, 2019.
 - (C) If the supplier receives written Department-approval for alternative survey compliance ratios, the supplier must comply with any Department-specified requirements in the approval.
- (d) If the supplier discovers an uncontrolled cross connection and a suspected or confirmed backflow contamination event has not occurred, the supplier must:
- (i) No later than 120 days after its discovery, install and maintain or require the customer to install and maintain a backflow prevention assembly or backflow prevention method at the uncontrolled cross connection, suspend service to the customer, or remove the cross connection.
 - (A) If the supplier is unable to meet the 120-day deadline, the supplier must consult with the Department and the Department may approve an alternative schedule.
 - (B) The supplier can either control cross connections discovered within a customer's water system by containment or containment by isolation.
 - (I) "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.
 - (II) "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.
 - (C) The supplier must ensure that all installed backflow prevention assemblies used to control cross connections are tested by a Certified Cross-Connection Control Technician upon installation.

- (D) The supplier must ensure that all installed backflow prevention methods used to control cross connections are inspected by the supplier or a Certified Cross-Connection Control Technician upon installation.
- (e) The supplier must ensure that backflow prevention assemblies used to control cross connections are tested annually by a Certified Cross-Connection Control Technician and maintained. The supplier must achieve the backflow prevention assembly annual testing compliance ratios as specified in Table 11.39-II.

TABLE 11.39-II Backflow Prevention Assembly Annual Testing Compliance Ratio	
Compliance Date	Annual Compliance Ratio
By December 31, 2016	Greater than 0.50
By December 31, 2017	Greater than 0.60
By December 31, 2018	Greater than 0.70
By December 31, 2019	Greater than 0.80
By December 31, 2020 and each year after	Greater than 0.90

- (i) No later than 60 days after the supplier is notified of a failed test, the supplier must ensure that the backflow prevention assembly that produced the failed test is repaired or replaced and tested, service is suspended to the customer, or the cross connection is removed.
- (A) If the supplier is unable to meet the 60-day deadline, the supplier must consult with the Department and the Department may approve an alternative schedule.
- (ii) Beginning January 1, 2021, for each backflow prevention assembly not tested during the previous calendar year, the supplier must ensure the backflow prevention assembly is tested no later than 90 days after the active date of the backflow prevention assembly in the following calendar year.
- (A) If the supplier is unable to meet the 90-day deadline, the supplier must consult with the Department and the Department may approve an alternative schedule.
- (f) The supplier must ensure that backflow prevention methods used to control cross connections are inspected annually by the supplier or a Certified Cross-Connection Control Technician and maintained. The supplier must achieve a backflow prevention method annual inspection compliance ratio of greater than (>) 0.90.
- (i) No later than 60 days after the supplier is notified of an inadequate backflow prevention method, the supplier must ensure that the inadequate backflow prevention method is repaired or replaced, service is suspended to the customer, or the cross connection is removed.
- (A) If the supplier is unable to meet the 60-day deadline, the supplier must consult with the Department and the Department may approve an alternative schedule.
- (ii) Beginning January 1, 2017, for each backflow prevention method not inspected during the previous calendar year, the supplier must ensure the backflow prevention method is inspected no later than 90 days after the active date of the backflow prevention method in the following calendar year.
- (A) If the supplier is unable to meet the 90-day deadline, the supplier must consult with the Department and the Department may approve an alternative schedule.

- (g) The supplier must control or remove any uncontrolled cross connection or ensure that any cross connection is controlled no later than 10 days after being ordered in writing by the Department.

11.39(4) Backflow Prevention and Cross-Connection Control Program Annual Written Report

- (a) Beginning in 2017, the supplier must develop a written backflow prevention and cross-connection control program report for the previous calendar year that includes all of the following information:
 - (i) Total number of non-single-family-residential connections to the public water system and connections within the supplier's waterworks.
 - (A) The supplier is not required to include any non-single-family-residential connections identified after October 31 of the calendar year in the total number of non-single-family-residential connections to the public water system until the following calendar year.
 - (ii) Total number of connections surveyed to determine if cross connections are present.
 - (iii) Survey compliance ratio.
 - (iv) Total number of identified cross connections.
 - (v) Number of uncontrolled cross connections identified during the calendar year.
 - (A) Number of identified uncontrolled cross connections that were controlled within 120 days of discovery.
 - (B) Number of identified uncontrolled cross connections that were not controlled within 120 days of discovery.
 - (vi) Number of backflow prevention assemblies installed at cross connections that were used during the calendar year.
 - (vii) Number of backflow prevention methods installed at cross connections that were used during the calendar year.
 - (viii) Number of connections where service was suspended as specified in 11.39(3) during the calendar year.
 - (ix) Number of backflow prevention assemblies used to control cross connections that were tested by a Certified Cross Connection Control Technician during the calendar year.
 - (x) Backflow prevention assembly annual testing compliance ratio.
 - (xi) Beginning January 1, 2021, the number and location of backflow prevention assemblies not tested during the calendar year covered by the report.
 - (xii) Number of backflow prevention methods used to control cross connections that were inspected during the calendar year.
 - (xiii) Backflow prevention method annual inspection compliance ratio.
 - (xiv) Beginning January 1, 2017, the number and location of backflow prevention methods not inspected during the calendar year covered by the report.

- (b) For each calendar year, the supplier must complete the annual backflow prevention and cross-connection control program report no later than May 1 of the following calendar year.

11.39(5) Compliance Determinations for Backflow Prevention and Cross-Connection Control

- (a) Compliance with the survey treatment technique requirement is based on the survey compliance ratio.
 - (i) The supplier is not required to include any non-single-family-residential connections identified after October 31 of the calendar year in the total number of non-single-family-residential connections to the public water system until the following calendar year.
- (b) Compliance with the backflow prevention assembly testing treatment technique requirement is based on the backflow prevention assembly annual testing compliance ratio.
- (c) Compliance with the backflow prevention method inspection treatment technique requirement is based on the backflow prevention method annual inspection compliance ratio.

11.39(6) Violations for Backflow Prevention and Cross-Connection Control

- (a) The following constitute backflow prevention and cross-connection control treatment technique violations:
 - (i) The supplier fails to notify the Department of any suspected or confirmed backflow contamination event as specified in 11.39(3)(a).
 - (ii) The supplier installs or permits an uncontrolled cross connection.
 - (iii) The supplier fails to achieve the survey compliance ratio specified in 11.39(3)(c) or the Department-approved alternative survey compliance ratios.
 - (iv) The supplier discovers an uncontrolled cross connection and fails to comply with the requirements specified in 11.39(3)(d).
 - (v) The supplier fails to achieve the annual backflow prevention assembly testing compliance ratio specified in 11.39(3)(e).
 - (vi) The supplier fails to comply with the backflow prevention assembly failed test requirements specified in 11.39(3)(e)(i).
 - (vii) The supplier fails to comply with the backflow prevention assembly testing requirements specified in 11.39(3)(e)(ii).
 - (viii) The supplier fails to achieve the backflow prevention method inspection compliance ratio specified in 11.39(3)(f).
 - (ix) The supplier fails to comply with the backflow prevention method inadequate method requirements specified in 11.39(3)(f)(i).
 - (x) The supplier fails to comply with the backflow prevention method inspection requirements specified in 11.39(3)(f)(ii).
 - (xi) The supplier fails to comply with a written order from the Department specified in 11.39(3)(g).

- (b) The following constitute backflow prevention and cross-connection control violations:
 - (i) The supplier fails to develop or implement a written backflow prevention and cross-connection control program as specified in 11.39(2).
 - (ii) The supplier fails to complete an annual backflow prevention and cross-connection control program report as specified in 11.39(4).

11.39(7) Response to Violations for Backflow Prevention and Cross-Connection Control

- (a) In the event of a backflow prevention and cross-connection control treatment technique violation, the supplier must:
 - (i) Notify the Department no later than 48 hours after the violation occurs.
 - (ii) Distribute Tier 2 public notice as specified in 11.33.
- (b) In the event of a backflow prevention and cross-connection control violation, the supplier must:
 - (i) Notify the Department no later than 48 hours after the violation occurs.
 - (ii) Distribute Tier 3 public notice as specified in 11.33.

11.40 RESERVED

11.41 WATER HAULER RULE

11.41(1) Applicability and Definitions

- (a) For a public water system that hauls water, the water hauler must comply with the requirements specified in this rule in addition to other applicable requirements of the *Colorado Primary Drinking Water Regulations*.
- (b) The water hauler is a supplier and means any person that owns or operates a public water system that hauls water.

11.41(2) Treatment Technique and Monitoring Requirements for Public Water Systems That Haul Water

- (a) The water hauler must operate in accordance with a Department-approved operational plan.
 - (i) The water hauler must either submit an operational plan for Department approval or use the pre-approved operational plan in the Department's *Operational Handbook for a Colorado Public Water System That Hauls Water*.
- (b) In addition to the applicable residual disinfectant concentration monitoring requirements specified in 11.8, 11.11 and 11.23, on each day a tank or container is used to deliver water, the water hauler must monitor the residual disinfectant concentration of the water dispensed from each tank or container at least once.
 - (i) If the water hauler uses more than one water loading station per day, the water hauler must also monitor the residual disinfectant concentration of the water dispensed from the tank or container at least once for each water loading station used.

Tier 1 Public Notice Instructions

Delivery Requirements

Violations and other situations that require Tier 1 public notice have significant potential to have serious adverse effects on human health as a result of short-term exposure. Therefore, the water system must provide public notice to persons served as soon as practical but within 24 hours after learning of the violation or situation. The water system must issue a repeat notice at a frequency determined by the Water Quality Control Division for as long as the violation or situation persists. ***Public water systems that provide water to other water systems must deliver public notices to the owners or operators of all receiving water systems (consecutive water systems).***

Community systems must, at a minimum, use the following delivery method:

- ✓ Hand delivery

Non-community systems must, at a minimum, use the following delivery method:

- ✓ Posting in conspicuous locations

In addition, both community and non-community systems must use another method reasonably calculated to reach others if they would not be reached by the first method. Such methods could include emergency reverse 911 system phone calls, television, radio, newspapers, e-mail, or delivery to community organizations. If you post the notice, it must remain posted until the violation or situation is resolved, but no less than seven days.

Ten Required Elements of a Public Notice

1. Description of the violation or situation including contaminant(s) of concern and (as applicable) the contaminant level(s).
2. When the violation or situation occurred.
3. Any potential adverse health effects from the violation or situation, including any standard language provided in the rule. The health effects language may not be modified.
4. The population at risk; including subpopulations particularly vulnerable if exposed to the contaminant in their drinking water.
5. Whether alternate water supplies should be used.
6. What actions consumers should take, including when to seek medical help, if known.
7. What the system is doing to correct the violation or situation (corrective action).
8. When the system expects to return to compliance or resolve the situation.
9. Contact information: name, business address, and phone number of the water system owner or the owner's legal representative of the PWS that can provide additional information.
10. A statement encouraging notice recipients to distribute the notice to other persons served using the following standard language from the rule. This statement may not be modified: "Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in public places or by distributing copies by hand."

Corrective Actions

In the notice, describe corrective actions the water system is taking. Use one or more of the following actions, if appropriate, or develop your own:

- ✓ We are sampling throughout the distribution system for the presence of [contaminant]
- ✓ We are monitoring chlorine levels and will adjust them as needed
- ✓ We have isolated the break and are working to correct the problem.

After Issuing the Notice

Make sure to send WQCD copies of all public notice(s) and a Tier 1 Certificate of Delivery Form within ten days after issuing the notice.

Recommendations:

Although not required, it is recommended that the water system issue a "Problem Corrected" public notice once the violation or situation has been resolved.

It is recommended that the water system notify health professionals in the area of the potential health risks. People may call their doctors with questions about how the violation may affect their health, and the doctors should have the information they need to respond appropriately. In addition, health professionals, including dentists, use tap water during their procedures and need to know of potential problems so they can use bottled water.

Tier 2 Public Notice Instructions

Delivery Requirements

Tier 2 public notices are required for violations and situations that can have potential serious adverse effects on human health. Water systems must provide public notice to persons served as soon as practical but within 30 days after learning of the violation. The water system must issue a repeat notice every three months for as long as the violation or situation persists. ***Public water systems that provide water to other water systems must deliver public notices to the owners or operators of all receiving water systems (consecutive water systems).***

Community systems must use at least one of the following delivery methods :

- ✓ Hand delivery or other direct delivery method
- ✓ Mail (can be included with the bill)

Non-community systems must use at least one of the following delivery methods:

- ✓ Posting in conspicuous locations
- ✓ Mail, hand delivery, or other direct delivery method to each user (where known)

In addition, both community and non-community systems must use another method reasonably calculated to reach others if they would not be reached by the first method. Such methods could include newspapers, e-mail, or delivery to community organizations. If you post the notice, it must remain posted until the violation is resolved, but no less than seven days.

Ten Required Elements of a Public Notice

1. Description of the violation or situation including contaminant(s) of concern and (as applicable) the contaminant level(s).
2. When the violation or situation occurred.
3. Any potential adverse health effects from the violation or situation, including any standard language provided in the rule. The health effects language may not be modified.
4. The population at risk; including subpopulations particularly vulnerable if exposed to the contaminant in their drinking water.
5. Whether alternate water supplies should be used.
6. What actions consumers should take, including when to seek medical help, if known.
7. What the system is doing to correct the violation or situation (corrective action).
8. When the system expects to return to compliance or resolve the situation.
9. Contact information: name, business address, and phone number of the water system owner or the owner's legal representative of the PWS that can provide additional information.
10. A statement encouraging notice recipients to distribute the notice to other persons served using the following standard language from the rule. This statement may not be modified: "Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in public places or by distributing copies by hand."

Corrective Actions

In the notice, describe corrective actions the water system took or is taking. Listed below are some steps commonly taken by water systems with MCL violations. Choose the appropriate language, or develop your own:

- ✓ We are working with [*local/state agency*] to evaluate the water supply and researching options to correct the problem. These options may include treating the water to remove [*contaminant*] or connecting to [*system*]'s water supply.
- ✓ We have stopped using the contaminated well. We have increased pumping from other wells, and we are investigating drilling a new well.
- ✓ We will increase the frequency at which we test the water for [*contaminant*].
- ✓ We have since taken samples at this location and had them tested. They show that we meet the standards.

After Issuing the Notice

Make sure to send WQCD copies of all public notice(s) and a Tier 2 Certificate of Delivery Form within ten days after issuing the notice.

Tier 3 Public Notice Instructions

Delivery Requirements

Tier 3 public notices must be provided to persons served within one year (365 days) after you learn of the violation. Multiple monitoring violations can be serious. *Public water systems that provide water to other water systems must deliver public notices to the owners or operators of all receiving water systems (consecutive water systems).*

Community systems must use at least one of the following delivery methods:

- ✓ Hand delivery or other direct delivery method
- ✓ Mail (can be included with the bill)
- ✓ Insert the notice in the Consumer Confidence Report, as long the CCR is directly delivered within one year (365 days) after you learn of the violation.

Note: In order to meet the public notification requirement using the CCR the system **must use the direct delivery method** and **cannot use the waiver options for small systems**.

Non-community systems must use at least one of the following delivery methods:

- ✓ Posting in conspicuous locations
- ✓ Mail, hand delivery, or other direct delivery method to each user (where known)

In addition, both community and non-community systems must use another method reasonably calculated to reach others if they would not be reached by the first method. Such methods could include newspapers, e-mail, or delivery to community organizations. If you post the notice, it must remain posted until the violation is resolved, but no less than seven days.

Ten Required Elements of a Public Notice

1. Description of the violation or situation including contaminant(s) of concern and (as applicable) the contaminant level(s).
2. When the violation or situation occurred.
3. Any potential adverse health effects from the violation or situation, including any standard language provided in the rule. The health effects language may not be modified.
4. The population at risk; including subpopulations particularly vulnerable if exposed to the contaminant in their drinking water.
5. Whether alternate water supplies should be used.
6. What actions consumers should take, including when to seek medical help, if known.
7. What the system is doing to correct the violation or situation (corrective action).
8. When the system expects to return to compliance or resolve the situation.
9. Contact information: name, business address, and phone number of the water system owner or the owner's legal representative of the PWS that can provide additional information.
10. A statement encouraging notice recipients to distribute the notice to other persons served using the following standard language from the rule. This statement may not be modified: "Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in public places or by distributing copies by hand."

Corrective Actions

In your notice, describe corrective actions you took or are taking. Listed below are some steps commonly taken by water systems with monitoring violations. Choose the appropriate language, or develop your own:

- ✓ We have since taken the required samples, as described in the last column of the table above. The samples showed we are meeting drinking water standards.
- ✓ We have since taken the required samples, as described in the last column of the table above. The sample for [contaminant] exceeded the limit. [Describe corrective action; use information from public notice prepared for violating the limit.]
- ✓ We plan to take the required samples soon, as described in the last column of the table above.

After Issuing the Notice

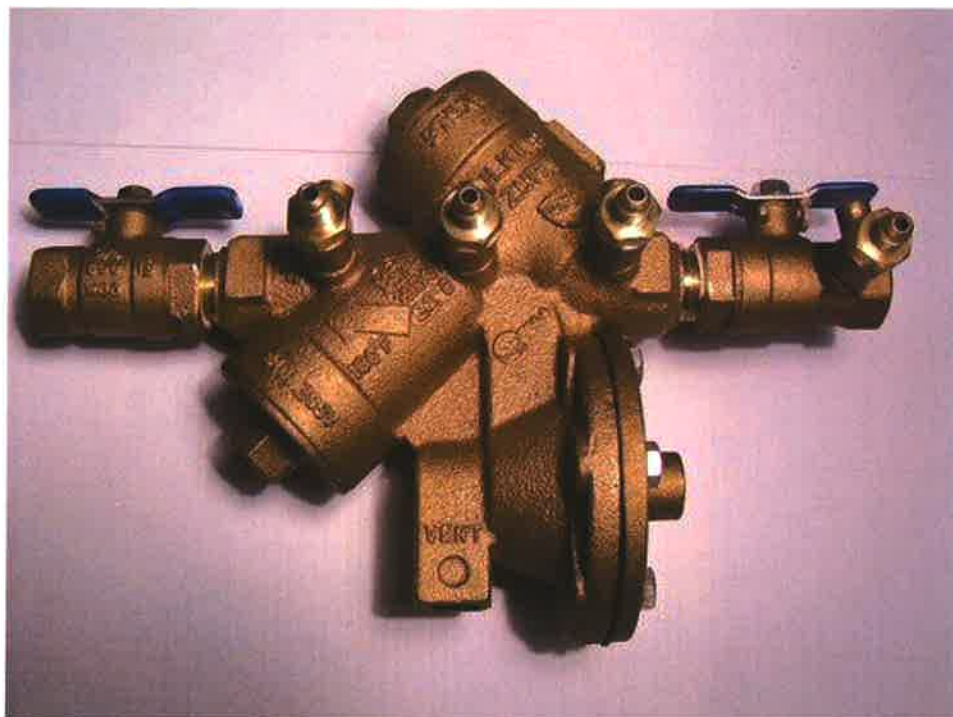
Make sure to send WQCD copies of all public notice(s) and a Tier 3 Certificate of Delivery Form within ten days after issuing the notice.



COLORADO

Department of Public
Health & Environment

Regulation 11.39 Backflow Prevention and Cross-connection Control Guidance



WATER QUALITY CONTROL DIVISION

4300 CHERRY CREEK DRIVE SOUTH DENVER, COLORADO 80246

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1. Introduction

1.1 Overview

Colorado Revised Statutes 25-1-114 (1)(h) do not allow anyone to install, maintain or permit an uncontrolled cross connection that is connected to a drinking water system that supplies water to the public. The Colorado Primary Drinking Water Regulations, 5 CCR 1002-11 (Regulation 11), Section 11.39 requires that water suppliers that own and/or operate public water systems protect the drinking water from potential contamination through cross connections. Chemical, biological and radiological contaminants can pose unacceptable health and/or safety risks to the public through backflow of contaminants from cross connections. The Colorado Department of Public Health and Environment's Water Quality Control Division (Department) is responsible for ensuring that water suppliers comply with Section 11.39 of Regulation 11.

Generally, Section 11.39 of Regulation 11, the Backflow Prevention and Cross-Connection Control (BPCCC) Rule, requires that water suppliers do all of the following:

- Develop and implement a written BPCCC program;
- Notify the Department of any suspected or confirmed backflow events;
- Do not install cross connections at its facilities or throughout the distribution system;
- Do not allow any uncontrolled cross connections to continue to exist once discovered;
- Control the installation of new uncontrolled cross connections;
- Survey all non-single-family-residential connections for cross connections or control non-surveyed non-single-family-residential connections with the most protective backflow prevention assembly or backflow prevention method;
- Control any identified cross connection in a manner that prevents backflow through the cross connection in to the distribution system or if applicable the water supply system;
- Perform or verify annual backflow prevention assembly testing;
- Perform or verify annual backflow prevention method inspections;
- Ensure that all failed assemblies and inadequate methods are repaired; and,
- Keep records and develop an annual report to track compliance with the BPCCC Rule.

The Department reviews a public water system's backflow prevention and cross-connection control implementation procedures, methods, and records during sanitary surveys to determine whether or not the water supplier is compliant with Section 11.39. Inadequate protection, record keeping, reporting, operational, maintenance or other practices may be identified as a significant deficiency and/or violation that must be corrected for water suppliers to remain in compliance with Regulation 11.

The Department developed Safe Drinking Water [Policy 7 titled "Backflow Prevention and Cross-connection Control Rule Implementation Policy"](#) to provide additional information to assist water suppliers. The policy further explains how the Department evaluates whether a water supplier is meeting the performance requirements of the BPCCC Rule. Policy 7 specifically establishes and clarifies certain terminology used in the BPCCC Rule:

- Permitting an Uncontrolled Cross Connection;
- Ensuring that Activities are Completed – Implementing Legal Authority;
- Appropriate Assembly or Method for an Identified Contaminant;
- Unacceptable Health and/or Safety Risk;

- Site-specific Deviation Criteria;
- Most Protective Backflow Prevention Assembly or Method;
- Survey Process Documentation;
- Public Water System's Water Supply System Cross Connections; and,
- Active Date.

1.2 Background

The Colorado Revised Statutes have required that water suppliers provide cross-connection control within their own water supply systems since the mid 1960's. Regulation 11 has required that the cross connections be controlled since the mid 1980's. Commercial and residential facilities are required to protect the potable water supply in accordance with the local jurisdictional plumbing code. If there is not a local code the *Colorado Plumbing Code* applies.

In 2015, the State of Colorado Water Quality Control Commission (WQCC) revised Section 11.37 and of Regulation 11 which became the Backflow Prevention and Cross-Connection Control Rule, located in Section 11.39 of Regulation 11, effective January 1, 2016.

1.3 Purpose of this Guidance Document

This guidance is designed to help water suppliers comply with the BPCCC Rule that the Department may evaluate at will and during sanitary surveys. Therefore, the purposes of this guidance document are to:

- Assist water suppliers in developing and implementing an adequate BPCCC program;
- Provide templates for BPCCC Rule requirements; and,
- Provide a common reference for water suppliers and Department staff.

This guidance document is not a regulation, is not a policy, and does not preclude other means for water suppliers to demonstrate that they comply with Regulation 11. However the methods described in this document are based on widely accepted industry standards, the *Colorado Plumbing Code*, EPA guidance and previously published Department guidance. This guidance addresses all water suppliers that operate regulated public water systems. When the term "must" is used in this document it means that the action is required by Regulation 11.

This guidance does not address the introduction of chronic contaminants or protection of storage tanks and the distribution system from contaminants that enter the system through various other means other than cross connections. Additionally, this guidance does not address unregulated treatment at private buildings or treatment for aesthetic concerns common to many plumbing arrangements found in Colorado.

This document will be updated as needed to include the most relevant and updated information available by the Department and the latest version can be found at:

<https://www.colorado.gov/pacific/cdphe/drinking-water-cross-connection-control-program>.

2. Department Notification

2.1 Reportable Backflow Events

All water systems experience conditions that could allow for the unintended reverse flow of fluids. This is known as a backflow event. Backflow through a cross connection can pose a risk to a public water system and its users. These risks may be acute and could cause an immediate health risk to the public. In the event that a backflow event contaminates the public water system the Department must be notified.

Regulation 11.39(3) requires that if a supplier learns of a suspected or confirmed backflow contamination event, the supplier must notify and consult with the Department on any appropriate corrective measures no later than 24 hours after learning of the backflow contamination event. The notification should be made to the **24-hour Environmental Release and Incident Report Hotline at 1-877-518-5608**. In the interest of public health, the Department encourages anyone aware of a backflow event, which may have contaminated a public water system through a cross connection, to call the Department as soon as possible after necessary emergency response calls have been made.

When reporting the event, please have available as much of the following information as possible:

- Date and time of event;
- Location of event;
- Type of threat or incident (bacteriological chemical, radiological, physical, etc.);
- Public Water System Name and Identification Number;
- Water supplier contact name and phone number;
- Method of discovery (consumer complaint, witness, perpetrator, employee report);
- Response actions taken (water quality parameter testing, isolation of affected water);
- Recovery actions taken;
- Notifications made (customers, law enforcement, news media, etc.);
- Assessment of threat, if possible.

Once the Department has gathered the necessary information the Department will provide assistance to ensure the safety of the public and the integrity of the public water system.

2.2 Reportable Regulatory Requirements

Regulation 11.39(7) requires that suppliers notify the Department within 48 hours after the water supplier becomes aware of any backflow prevention and cross-connection control violation or any backflow prevention and cross-connection control treatment technique violation specified in Regulation 11.39(6).

In accordance with Regulation 11.36(2)(b) the department will request that the supplier submit a copy of the BPCCC annual report documenting the identified violation. Please submit a copy of the BPCCC annual report via the department's Drinking Water Portal which can be found at <https://wqcdcompliance.com/login> and send to the attention of the department's Backflow Prevention and Cross-Connection Control Specialist.

2.3 Public Notice Requirements

Regulation 11.39(7) requires that suppliers distribute Tier 2 public notice as specified in Regulation 11.33 in any instance the supplier becomes aware of any backflow prevention and cross-connection control treatment technique violation.

Regulation 11.39(7) requires that suppliers distribute Tier 3 public notice as specified in Regulation 11.33 in any instance the supplier becomes aware of any backflow prevention and cross-connection control violation.

Please contact your Department assigned compliance officer with any questions regarding public notice. Department assigned contacts can be found online at; <https://www.colorado.gov/cdphe/dwcontact>.

3. Backflow Prevention and Cross-connection Control Program

Protection of public health from cross connections is best achieved through a properly developed, administered and implemented Backflow Prevention and Cross-connection Control program. The development of a written BPCCC program will be essential for compliance with Regulation 11. The written BPCCC program should clearly outline all procedures and duties associated with the implementation of the BPCCC program.

The BPCCC program will need to include and specify information regarding how the supplier identifies cross connections, performs surveys, and controls identified cross connections. The BPCCC program must also address how the supplier requires that backflow prevention assemblies and methods be tested and inspected annually, how the supplier will track the installation, maintenance, and testing of assemblies and methods and how the supplier will ensure that assemblies are tested by a *Certified Cross-Connection control Technician*, (Regulation 11.37(1)(b)). Many of these program components can be addressed through the establishment of legal authority.

[Appendix A](#) contains a link to the latest Department template for a written BPCCC Program. For suppliers that operate a non-community public water system, the Department has developed a simpler written program which includes the annual compliance report. The combined BPCCC non-community written program and report can be found in [Appendix G](#). Water suppliers should be prepared for a program review during each sanitary survey.

3.1 Legal Authority

Generally, community public water systems administer three types of BPCCC programs. The most common forms of observed programs are based on one of the following: local government ordinances, user agreements or full public water system responsibility. An example ordinance can be found in [Appendix B](#).

Generally, non-community public water systems own their water supply system. When that is the case, the responsibility falls on the water supplier to control identified cross connections. If the supplier serves water to customers through a service connection the water supplier will have to implement a user agreement between the customers or take on full public water system responsibility to ensure that cross connections are controlled.

The supplier must have a legally-enforceable mechanism that implements its BPCCC program as described in Regulation 11.39(2). The Department recommends that the legally-enforceable mechanisms include specific provisions identifying customer requirements under 11.39(2)(a)(ii, iv) and the associated remedies that the water supplier may utilize for failure of customer(s) to comply.

3.2 Prohibition of Installing or Permitting Cross Connections

Suppliers are prohibited from installing or permitting any uncontrolled cross connection to the distribution system or within the supplier's waterworks.

- Installing an uncontrolled cross connection means modifications or additions to waterworks or water supply systems that create a cross connection. The supplier is

prohibited from intentionally performing any actions which would result in the creation of a cross connection.

- Permitting an uncontrolled cross connection in the context of Regulation 11.39 means the supplier has allowed their users or customers to continue to have an uncontrolled cross connection past the regulatory-defined timelines. If the regulatory-defined timelines in Regulation 11.39 have elapsed and the supplier has not taken any of following actions; control the cross connection, remove the cross connection or suspends service to the identified connection***, then the supplier is allowing, or permitting, the cross connection to exist and is in violation of Regulation 11.
 - *** Note. Before suspension of service can be considered appropriate action, the Department expects that the supplier will confirm the following:
 -  The connection downstream of the valve used to suspend the service does not remain pressurized because the customer has access to an alternative source of water or a storage tank onsite
 -  If the cross connection is to a fire suppression system; suspension of service would not result in the building being inadequately protected from loss of life through fire. If there are service connections at the property separate from the fire suppression system causing the cross connection, a supplier may suspend service to one or all of those other service lines (e.g. domestic or irrigation) as an appropriate action.
- The supplier may receive a Department approved alternative compliance schedule for identified cross connections that have not been controlled within 120 days. Department-approval of an alternative compliance schedule means either an email or other written communication from the Department. The Department has provided [APPENDIX C.1 – BPCCC Rule 120-Day Cross-connection Control Extension Application](#) for such request.

3.3 Identification of Cross Connections

Suppliers must survey all non-single-family-residential connections to the public water system to determine if the connection is a cross connection. The supplier must also survey all connections within the supplier's waterworks to determine if there are any cross connections present which could contaminate the public water systems or the facilities water supply system. Acceptable survey process documentation should include how the supplier will select service connections that need a survey; For example:

Usage type - commercial, industrial, or multi-family;

New or newly acquired connections; and/or

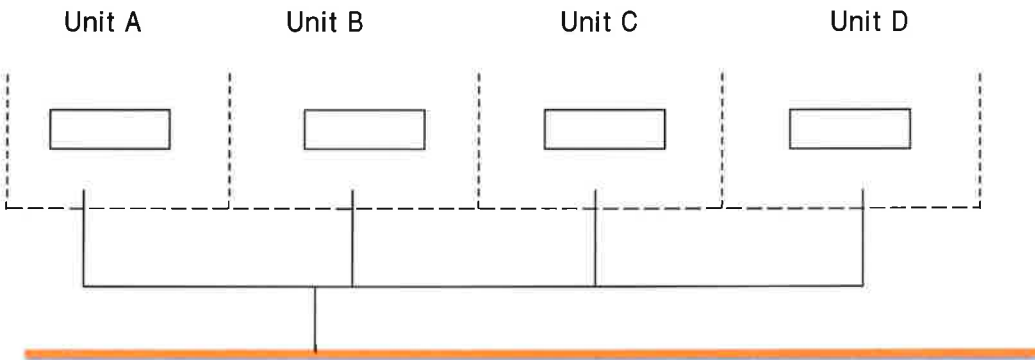
Questionnaire results.

The supplier must identify the total number of non-single-family-residential connections to the public water system and connections within the supplier's waterworks. This number is the total number or connections to the public water distribution system that are not considered single-family connections.

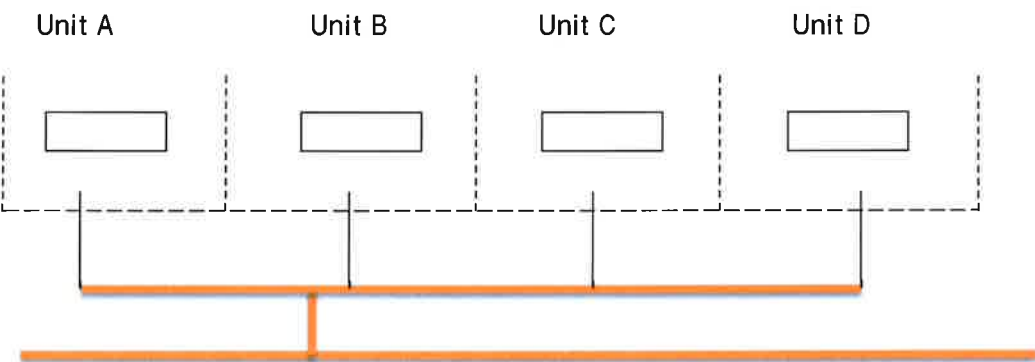
Single-family means:

- A single dwelling which is occupied by a single family and is supplied by a separate service line;
- A single dwelling comprised of multiple living units where each living unit is supplied by a separate service line.
- If a water supplier has ownership and maintenance responsibilities of a service line up to a point of single-connections such connections may be considered a single-family-residential-connection even if this connection is to a multi-family dwelling unit. It is important to be aware that all other applicable parts of Regulation 11 will also apply to those new acquired waterworks (i.e. distribution system) and that any irrigation or other cross connections that are directly connected to the newly acquired service line would have to be controlled in accordance with Regulation 11.39.

Multi Family Connection



Scenario 1 - Example Multi-Family Connection to a Public Water System (distribution system is red thick line) considered a **Non-Single-Family-Residential Connection**



Scenario 2 - Example Multi Family Connection with Four Separate Connection (Supplier assumes ownership and maintenance of the service line (distribution system is red thick line) up to the distribution system. This type of connection would be considered a single-family-residential connection.

3.4 Survey Process and Documentation

Once the supplier has identified the total number of non-single family residential connections, the supplier must survey the connections to identify cross connections. The supplier must document the process for conducting surveys. Surveys can be performed onsite by a person designated by public water system or can be a questionnaire type. The supplier's survey process should identify potential service connections and uses that when identified may trigger cross-connection control requirements. The supplier's process should address how the supplier will select individuals to perform the survey including experience and/or training or certification qualifications to perform a survey. Additionally the supplier must survey any waterworks and the water supply systems associated with those facilities for cross connections.

Should the supplier use questionnaires, various methods may be used to distribute the questionnaires: email surveys, web-based surveys, written surveys, or telephone surveys. Questionnaires should provide examples of common cross connections to the customer who completes the survey. Questionnaires should ask that the property-owner indicate the information provided is accurate to the best of their knowledge. If the supplier does not receive a response to a questionnaire or the results are inconclusive, the supplier is required to perform an onsite survey for cross connections or control the connection with the most protective backflow prevention assembly or method.

The Department has provided several example survey questionnaires to be considered by public water systems in [Appendix E](#).

The results of surveys should be kept in a manner that allows the supplier to demonstrate that a survey has been performed and if any action was required based on the result of the survey.

It is important that newly constructed and renovated buildings are constructed in accordance with the local plumbing code. The code is intended to protect the internal potable water system and its occupants from contamination that can be introduced via restrooms, kitchens, boilers, irrigation, HVAC systems, etc. It is equally important that the water supplier protect their distribution system from contamination that can be introduced via car washes, auxiliary water sources, fire suppression systems, irrigation and many other sources. Water suppliers need to perform cross connection identification surveys to identify potential cross connections within their distribution system.

Suppliers may choose not to perform surveys of non-single-family-residential connections if the supplier controls that connection with the most protective backflow prevention assembly or backflow prevention method. The following are acceptable "most protective backflow prevention assemblies or methods":

- Method - air gap installed in accordance with standard AMSE A112.1.2.
- Assembly - reduced pressure zone backflow prevention assembly.

3.4.1 Single-Family-Residential Connections

The supplier does not have to perform surveys at single-family-residential-service connections. If the supplier becomes aware of a single-family-residential connection to the public water system that is a cross connection, the supplier must control the cross connection in the same manner required in Regulation 11.

If the supplier's public water system consists only of single-family-residential-service connections, the public water system does not have to perform surveys at those service connections, however the supplier must survey its waterworks and identify if there are any direct connections to the public water system's distribution system such as irrigation systems, maintenance shops, fire suppression systems, agricultural uses, water fill stations or other hazards.

3.4.2 Cross Connections Not Identified

If the survey process identifies no cross connection the supplier must document the results of the surveys. The supplier is still required to have a written cross connection control program. The written BPCCC program should make mention of how the supplier will continue to evaluate new service connections and changes in use for potential cross connections.

3.5 Identified Cross Connections

Once a supplier has learned of a cross connection the supplier must take action based on the specific site conditions.

If the supplier learns of an identified cross connection and suspects or confirms that backflow contamination has occurred, the supplier must notify and consult with the Department on any appropriate corrective measures no later than 24 hours after learning of the backflow contamination event. Part 2.1 of this document provides guidance for reporting contamination events to the Department.

If the supplier believes that an identified cross connection could present an immediate health risk to the public based on the site's hydraulic conditions and the acute toxicity of the identified risk, the Department requests notification for further evaluation to determine if alternative action is necessary based on threat to public health. Such action could be an expedited schedule to remove the cross connection or the Department or supplier could issue a bottle water advisory for the impacted area.

If the supplier discovers an uncontrolled cross connection and believes that a backflow contamination event has not occurred, the supplier must: first the supplier must determine the type of backflow prevention assembly or backflow prevention method needed to control the cross connection and second install and maintain or require the customer to install and maintain a backflow prevention assembly or backflow prevention method at the uncontrolled cross connection, suspend service to the customer, or remove the cross connection, no later than 120 days after its discovery.

If the supplier becomes aware of a single-family-residential connection to the public water system that is a cross connection, the supplier must control the cross connection in the same manner required in Regulation 11.

If the supplier is unable to meet the 120-day deadline, the supplier must consult with the Department and the Department may approve an alternative schedule. The Department has created a 120 day deadline application for alternative compliance schedules, See [Appendix C](#). Submittal of the application does not constitute approval. If requested, the Department may send a confirmation of receipt of the application submission back to the supplier. Once the Department has reviewed the application the Department will notify the supplier of its decision.

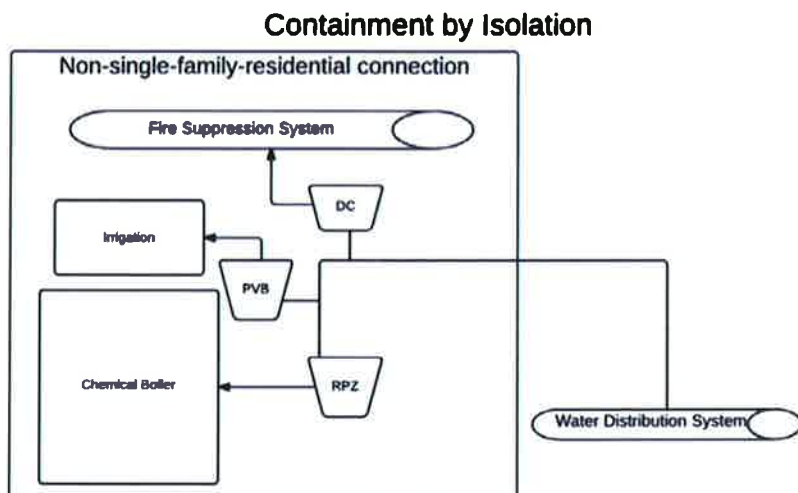
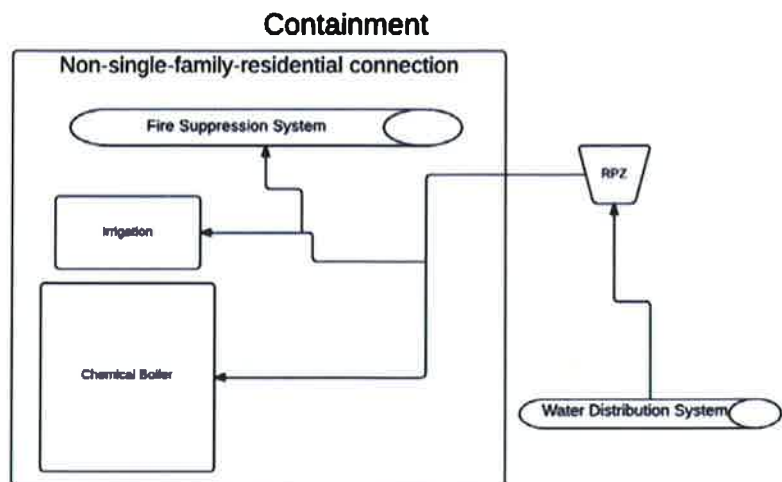
3.6 Assembly and Method Selection

Regulation 11.39(2)(2)(iii) requires that the supplier describe the process used to select a backflow prevention assembly or backflow prevention method to control a cross connection in the written BPCCC program. Suppliers should include in the written BPCCC program guidelines and criteria used to select the type of backflow prevention assembly or method used to control identified cross connection. Guidelines and criteria should address examples of cross connections throughout the water systems distribution system along with the corresponding appropriate backflow prevention assembly and or backflow prevention method used to control the identified cross connection. Part 4.3 of SDWP [Policy 7](#) provides various examples of backflow prevention assemblies and methods and when the use of such assemblies and methods may be appropriate.

Many water systems will choose to control all cross connections with the most protective backflow prevention assembly or method and will not have to develop guidelines or criteria. The rest of the water systems will need to identify the selected industry standards that are used to make control determinations. Regulation 11.39 allows suppliers the option to protect their public water system from cross connections by containment or containment by isolation.

“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.



3.7 Tracking, Testing, and Maintenance

Suppliers must specify the process that the water system will use to require the installation, maintenance, testing, and inspection of all backflow prevention assemblies and backflow prevention methods used to control cross connections. Generally, this is specified in one of the following: local government ordinances, user agreements or the public water system assumes full responsibility. Suppliers must also specify the tracking mechanism it will use to verify the installation, maintenance, testing, and inspection of all backflow prevention assemblies and backflow prevention methods used to control cross connections.

In the state of Colorado, public water systems vary significantly in size and population served; ranging from a small restaurant that serves 25 people per day, to our largest water system which provides water to over one million people per day. Appropriate tracking mechanisms

will vary depending on the number of identified cross connections. If a water system performs a survey and no cross connections are identified then there will be no further tracking requirements, however the supplier's survey process will need to include an evaluation process which will capture potential changes in customers at surveyed service connections. New customers may create new cross connections which are required to be controlled. If the supplier identifies any cross connections that require control the supplier will have to develop and appropriate tracking mechanism for the installation, testing and maintenance of those assemblies and methods. Tracking methods may vary from a simple list, to a more complicated spreadsheet or tracking software specifically dedicated to control of cross connections. The Department has developed a sample tracking spreadsheet (as part of the annual report) that can be found in Appendix D.2.

A good tracking mechanism will be able to keep track of the location of the cross connection (address and perhaps a description of the location of the assembly or method), facility contact and phone number, the cross connection type, the assembly or method used to control the cross connection, when available the initial discovered date, date assembly tested and result (pass/fail) for the preceding three year period, active date and any other notes that may be useful to the supplier such as installation issues or pass/fail history.

3.7.1 Failed Assembly or Inadequate Method

If the supplier is notified of a failed assembly or and inadequate method the supplier must ensure that the backflow prevention assembly that produced the failed test is repaired or replaced and tested, or that the inadequate method is corrected, or service is suspended to the customer, or the cross connection is removed

The supplier may receive a Department approved alternative compliance schedule for failed assemblies or inadequate methods that have not been repaired/corrected within 60 days. Department-approval of an alternative compliance schedule means either an email or other written communication from the Department. The Department has provided [APPENDIX C.2 – BPPCC Rule 60-Day Cross-connection Control Extension Application](#) for such request.

3.8 Certified Tester

Regulation 11 section 11.39(2)(a)(vi) refers to the “process the supplier will use to ensure backflow prevention assemblies are tested by a Certified Cross-Connection Control Technician”. The Department will determine the adequacy of a supplier's process to ensure that testing has been completed by a certified professional. Typically, the supplier is in compliance with section 11.39(2)(a)(vi) of Regulation 11 if the supplier does the following:

- i. The supplier has a documented process in place where the supplier receives a test report directly from the Certified Cross-Connection Control Technician or their associated company.
- ii. To be considered adequate, test reports used to document compliance with Regulation 11 must include all of the following:

Assembly or method information:

- a. Assembly or method type;

- b. Assembly or method location;
- c. Assembly make, model and serial number;
- d. Assembly size;
- e. Test date; and,
- f. Test result (pass/fail).

Certified Cross-Connection Control Technician information:

- a. Certified Cross-Connection Control Technician certification agency;
- b. Certification number;
- c. Certification expiration date or statement that certification is current; and,

- d. As an alternative to a-c, suppliers may provide documentation of an alternative validation process such as electronic login to reporting software where only current, certified cross-connection control technicians (or their companies) are given a login.
- iii. APPENDIX H provides examples of acceptable test reports.

4. Backflow Prevention and Cross-connection Control Annual Report

In order to evaluate compliance with the backflow prevention and cross-connection control requirements of Regulation 11 and ensure protection of public health from cross connections suppliers must develop a written backflow prevention and cross-connection control annual report in accordance with Regulation 11. For each calendar year the written BPCCC annual report must be completed by May 1 of the following year. The first report must be completed by May 1, 2017. The report will need to be made available to the department upon request and will be evaluated during sanitary surveys for compliance. A backflow prevention and cross-connection report template can be found in [Appendix D.1](#). Also, for non-community systems, the combined BPCCC written program and report can be found in [Appendix G](#).

Additional sample calculations and guidance can be found in the department's [CDPHE BPCCC Program Report Guidance](#). Per Regulation 11, at a minimum the report must include the following information:

1. Total number of non-single-family-residential connections to the public water system and connections within the supplier's waterworks. This is the number of connections that the supplier has identified which will either require a survey or protection. This number should be tabulated once and updated as needed. This number can only increase with new connections to the public water system's distribution system and can only decrease if connections to the distribution system are reduced. ****Note**** The supplier is not required to include any non-single-family-residential connections identified after October 31 of the calendar year in the total number of non-single-family-residential connections to the public water system until the following calendar year.
2. Total number of connections surveyed to determine if cross connections are present. If a supplier chooses to control a connection with the most protective backflow prevention assembly or method for reporting purposes the connection can be considered surveyed and reported as such. This number is a tabulation of all connections surveyed and controlled throughout the years and not the number of connections surveyed that year.
3. Survey compliance ratio (SCR). SCR is equal to the total number of connections surveyed divided by the total number of non-single-family-residential connections identified. Note: If a water supplier determines that it may be difficult to achieve the survey compliance ratio, the supplier may propose an alternative survey compliance ratio to the Department- [Appendix F](#) contains the appropriate application form.

CPDWR Regulation 11 Table 11.39 -I Survey Compliance Ratio	
Compliance Date	Compliance Ratio
By December 31, 2016	Greater than 0.60
By December 31, 2017	Greater than 0.70
By December 31, 2018	Greater than 0.80
By December 31, 2019	Greater than 0.90
By December 31, 2020 and each year after	1.0

4. Total number of identified cross connections. If a supplier chooses to control a connection with the most protective backflow prevention assembly or method for reporting purposes the connection can be considered a cross connection and reported as such.
5. Number of uncontrolled cross connections identified during the calendar year.
 - a. Number of identified uncontrolled cross connections that were controlled within 120 days of discovery.
 - b. Number of identified uncontrolled cross connections that were not controlled within 120 days of discovery.
6. Number of backflow prevention assemblies installed at cross connections that were used during the calendar year. This is the number of assemblies installed that protected the public water system from potential contamination via cross connections for the previous calendar year.
7. Number of backflow prevention methods installed at cross connections that were used during the calendar year. This is the number of methods installed that protected the public water system from potential contamination via cross connections for the previous calendar year.
8. Number of connections where service was suspended as specified in 11.39(3) during the calendar year.
9. Number of backflow prevention assemblies used to control cross connections that were tested by a Certified Cross Connection Control Technician during the calendar year.
10. Backflow prevention assembly annual testing compliance ratio (ATR). The ATR is equal to the total number of assemblies tested during the previous calendar year divided by the total number of assemblies used to protect the distributions system during the previous calendar year.

CPDWR Regulation 11 Table 11.39 –II Backflow Prevention Annual Testing Survey Compliance Ratio	
Compliance Date	Compliance Ratio
By December 31, 2016	Greater than 0.50
By December 31, 2017	Greater than 0.60
By December 31, 2018	Greater than 0.70
By December 31, 2019	Greater than 0.80
By December 31, 2020 and each year after	Greater than 0.90

11. Beginning January 1, 2021, the number and location of backflow prevention assemblies not tested during the calendar year covered by the report.
12. Number of backflow prevention methods used to control cross connections that were inspected during the calendar year.
13. Backflow prevention method annual inspection compliance ratio.
14. Beginning January 1, 2017, the number and location of backflow prevention methods not inspected during the calendar year covered by the report.

4.1 Calendar Year Backflow Prevention Assembly Testing and Reporting

Guidance:

The following is a list of scenarios that may present themselves to your water system and how those scenarios can be addressed;

Scenario 1. Assembly X was due to be annually tested in 2017. Assembly X was not tested in 2017. Consequently, assembly X was tested February 15, 2018. Assembly X is no longer required to be tested in 2018.

For the annual report due May 1, 2018, assembly X would not be included in the Regulation 11.39(4)(a)(ix) determination. Assembly X would be included in the Regulation 11.39(4)(a)(ix) determination for the annual report due May 1, 2019.

Scenario 2. Same scenario described above but occurred in 2020. Beginning January 1, 2021

Assembly Z was due to be annually tested in 2020. Assembly Z was not tested in 2020. Consequently, assembly Z was tested February 15, 2021. Assembly Z is no longer required to be tested in 2021.

For the annual report due May 1, 2021, assembly Z would not be included in the Regulation 11.39(4)(a)(ix) determination. Assembly Z would need to be included in the Regulation 11.39(4)(a)(xi) determination. Additionally, assembly Z would be included in the Regulation 11.39(4)(a)(ix) determination for the annual report due May 1, 2022.

5. Standards for Construction and Installation

Water suppliers are expected to develop methods or adopt standards in order to ensure that customers install the appropriate level of backflow prevention at service connections. Example standards are printed in [Appendix I](#). In cases where industry-accepted assemblies are not practical to be installed, site-specific deviation criteria may need to be developed.

5.1 Site-specific Deviation Criteria Development

The supplier may develop site-specific deviation criteria if the supplier determines that the installation of an alternative backflow prevention assembly or backflow prevention method is appropriate for the identified contaminant, or that a lower protective backflow prevention assembly or backflow prevention method can be installed due to more frequent testing and/or inspections.

If a supplier develops a site-specific deviation criteria, the supplier does not have to receive approval from the department. The department may be consulted when developing criteria. Site-specific deviation criteria and modifications are subject to review by the Department and may address situations where the assembly or method is installed in accordance with the local jurisdictional plumbing code or instances when the installation of an air gap or where the supplier considers that the RPZ retrofit would create an unreasonable burden.

If the department disagrees with an already implemented site-specific deviation criteria, it may be possible that the department would consider the cross connection uncontrolled. Depending on the severity of the situation, the cross connection may need to be controlled appropriately within 120 days or within ten days of being ordered by the department.

Examples of situations where site specific deviation criteria may be developed are provided in Part 4.5 of [SDWP Policy 7](#). The supplier must document and be able to provide the developed site-specific deviation criteria and make it available to the department upon request.

APPENDIX A – BPCCC Program Template

An example BPCCC program can be downloaded on the Department's web page. The Department has provided a MS Word version of the required written program.

[Link to Department's BPCCC Page.](#)

[LINK FOR REV](#)

APPENDIX B – Sample Ordinance

An example BPCCC ordinance can be downloaded on the Department's web page.

[Link to Department's BPCCC Page.](#)

[Link For Rev](#)

APPENDIX C.1 – BPCCC 120-Day Cross-connection Control Extension

A template for the BPCCC 120-day cross-connection control extension application can be downloaded on the Department's web page.

APPENDIX C.2 – BPCCC 60-Day Cross-connection Control Extension

A template for the BPCCC 120-day cross-connection control extension application can be downloaded on the Department's web page.

[Link to Department's BPCCC Page.](#)

[LINK FOR REV](#)

APPENDIX D – BPCCC Annual Report

An example BPCCC annual compliance report can be downloaded on the Department's web page. The Department has provided a MS Word and Excel version of the required report, depending on system complexity.

[Link to Department's BPCCC Page.](#)

[Link for Rev \(MS Word\)](#)

[Link for Rev \(MS Excel\)](#)

APPENDIX E – BPCCC Survey Questionnaires

An example BPCCC annual compliance report can be downloaded on the Department's web page. The Department has provided a MS Word and Excel version of the required report, depending on system complexity.

[Link to Department's BPCCC Page.](#)

[Link for Rev \(MS Word\)](#)

APPENDIX F – Alternative Survey Compliance Ratio Application

A template for the BPCCC alternative survey compliance ratio application can be downloaded on the Department's web page.

[Link to Department's BPCCC Page.](#)

[Link for Rev.](#)

APPENDIX G – Non-community Public Water System Program and Report Template

Non-community public water systems and community water systems located on one entire property that contain water supply systems are subject to the following survey and cross connection control requirements:

- a. Generally, if the water supply system is owned by the supplier, then all cross connections within the water supply system must be protected from backflow. In this case, the water supply system is part of the distribution system for the purposes of identifying cross connections.
- b. The survey requirement in 11.39(3)(c) applies to the water supply system. At a minimum, identified cross connections must be controlled in accordance with the Colorado Plumbing Code. All backflow prevention assemblies and methods used to control cross connections must be tested or inspected and maintained as specified in Regulation 11.

A template for the BPCCC Non-community program and report can be downloaded on the Department's web page.

[Link to Department's BPCCC Page.](#)

[Link for REV](#)

APPENDIX H: Example Assembly and Method Test Reports

Sample Backflow Prevention Assembly Test Report

Public Water System:		
Customer Name & Number:		
Customer Account Number:		
Onsite Contact Person Name, Number & Address:		
Assembly Type and Size:		
Assembly Location:		
Assembly make model and serial number:		
Test Result:		
Certified Cross-Connection Control Technician Certification Agency		
Certification Number		
Certification Expiration Date		
Observations, Repairs or Comments		
Signatures of Owner or Onsite Contact:		
Date	Name	Signature
Signatures of Tester:		
Date Assembly Tested	Name	Signature

Directions: The tester or customer must submit and include all of the following information to the appropriate public water system. Record must be kept for three years.

Sample Backflow Prevention Method Inspection Report

Public Water System:		
Customer Name & Number:		
Customer Account Number:		
Onsite Contact Person Name, Number & Address:		
Method Type and Size:		
Method Location:		
Device make model and serial number:		
Inspection Result:		
Certified Cross-Connection Control Technician Certification Agency (NA if performed by supplier staff)		
Certification Number (NA if performed by supplier staff)		
Certification Expiration Date (NA if performed by supplier staff)		
Observations, Repairs or Comments		
Signatures of Owner or Onsite Contact:		
Date	Name	Signature
Signatures of Inspector:		
Date Assembly Tested	Name	Signature

Directions: The tester or customer must submit and include all of the following information to the appropriate public water system. Record must be kept for three years.

APPENDIX I: Example Standards for Assemblies and Methods

(1) Only the models of backflow prevention assemblies that are approved by the Foundation for Cross-Connection Control and Hydraulic Research of the University of Southern California (USC- FCCC&HR) or The American Society of Sanitary Engineering (ASSE) are acceptable for use when installing assemblies and devices used to control cross connections in accordance with Regulation 11.

(2) Air gaps must be installed in accordance with standard AMSE A112.1.2.

(3) Backflow prevention assemblies and air gaps used for containment shall be installed on the user's water service line as close as possible to the point of connection to the public water system and prior to any other connection or branch line. If it is not possible or practical to install backflow prevention assemblies or air gaps as described, the installation shall be at the approval of the water supplier; such backflow prevention assemblies or air gaps used for containment by isolation shall be installed in the user's plumbing system as close as possible to the cross-connections and shall be installed in accordance with the applicable plumbing code.

(4) No bypass piping shall be allowed around the backflow prevention assembly unless the bypass is equipped with the same degree of backflow prevention protection.

(5) Reduced pressure principle backflow prevention assemblies and reduced pressure principle detector backflow prevention assemblies shall be installed with no plug or additional piping affixed to the pressure differential relief valve port (except for specifically-designed funnel apparatus available from the manufacturer) and with the pressure differential relief valve port a minimum of twelve inches (12") above floor level or finished grade. Additionally, the assembly shall be installed at a location where any leakage from the pressure differential relief valve port will be noticed, that allows easy access to the assembly for maintenance and testing, and that will not subject the assembly to flooding.

(6) All double check valve assemblies and double check detector backflow prevention assemblies shall be installed at a location that allows easy access to the assembly for maintenance and testing and that will not subject the assembly to excessive heat or freezing.

(7) All pressure vacuum breaker assemblies and spill resistant pressure vacuum breaker assemblies shall be installed at a location that allows easy access to the assembly for maintenance and testing and that will not subject the assembly to backpressure or flooding. Said assembly shall be installed at least twelve inches (12") above the highest downstream plumbing.

(8) All backflow prevention assemblies installed on fire suppression systems shall be installed upstream of the fire department connection (FDC).

(9) All backflow prevention methods should be installed in accordance with the local jurisdictional plumbing code if applicable. If there is not a local jurisdiction having authority the method must be installed in accordance with the most current Colorado Plumbing Code.



MEMORANDUM

Date: May 18, 2020
To: Mayor and Town Board
Via: Shane Hale, Town Manager
From:
Re:
Item #: 4.

ATTACHMENTS:

- ▢ Future Meetings Agenda



FUTURE TOWN BOARD MEETINGS

May 25, 2020	Town Board Work Session and Regular Meeting Cancelled due to Memorial Day
May 28, 2020 4:00 p.m.	Community Conversation – Recycling Center
June 1, 2020 4:00 p.m.	Town Board Work Session Small Cell Towers – Code Update Discussion
June 8, 2020 4:00 p.m.	Town Board Work Session- Board/Manager/Attorney Monthly Meeting
June 8, 2020 5:00 p.m.	Town Board Regular Meeting
June 15, 2020 4:00 p.m.	Town Board Work Session District 4 Vacancy Interviews
June 22, 2020 4:00 p.m.	Town Board Work Session
June 22, 2020 5:00 p.m.	Town Board Regular Meeting
June 29, 2020	Fifth Monday – No Meeting
July 6, 2020 6:00 p.m.	Town Board Work Session
July 13, 2020 5:30 p.m.	Town Board Work Session- Board/Manager/Attorney Monthly Meeting
July 13, 2020 7:00 p.m.	Town Board Regular Meeting
July 20, 2020 6:00 p.m.	Town Board Work Session

Additional Events

Postponed to a date undetermined Brycen Zerby Playground Dedication, Windsor Main Park beginning at 8:00 a.m. — attending: Rennemeyer, Jones, Wilson

Postponed to a date undetermined Public Services Ribbon Cutting, 922 15th Street, Windsor, CO, 5:00 p.m. — 7:00 p.m. — attending: Rennemeyer, Jones Baker, Wilson

Postponed to a date undetermined Kodak Dedication of Windsor Lake, Boardwalk Park, beginning at 0:00 a.m. — attending: Bennett, Jones, Baker, Rennemeyer

Postponed to a date undetermined Outgoing Board Member Grove Dedication prior to Board Meeting

Future Work Session Topics

- Land Use Code Update meeting with Planning Commission (next code section in series) – Planning
- Economic development/retail needs at 60,000 population
- Clearview Library Presentation (General Update and Strategic Plan)
- Joint Meeting with Town of Windsor, Town of Severance, Fire District and School District – Tentative for Fall of 2020