

### Cross-Connection Control

Effective Date: November 2, 2010  
Last Revised: December 16, 2025

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#### 1. Purpose

The City of Pitt Meadows (City) is committed to providing our citizens with safe, reliable drinking water in accordance with the BC Drinking Water Protection Act and has implemented a Cross-Connection Control Program (CCP). The CCP ensures the delivery of safe drinking water by helping to eliminate actual and/or potential Cross-Connections within the City's water distribution system by requiring the installation of approved Backflow prevention devices.

Backflow prevention devices, if properly installed and maintained, allow water to flow in only one direction. Water can flow from the City's water distribution system to the property, but not in the other direction, effectively reducing the potential of contamination of the City's water distribution system through Backflow and Cross-Connection occurrences.

This Policy is intended to help inform the administration and enforcement of the Cross-Connection and Backflow Prevention provisions of the Waterworks Bylaw.

#### 2. Scope

This policy applies to private and public properties that are serviced from the City of Pitt Meadows' water distribution system where Backflow prevention is required.

#### 3. Definitions

In this policy,

- a) **Agricultural Property** means a property that is zoned to permit an agriculture use in the Zoning Bylaw;
- b) **Annual Declaration** means an annual backflow declaration, in the form prescribed by the City;
- c) **AWWA Manual** means the manual published by the American Water Works Association titled "Canadian Cross-Connection Control Manual;"



- d) **Backflow** means the flowing back or reversal of the normal direction of water flow in either the Waterworks or the Private Water System on a property that connects to the Waterworks;
- e) **Backflow Preventer** means a mechanical apparatus installed on a water service to prevent Backflow, consisting of the Backflow prevention unit, and two independent valves.
- f) **Building Official** has the meaning set out in the Waterworks Bylaw;
- g) **City** means the City of Pitt Meadows;
- h) **Commercial Property** means a property that is zoned to permit a commercial use in the Zoning Bylaw;
- i) **Consumer** has the meaning set out in the Waterworks Bylaw;
- j) **Cross-Connection** means any actual or potential connection between the Waterworks and any source of pollution or contamination;
- k) **Cross-Connection Control Program (CCP)** means a program initiated by the City to administer and regulate the selection, installation, testing, and maintenance of Backflow Preventers;
- l) **CSA Standard** means the standard published by Canadian Standards Association titled "Selection and Installation of Backflow Preventers/Maintenance and Field Testing of Backflow Preventers;"
- m) **Director** means the Director of Engineering & Operations, the Director of Planning and Development, an authorized representative, or any person appointed by Council to serve in that capacity;
- n) **Hazard** means one of the three levels of hazard: Minor Risk, Moderate Risk, or Severe Risk as defined in the CSA Standard;
- o) **Higher Hazard** means the Moderate Risk and Severe Risk hazard activities or environment classification;
- p) **Industrial Property** means a property that is zoned to permit an industrial use in the Zoning Bylaw;
- q) **Institutional Property** means a property that is zoned to permit an institutional use in the Zoning Bylaw;
- r) **Occupier** has the meaning set out in the Waterworks Bylaw;
- s) **Owner** has the meaning set out in the Waterworks Bylaw;
- t) **Premise Isolation** means having a Backflow Preventor installed on the property at the point where the water service enters a property, which is typically as close to the property line as feasible;

- u) **Private Water System** has the meaning set out in the Waterworks Bylaw;
- v) **Qualified Professional** means person or firm who is qualified and permitted to carry out the required work under the Authorized Functions List in the CSA Standard;
- w) **Residential Property** means a property that is zoned to permit a residential use in the Zoning Bylaw;
- x) **Single-Family Dwelling** means a single-family dwelling as defined in the Zoning Bylaw;
- y) **Waterworks** has the meaning set out in the Waterworks Bylaw;
- z) **Waterworks Bylaw** means the City of Pitt Meadows Waterworks Bylaw No. 2891, 2021, as amended from time to time; and
- aa) **Zoning Bylaw** means the City of Pitt Meadows Zoning Bylaw No. 2505, 2011, as amended from time to time.

#### 4. Policy Statements

The City has developed the CCP following the best practices contained in the AWWA Manual and the CSA Standard.

##### 4.1. Role of the City

###### (1) Provision of CCP

- a) The City, through the CCP, intends to prevent contamination of the Waterworks resulting from Cross-Connections and Backflow occurrences, and, in doing so, may:
  - i. Undertake a review of properties and water service connections to assess the potential Hazard and type of Backflow Preventer that is required;
  - ii. Require the installation or repair of a Backflow Preventer at any time, in accordance with the provisions of this policy and the Waterworks Bylaw;
  - iii. Require the installation of a Backflow Preventer as part of a building permit when required by the BC Building Code;
  - iv. Maintain records on Backflow Preventer devices, including annual test reports; and

- v. Provide community education and respond to public inquiries.

## (2) CCP Implementation

- a) In implementing the CCP, the Director or Building Official may perform a desktop review of the water connections of properties to assess the potential risks and the level of Hazard in accordance with the AWWA Manual and the CSA Standard. The CCP will generally focus on potentially Higher Hazard water use properties first, including Industrial, Commercial, Institutional, Agricultural, and certain Residential Properties.
- b) The desktop review would generally consider the zoning of the property, including the permitted uses, and the level of Hazard for such uses and activities per the AWWA Manual and the CSA Standard, to inform the type of Backflow Preventer that may be required.
- c) Following the desktop review, a letter may be sent to the water Consumer and/or property Owner explaining the result of the assessment and the requirements, if any, for Backflow Preventers.

## (3) CCP Enforcement

- a) If the requirements for Backflow Preventers are not met, enforcement of the provisions of the Waterworks Bylaw may include, without limitation:
  - i. the issuance of Bylaw Notices (tickets);
  - ii. seeking injunctive relief; and/or
  - iii. undertaking direct action by the City to correct the contravention.

## (4) CCP Maintenance and Updates

- a) From time to time, the Director or Building Official may update the CCP by means of issuing bulletins or public notifications that will apprise the water Consumers, the property Owners, and the public of the revisions to the CCP.
- b) Requirements for Cross-Connection control that are not specifically addressed in the AWWA Manual or the CSA Standard may also be

issued by bulletins or public notifications. In the case of a discrepancy between the manuals and a bulletin/notification of the CCP, the requirements of the bulletin/notification will prevail.

**(5) Emergency Response**

- a) A Water Response Plan may be enacted in accordance with the BC Safe Drinking Water Regulation - Section 7, to address any incident arising from Cross-Connections and Backflow occurrences.

**4.2. Responsibilities of the Water Consumer and/or Property Owner**

**(1) Contamination and Cross-Connection**

- a) Pursuant to the Waterworks Bylaw, the water Consumer and/or the property Owner will not allow water, waste water, or any harmful liquid, gas, substance, or contaminant to enter the Waterworks.
- b) The water Consumer and/or the property Owner will further ensure that onsite water-use practices or processes do not negatively impact the Waterworks.

**(2) Backflow Prevention**

- a) Where a Backflow Preventor is required for a property, the water Consumer and/or the property Owner will retain the services of a Qualified Professional to install an accepted Backflow Preventer in accordance with the CCP and the Waterworks Bylaw.
- b) The water Consumer and/or the property Owner will be responsible for all costs associated with the installation, annual inspection and testing by a Qualified Professional, repair, maintenance, and replacement of the Backflow Preventers servicing their property.
- c) All new Backflow Preventor device installations require a building permit.

**(3) Annual Testing**

- a) All testable Backflow Preventer devices require annual testing by a Qualified Professional, or more often if required by the Director or



Building Official. If test reports are not received by the date required by the Director or Building Official, a reminder letter requesting test results within 30 days may be sent by the Director or Building Official.

- b) The Director or Building Official retains the right to reject test reports based on errors, discrepancies or omissions.
- c) In the event a Backflow Preventer fails a test, the consumer must have the device repaired or replaced. The device must then be tested again to ensure that it is in proper working order.
- d) A test tag must be attached to every assembly, once it has passed inspection.
- e) The water Consumer and/or the property Owner is responsible for all costs associated with the annual testing, repair, replacement and maintenance of Backflow Preventers.
- f) Failure to submit an acceptable test report, or failure to repair or replace a Backflow Preventer device that fails a test, may be considered non-compliance with the requirements of this Policy and Waterworks Bylaw, and may result in enforcement action.

#### **(4) Access to Property**

- a) The Director or Building Official may elect to access a property to perform inspections to assess the buildings and the property for potential or actual Cross-Connections. An officer or employee of the City, or other persons authorized by Council, may enter on or into property in accordance with the provisions of the Community Charter.

#### **(5) Incident Reporting**

- a) The water Consumer or the property Owner must immediately report all Cross-Connections and Backflow occurrences to the City in the form prescribed by the Director or Building Official.



#### 4.3. Backflow Preventers

- (1) The type of Backflow Preventer will depend upon the degree of Hazard a property presents to the Waterworks. The determination of the degree of Hazard for a property will be informed by the City's CCP, the AWWA Manual, and the CSA Standard.
  - a) For properties with Severe Risk hazards, a Reduced Pressure Backflow Assembly (RPBA) will be required.
  - b) For properties with Moderate Risk hazards, a Double Check Valve Assembly (DCVA) will be required.
  - c) For properties with Minor Risk hazards, a Dual Check Valve (DCV) will be required.
- (2) Future changes to the uses of the property or zoning will require a renewed determination of the property's Hazard classification and Backflow prevention.
- (3) Heat tracing or heated enclosures for RPBA devices is standard industry practice to reduce chances of freezing in colder temperatures. Lack of such heat tracing measures or heated enclosures for any Backflow Preventer, and subsequent costs to repair the devices, is not the City's responsibility.
- (4) Under the City's CCP, Industrial, Commercial, Institutional and Agricultural Properties are generally considered Higher Hazard properties, and therefore will require Premise Isolation. Only the RPBA and DCVA Backflow Preventers will be accepted for properties with Premise Isolation.
- (5) Under the City's CCP, properties with more than one water service (which is not standard practice), where the services may be connected via the Private Water System, are deemed Higher Hazard properties, and therefore will require Premise Isolation. Only the RPBA and DCVA Backflow Preventers will be accepted for properties with Premise Isolation.
- (6) Agricultural Properties with agricultural uses and activities, or other Severe Risk hazards, require a RPBA regardless of the size and extent of the activities, the presence of irrigation, or the commodity being grown and/or farmed.
- (7) For Agricultural Properties that generally contain a Single-Family Dwelling with no agricultural uses and activities, or any other Severe Risk hazards, a DCVA may be accepted in lieu of the required RPBA. However, the



property Owner will be required to submit an Annual Declaration confirming that there are no Severe Risk uses or activities being undertaken at the property. If the uses and activities change which increase the degree of Hazard for the property, an upgrade to a RPBA will be required.

- (8) Examples of Severe Risk hazards (i.e. uses, equipment and/or activities) include, without limitation:
- a) Agricultural activities, including the growing of any commodity, presence of livestock equipment, poultry barn, food processing plant or other;
  - b) Irrigation system with chemical sprayer or injection;
  - c) Storage of chemicals;
  - d) Laundromat with dry cleaning;
  - e) Dentistry;
  - f) Landscape and/or soil stock piling;
  - g) Auto repair shop or car wash;
  - h) Golf course;
  - i) Mortuary equipment;
  - j) Film development equipment;
  - k) Hospital, surgical clinic or laboratory;
  - l) Industrial fluid system or other industrial process;
  - m) Oil refinery;
  - n) Asphalt, concrete, manufacturing, pulp or paper plant;
  - o) Garbage transfer station;
  - p) Sewage pump station.
- (9) Despite sections 4.3(4), (6) and (7) of this Policy, for Industrial, Commercial, Institutional and Agricultural Properties:
- a) The water Consumer or the property Owner may coordinate, at their own expense, a report prepared by a Qualified Professional with an assessment of potential risks and the level of Hazard for the property and, based on this assessment, make a recommendation on the type of Backflow Preventer that is required, in consideration of the AWWA Manual and the CSA Standard.
  - b) Where the Director or Building Official accepts the recommendation of the Qualified Professional, and the recommendation is different

than the Backflow Prevention requirements outlined in sections 4.3(4), (6) or (7) of this Policy, the property Owner will be required to submit an Annual Declaration confirming that the uses on the property have not changed since the assessment was prepared by the Qualified Professional.

- c) Any changes to the uses of the property will require a new assessment of the property's Hazard classification and Backflow Preventer requirements.
- d) Despite any recommendation from a Qualified Professional, the minimum requirement for a Backflow Preventer for an Industrial, Commercial, Institutional or Agricultural Property is a Premise Isolation Dual Check Valve (DCV).

## 5. Related Bylaws and Policies

- (1) Council Policy C014 Complaints and Bylaw Enforcement
- (2) Building Bylaw No. 2131, 2003
- (3) Bylaw Notice Enforcement Bylaw No. 2439, 2009
- (4) Zoning Bylaw No. 2505, 2011
- (5) Subdivision and Development Servicing Bylaw No. 2559, 2013
- (6) Waterworks Bylaw No. 2891, 2021