

## By-law Number 24-2018

### of The Regional Municipality of Durham

Being a By-law to implement a backflow prevention program for premise isolation in the Regional Municipality of Durham.

Whereas section 11 of the Municipal Act, 2001, S.O. 2001, c.25, provides that the Region has exclusive authority within its geographical boundaries to pass By-laws respecting water production, collection and distribution as well as the collection and treatment of sanitary sewage.

And Whereas the Region operates drinking water systems pursuant to the provisions of the Ontario Safe Drinking Water Act, 2002, S.O. 2002, c.32 which prohibits and makes it an offence to cause or permit anything to enter a drinking water system if it could result in, a drinking-water hazard, a contravention of a prescribed standard or the interference with the normal operations of the system.

And Whereas the Municipal Act, 2001, provides the Region with broad authority to pass By-laws to effectively manage its drinking water system.

And Whereas the Region desires to regulate cross connections and the use of backflow prevention devices in order to protect the integrity of the Drinking Water System.

Now therefore, the Council of The Regional Municipality of Durham hereby enacts as follows:

#### 1. Interpretation,

##### 1.1 In this By-law,

- (a) “**Area Isolation**” means the prevention of backflow into the drinking water system by the installation of a suitable backflow prevention device section of water piping within a building or facility which has potable and non-potable connections.
- (b) “**Area Municipality**” means the Municipality or Corporation of the City of Oshawa, the City of Pickering, the Town of Ajax, the Town of Whitby, the Township of Brock, the Township of Scugog, the Township of Uxbridge and the Municipality of Clarington.
- (c) “**Authorized Functions List**” means the list of functions and the persons authorized to carry out such functions as set out in Appendix A.
- (d) “**Authorized Tester**” means a person authorized to carry out such functions as set out in the authorized functions list.
- (e) “**Backflow**” means a flowing back or reversal of the normal direction of water flow.
- (f) “**Backflow Prevention**” means the prevention of the flow of water, other liquids, chemicals or substances back into the water being supplied by the Region’s water distribution system.
- (g) “**Backflow Prevention Device**” means a device that prevents backflow in to the Region’s water distribution system and includes all valves and test ports approved by the Canadian Standards Association (CSA) B64 series standard.

- (h) “**Building Code Act**” means the Building Code Act, S.O.1992, C.23, as amended.
- (i) “**Commercial**” means land, buildings or structures used, or designed or intended for use for either or both of office and retail uses as defined in this By-law.
- (j) “**Commissioner**” means the Commissioner of Works appointed by the Region or a delegate.
- (k) “**Cross Connection**” means an actual or potential connection between a Potable water system and any source of pollution affecting any temporary, permanent, or potential water connections that may allow backflow to occur.
- (l) “**Cross Connection Control Program Test Report**” means a standard Region document, as amended from time to time.
- (m) “**Cross Connection Survey Report**” means a standard Region document, as amended from time to time.
- (n) “**CSA B64**” means the CSA B64 series standard published by the Canadian Standards Association, in effect at the time of the enactment of this By-law, and as amended from time to time, or successor thereof.
- (o) “**Drinking Water System**” means the water supply system of the Region including all water supply plants, wells, intakes, outlets, equipment, water storage tanks and reservoirs, water supply pumping stations, watermains, appurtenances, water service connections, water meters and all other water works designated for the supply of water together with all lands appropriated for such purposes and uses.
- (p) “**High or Severe Hazard**” means any type of cross-connection or potential cross-connection involving water that has additives or substances, that, under any concentration, can create a danger to health as per CSA series standard.
- (q) “**Industrial**” means lands, buildings or structures used or designed or intended for use for manufacturing, producing, processing, fabricating or assembly of raw goods, research or development in connection therewith, and includes office uses, warehousing or bulk storage of goods and the sale of commodities to the general public where such uses are accessory to an industrial use, but does not include the sale of commodities to the general public through a warehouse club or similar use.
- (r) “**Institutional**” means lands, buildings or structures used or designed or intended for use by an organized body, society or religious group for promoting a public or non-profit purpose, and includes office uses where such uses are accessory to an institutional use.
- (s) “**Moderate Hazard**” means any connection that has a low probability of becoming a severe hazard. This category includes, but is not limited to, connection involving water where the aesthetic qualities of the water have been reduced and, under certain conditions, can create a danger to health as per CSA B64 series standard.
- (t) “**Multi-Residential Property**” means an apartment building, condominium property, townhouse property, co-op property or other similar residential property containing more than six (6) self-contained dwelling units.
- (u) “**Owner**” means a person holding a fee simple or equitable interest in land.
- (v) “**OWWA**” means the Ontario Water Works Association.

- (w) **“Person”** includes an individual, sole proprietorship, partnership, unincorporated association, unincorporated organization, corporation, trustee, heir, executor, administrator or other legal representative.
- (x) **“Potable Water”** means treated Regional water.
- (y) **“Premise Isolation”** means the prevention of backflow into the drinking water system by the installation of a suitable backflow prevention device on a water service.
- (z) **“Property”** means public and private lands, buildings, structures, boats, vehicles, railway cars, or mobile homes which are located within the Region that may be entitled to a water service connection.
- (aa) **“Region”** means The Regional Municipality of Durham acting as a body corporate.
- (bb) **“Regional Water”** means potable water or raw water carried by the Region water supply system.
- (cc) **“Residential”** means lands, buildings or structures used, or designed or intended for use as a home or residence of one or more individuals, and shall include, but is not limited to, a single detached dwelling, a semidetached dwelling, a townhouse, a stacked townhouse, an apartment building, a mobile home, a retirement residence and a residential dwelling unit accessory to a non-residential use.
- (dd) **“Service Pipe”** means that part of a water service from the property line to a building.
- (ee) **“Test Tag”** means a tag approved by the Region containing information related to the date, installation address, type, make, size, model, serial number, location, and test date of the backflow prevention device.
- (ff) **“Watermain”** means a pipe forming part of the drinking water system that conveys Regional water from water supply plants and wells to water services.
- (gg) **“Water Meter”** means a device and associated appurtenances supplied and installed by the Region used for measuring water consumption for billing purposes.
- (hh) **“Water Service”** means a pipe connecting a watermain to a building or facility for domestic industrial, commercial, institutional (ICI), multi-residential property or fire protection purposes consisting of a water service connection and a service pipe.
- (ii) **“Water Service Connection”** means that part of the Regional water supply system connecting a watermain to a service pipe.
- (jj) **“Zone Isolation”** means the prevention of backflow into the drinking water system by the installation of a suitable backflow prevention device on a section of water piping within a building or facility which has only non-potable connections.

## 2. General

- 2.1 If any section, subsection, or part of this By-law is declared by any court of competent jurisdiction to be illegal or ultra vires, such section, subsection or part shall be declared to be separate and independent and enacted as such.
- 2.2 Wherever a word importing the singular number is used in this By-law, such word shall include the plural.
- 2.3 The grammatical changes required to make the provisions of this By-law apply to individuals (male or female), sole proprietorships, partnerships,

unincorporated associations, unincorporated organizations, corporations, trustees, heirs, executors, administrators and other legal representatives where the context so requires shall be assumed as though in each case fully expressed.

- 2.4 In the event of a conflict between the provisions of this By-law and the provisions of any other statute, regulation or By-law, the provisions that are the most restrictive prevail.

### **3. Application of By-law**

- 3.1 This By-law applies to all existing and future ICI and multi-residential properties, except buildings of residential occupancies in accordance with the Building Code Act to which Regional water is supplied.

- 3.2 In addition to and notwithstanding section 3.1, this By-law applies where a condition exists in any property that may be hazardous or detrimental to the drinking water system.

- 3.3 Every owner of property to which this By-law applies shall ensure that a backflow prevention device is installed to provide premise isolation, in every property to which Regional water is supplied.

### **4. Prohibition of cross connection**

- 4.1 No person shall directly or indirectly connect, permit or cause to be connected, allow to remain connected to the drinking water system or construct, install or maintain any piping, fixture, fitting, container, appliance, equipment or any other connection which may or could enable non-potable water, wastewater, or any other liquid, chemical or substance to enter the drinking water system.

- 4.2 If the Commissioner determines that a contravention to section 4.1 may exist at a property, the Commissioner may issue an order or orders to the owner or occupier of the property or any other person as may be required to remedy the contravention.

- 4.3 If the owner or other person to whom the Commissioner has issued an order fails to comply with that order, the Commissioner, may:

- (a) Give further notice to the owner or other person to correct the fault, at their expense, within a specified time period and, if the notice is not complied with, the Commissioner may then shut off the water service; or
- (b) Without prior notice, shut off water services where the Commissioner has identified an immediate threat of contamination to the drinking water system that may endanger public health and safety.

### **5. Cross connection survey**

- 5.1 A cross connection survey report of the plumbing system of properties to which this By-law applies shall be completed, at the owner's expense, by approved personnel specified in the authorized functions list.

- 5.2 The cross connection survey report shall be completed within ninety (90) days of the date of notification by the Commissioner with copies submitted to both the Region and Area Municipality.

- 5.3 A cross connection survey report shall be completed every five years from the date of the first requested survey, subsequent any tenant or ownership change, re-zoning of property, change of process or chemical use or as required by the Commissioner.

## **6. Installation and testing**

- 6.1 Notification to install a backflow prevention device will be issued by the Commissioner as determined by a cross connection survey report. Owner's will be required to install a backflow prevention device:
- (a) In buildings of high or severe hazard in accordance with backflow prevention requirements outlined in the Building Code Act and CSA B64; or
  - (b) In buildings of moderate hazard in accordance with backflow prevention requirements outlined in the Building Code Act and CSA B64; or
  - (c) As specified by the Commissioner.
- 6.2 The owner shall install, at their own expense, a backflow prevention device so that the water service is in compliance with the Building Code Act and CSA B64 within 180 days of notification by the Commissioner.
- 6.3 The backflow prevention device shall be maintained and tested annually or more often if required by the Commissioner, in accordance with CSA B64 by an authorized tester at the expense of the owner.
- 6.4 If the results of a test referred to in section 6.3 of this By-law show that a backflow prevention device is not in proper working condition, the authorized tester shall provide written notification to the Region and Area Municipality within twenty-four (24) hours and immediately make all necessary repairs or replace the device at the expense of the owner.
- 6.5 All cross connection control program test reports shall be completed and submitted to both the Region and Area Municipality within twenty-eight (28) days of a test.
- 6.6 The owner shall retain on-site, the results of cross connection control program test reports for a period of not less than five (5) years from the date of the test and make them available to the Commissioner upon request.
- 6.7 At no time shall a backflow prevention device be by-passed unless previously authorized by the Commissioner or subject to a requirement of provincial or federal legislation.
- 6.8 No person shall remove a backflow prevention device or any part thereof after it has been installed, and no owner of a building or structure in which a backflow prevention device is installed shall cause or permit the removal of such a device, unless such removal is to:
- (a) Replace the device with another device that meets or exceeds the provisions of this By-law; and
  - (b) The water supply is turned off for as long as the device is removed.
- 6.9 If the location of a backflow prevention device cannot be provided by an owner or conditions or circumstances change with respect to a backflow prevention device location within a property, the Commissioner may, at its discretion, approve the installation of zone isolation or area isolation in lieu of premise isolation.
- 6.10 A test tag shall be displayed on or adjacent to the backflow prevention devices on which the authorized tester shall record the address of the property, the location, type, manufacturer, serial number and size of the device, the test date, the authorized tester's initials, the authorized tester's name (if self-employed) or the name of their employer and the authorized tester's license number.

## **7. Inspection for cross connection**

- 7.1 Any person authorized by the Commissioner shall have free access, at all reasonable times, and upon reasonable notice given, to all property and parts of every building or other premises to which Regional water is supplied, for the purpose of inspecting, installing, repairing, altering, disconnecting or shutting off any service pipe or appurtenances.
- 7.2 If access is not provided within twenty-four (24) hours of written notice the Commissioner may, at its discretion, shut off the supply of water to the property until such time as the access is provided.

## **8. Authorized tester**

- 8.1 Only an authorized tester shall be permitted to test, install, replace, maintain, repair, relocate, clean or overhaul a backflow prevention device.
- 8.2 An authorized tester shall complete and pass a cross connection control course in backflow preventer testing, and shall have a certificate issued by OWWA or approved equivalent.
- 8.3 An authorized tester shall maintain current certification with the OWWA or approved equivalent.
- 8.4 Annual registration with the Region is required for all authorized testers. Authorized testers must provide proof of certification to the Region to conduct work on backflow prevention devices.
- 8.5 The Commissioner may suspend or revoke the authorized tester registration with the Region's backflow prevention program, if the authorized tester:
- (a) Fails to renew, submit or maintain the annual registration and the required annual documentation with the Region; or
  - (b) Submits a cross connection control program test report that was falsified; or
  - (c) Repeatedly submits incorrect reports or installations of backflow prevention devices.
- 8.6 All equipment used to test backflow prevention devices shall be verified or calibrated for accuracy, as required by the Building Code Act and CSA B64.

## **9. Fire protection system**

- 9.1 All backflow prevention devices on any ICI or multi-residential property fire protection system shall be selected, installed, maintained and tested annually or more often if required by the Commissioner, in accordance with the Building Code Act and CSA B64 at the expense of the owner, by personnel approved by the Commissioner to carry out such tests to demonstrate that the backflow prevention device is in proper working condition.

## **10. Penalties and fees**

- 10.1 Every person, other than a corporation, who contravenes any provision of this By-law is guilty of an offence and upon conviction is liable for every day or part thereof upon which such offence occurs or continues to occur, to a fine of not more than \$10,000.00 for the first offence and not more than \$25,000.00 for any subsequent offence.
- 10.2 Every corporation that contravenes any provision of this By-law is guilty of an offence and upon conviction is liable for every day or part thereof upon which such offence occurs or continues to occur, to a fine of not more than \$50,000.00 for the first offence and not more than \$100,000.00 for any subsequent offence.

10.3 All fees shall be in conformance with the Region's fee structure as indicated in By-law 89-2003, as amended, or on such other basis as the Region may at any time decide, at such time as the Commissioner may, from time to time, determine.

**11. Regulations and standards**

11.1 Regional standards and By-laws, along with the Building Code Act and CSA B64, the Ontario Provincial Standards Drawings, the Ontario Provincial Standard Specifications and the Ontario Safe Drinking Water Act, 2002, shall form part of this By-law.

**12. Confidential information**

12.1 All information submitted to and collected by the Region under this By-law is subject to the provisions of the Municipal Freedom of Information and Protection of Privacy Act, 2001, S. 2001 I c. 25 (MFIPPA).

12.2 In the event that any person is submitting information, in any form, to the Region as required under this By-law where such information is confidential or proprietary or otherwise may be exempt from disclosure under MFIPPA the person submitting the information shall so identify that information upon its submission to the Region and shall provide sufficient details as to the reason for its purported exemption from disclosure.

**13. Effective date**

13.1 All of the provisions of this By-law shall come into effect on the date that it is passed by Council.

This By-law Read and Passed on the 13<sup>th</sup> day of June, 2018.

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G.L. O'Connor, Regional Chair and CEO

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R. Walton, Regional Clerk

**Appendix A**

Item	Function	Professional Engineer with Tester's License	Certified Engineering Technologist with Tester's License <sup>1</sup>	Licensed Master Plumber with Contractor's and Tester's License	Journeyman Plumber or Pipe-Fitter with Tester's License <sup>2</sup>	Apprentice Plumber or Pipe-Fitter with Tester's License <sup>3</sup>	Licensed Durham Region Staff with Tester's License <sup>4</sup>	Fire System Sprinkler Fitter with Tester's License	Lawn Irrigation System Installer with Tester's License
A	Perform Cross-Connection Survey	✓	✓	✓	✓				
B	Install, relocate or replace a backflow prevention device			✓	✓	✓			
C	Repair of backflow prevention device <sup>4</sup>	✓	✓	✓	✓	✓			
D	Test backflow prevention device <sup>5</sup>	✓	✓	✓	✓	✓	✓	✓	✓
E	Items A, B, C and D above in relation to Fire Protection Systems	✓	✓	✓	✓	✓		✓	
F	Items B, C and D above in relation to lawn sprinkler systems	✓	✓	✓	✓	✓			✓

1. Required to be under the direction of a professional plumber
2. Required to be employed by a licensed plumbing contractor.
3. Required to be employed by a licensed plumbing contractor and under direct supervision of a journeyman plumber or a master plumber.
4. Water Distribution Operator or In-house maintenance staff is permitted to perform repairs, if they have a tester's license.
5. Anyone with a tester's license as per CSA B64, as amended, is permitted.