THE CORPORATION OF THE TOWN OF AMHERSTBURG

BY-LAW NO. 2012 - 08

By-law to regulate cross connections and backflow prevention

Whereas Section 11 of the Safe Drinking Water Act, S.O. 2002, c. 32, requires municipalities to ensure that all water supplied to a user's plumbing system meet the requirements of the prescribed drinking water quality standards,

Whereas Section 11 (2) 6 of the Municipal Act, S.O. 2001, c. 25, as amended, authorizes a municipality to regulate matters for purposes related to the health, safety and well-being of the residents of the Municipality;

Whereas the Municipal Act, S.O. 2001, c. 25 as amended, authorizes municipalities to pass by-laws respecting matters relating to public utilities;

Whereas Section 15.9 of the Building Code Act S.O. 2009, c. 23, as amended, allows an inspector to enter upon land and into *buildings* to determine whether a *building* is unsafe;

Whereas Section 15.10 of the Building Code Act S.O. 2009, c. 23, as amended, allows the *Chief Building Official* to take any measures necessary to terminate a dangerous condition within a *building*;

Whereas Section 80(2) of the Municipal Act, S.O. 2001, c. 25 as amended, authorizes the Municipality to shut off the supply of the public utility to the land;

NOW THEREFORE the Council of the Corporation of the Town of Amherstburg hereby enacts as follows:

1. Short Title

1.1 This by-law may be cited as the "Backflow Prevention By-law"

2. Definitions

2.1 For the purposes of this By-law, the following terms and definitions shall apply:

"Authorized Functions List" means the list of functions and the persons authorized to carry out such functions as set out in Appendix A of this By-law;

"auxiliary water supply" means any water source or system that may be available in a *building* or on any property, other than the Town water supply, including water from any other purveyor's water supply, water from any natural source such as a well, lake, river, spring or harbour and may also include any recycled water or cistern;

"backflow" means the flowing back or reversal of the normal direction of flow of water;

"backflow prevention device" means a device, certified to the *CSA Standard*, that prevents *backflow*;

"building" shall have the same meaning as set out in the Building Code Act, S.O. 2009, c. 23, as amended or any successor thereof;

"Chief Building Official" means a *chief building official* or his or her designate appointed under sections 3 or 4 of the Building Code Act for the Corporation of the Town of Amherstburg;

"cross connection" means any actual or potential connection between a potable water supply or system and any source of pollution or contamination and includes any by-pass, jumper connection, removable section of pipe, swivel or changeover device and any other temporary or permanent connecting arrangement through which *backflow* may occur;

"cross connection survey form" means the form set out in Appendix C of this By-law;

"CSA Standard" means the document entitled B64.10-07/B64.10.1-07 *Selection and Installation of Backflow Preventers/Maintenance and Field Testing of Backflow Preventers* published by the Canadian Standards Association, or any successor thereof;

"owner" means any person, firm or corporation having control over property to which this by-law applies and includes the *owner* registered on the title of the property and any occupant of any *building* or *structure* located on such property;

"potable water" means water that is safe for human consumption;

"premise isolation" means isolation of the water located within a *building* or *structure* from the *Town* water supply;

"source isolation" means isolation of the water located within or having flowed through a source or potential source of contamination within a *building* or *structure* including a device, machine, water system or the like, from any *potable* water system;

"survey" means a complete review of the water distribution system(s) located within a *building* or *structure* to determine the presence of any existing *backflow prevention devices* and/or any *cross connections*;

"structure" means anything constructed or built, either permanently or temporarily, which is provided with a source of *potable water*;

"tester" means a person who is a certified *backflow prevention device tester* who has successfully completed a *cross connection* course in *backflow* prevention testing at an accredited school or college as defined in the *CSA Standard*;

"test report" means a *test report* in the form set out in Appendix B of this by-law

"test tag" means a tag acceptable to the *Town* containing location, purpose, installation address and test history or the *backflow prevention device*;

"unsafe" means in a condition that could be hazardous to the health or safety of persons in the normal use of a *potable water* system or supply;

"untreated water" means any water not subject to the requirements of the Safe Drinking Water act, and/or water that is not under the direct control or the Water Purveyor;

"water meter" means the *water meter* installed to record the amount of water supplied to any *building* or *structure* by the *Town*; and

"zone isolation" means the isolation of the water within an area of a *building or structure* from any *potable water* system located within such *building or structure.*

3. Application

3.1 This by-law applies to existing industrial, commercial, institutional and multi-residential *buildings* and *structures*, except *buildings* of residential occupancies as described in Division A, Article 1.1.2.4. of Ontario Regulation 503/09 (the Ontario Building Code) or any successor thereof.

3.2 In addition to and notwithstanding Section 3.0 of this by-law, this by-law applies where a condition exists in any *building* or *structure* that may be hazardous or detrimental to the *potable water* supply.

4. *Cross Connection* Prohibited

4.1 No person or *owner* shall connect, cause to be connected, or allow to remain connected to the *Town* water supply or any other *potable water* system any piping, fixture, fitting, container, appliance, vehicle, machine or the like in a manner which may under any circumstance allow *untreated water*, waste water or any other liquid, chemical or substance to enter such supply or system, except in compliance with the provisions of this by-law.

4.2 In addition to Section 4.0 and in accordance with all other provisions of this by-law, every *owner* of property to which this by-law applies shall ensure that a *backflow prevention device* is installed in respect of *premise isolation, source isolation* and *zone isolation* in every *building* or *structure* where a *Town* water supply or other *potable water* supply exists.

4.3 No person or *owner* shall connect, cause to be connected or allow to remain connected to the *Town* water supply any *auxiliary water supply* without written approval from the *Town.*

5. Persons Permitted to Carry Out Work

5.1 Only the persons listed in the *Authorized Functions List*, forming Appendix A of this by-law, shall carry out the corresponding functions set out in such list.

6. Application of *CSA Standard*

6.1 Except as otherwise set out in this by-law, the installation, maintenance and field testing of *backflow prevention devices* shall be in accordance with the *CSA Standard.*

6.2 Wherever the *CSA Standard* and this by-law are in conflict, the provisions of this by-law shall prevail.

7. *Cross Connection* Control *Survey*

7.1 Every *owner* of a *building* or *structure* of a type set out is Section 3 of this by-law shall, every five years, or as otherwise required by the *Town*, cause to be carried out a *survey* of each of his or her *buildings* and *structures*, with respect to all existing *cross connections* and all existing and required *backflow prevention devices* and:

(a)shall ensure that such *survey* is carried out on a *cross connection control survey form* by a person permitted to do so pursuant to the *Authorized Functions List*; and

(b)shall ensure that the completed *cross connection* control *survey form* is submitted to the *Town* within fourteen days of the *survey* being conducted.

7.2 Notwithstanding Section 7.0, the *Town* reserves the right to designate one or more qualified employees or engage the services of one or more qualified persons, firms or agencies who meet the qualifications specified in Section 5.0, to perform the *surveys* required in this Section

8. Selection of *Backflow Prevention Devices*

8.1 Every *owner* shall ensure that every *backflow prevention device* required for *premise isolation, zone isolation or source isolation* on his or her property is the proper device to be used pursuant to this by-law.

8.2 *Backflow prevention devices* for *premise, source or zone isolation* shall be determined by:

(a) the *CSA Standard*; or

(b) when the type of *cross connection* is not identified in the *CSA Standard*, by the *Chief Building Official.*

8.3 Notwithstanding Section 8.1 of this by-law, the *Chief Building Official* may require, or permit a particular *backflow prevention device* to be used in respect of any *cross connection.*

8.4 Notwithstanding Section 8.1 of this by-law, the *Chief Building Official* may permit an existing *backflow prevention device* if previously approved as long as the safety of the water supply is maintained to the satisfaction of the *Chief Building Official.*

8.5 Notwithstanding Section 8.1 of this by-law, where a *source isolation backflow prevention device* has been installed by the manufacturer of equipment, the *cross connection* is required to be reviewed by the *Chief Building Official* to determine if the backflow prevention device meets the requirements of the *CSA Standard.*

9. Installation of *Backflow Prevention Devices*

9.1 Every person installing *backflow prevention devices* shall ensure that:

(a) such device is installed in accordance with acceptable engineering practices, the requirements of the Building Code and the *CSA Standard*;

(b) such device is installed in such manner so that, in the event of *backflow*, the device prevents contamination of the *Town* water and any other *potable water* system;

(c) where such device is installed in respect of premise isolation, such device is located within a maximum of 3.0 metres downstream of the *water meter*, except where circumstances require the device to be installed upstream of the *water meter* and such location is to the satisfaction of the *Chief Building Official*;

(d) where such device is installed in respect of premise isolation, all piping between the *water meter* and such device is clearly labelled "no connection permitted";

(e) where such device is installed in respect of *source or zone isolation*, all piping between the point of contamination or potential contamination and the point at which the device is located is labelled "non-*potable water*";

(f) where such device is installed in a public pool as defined in the Ontario Building Code, all exposed water piping and chlorine piping within the water treatment service room shall be colour coded by means of:

(i) painting the entire outer surface of the piping, or
(ii) coloured bands at least 25 mm (1 in) in width that are spaced along the piping at intervals of not more than 1,200 mm (4 ft 1 in);
(iii) colour coding referred to in (i) and (ii) shall be yellow for chlorine and green for *potable water*.

9.2 Installations of testable *backflow prevention devices* require a Building Permit and inspections as required by the Ontario Building Code and the Town Building by-law.

10. Testing of Devices

10.1 Every *owner* who has a testable *backflow prevention device* located on his or her property shall ensure that:

(a) such device is tested by a *tester* when it is first installed and annually thereafter or when requested by the *Chief Building Official* and also when it is cleaned, repaired, overhauled or relocated;

(b) a *test report* is provided to the *Town* within fourteen days of the test being conducted;

(c) in the event that the water supply to the device cannot be shut down in order to facilitate testing, a by-pass shall be installed around the device with a suitable *backflow prevention device* installed in the by-pass to allow for testing of both devices.

10.2 Every person who tests a *backflow prevention device* shall carry out such testing in accordance with this by-law and the *CSA Standard*.

10.3 Every person who tests a *backflow prevention device* shall:

(a) provide a legible *test report* to the *owner* in respect of such test;

(b) upon finding that a *backflow prevention device* is malfunctioning or otherwise not in proper working order, immediately notify the Town and the *owner*;

(c) upon completing the test, complete and affix a *test tag* to the device or immediately adjacent to the device on the piping connected thereto.

11. Inspections

11.1 The Town may, at any reasonable time, enter onto any property, *building* or *structure* to inspect for compliance with this by-law.

11.2 When carrying out an inspection pursuant to Section 11.0, the Town may:

(a) require the production for inspection of documents or things relevant to the inspection;

(b) inspect and remove documents or things relevant to the inspection for the purpose of making copies or extracts;

(c) require information from any person concerning a matter related to the inspection; and

(d) make examination or take tests, samples or photographs necessary for the purpose of the inspection.

12. Remedial Works

12.1 As per Section 15 of the Ontario Building Code Act, where the Town finds that an *unsafe condition* exists on any lands or within any *buildings* or *structures* that may allow contamination of the *Town's* municipal water supply or the contamination of any other *potable* water system on any of such properties the *Town* may:

(a) issue an Order of Compliance to the *owner* to eliminate the *unsafe* condition and in doing so may prescribe the time period for compliance with such Order; or

(b) may cause such remedial works to be undertaken to prevent any hazardous or detrimental infiltration of the *potable water* system or take such other action as is deemed necessary for the protection of the inhabitants and municipal water consumers of the Town; or

(c) shut off the water supply to the subject lands, *buildings* or *structures* or any portion thereof until the *unsafe condition* is eliminated.

12.2 The cost of any works undertaken by the *Town* or its agents to remove an *unsafe condition* shall be added by the clerk of the *Town* to the collector's roll and collected in the same manner and with the same priorities as municipal real property taxes.

13. General Provisions

13.1 Every *owner* of property upon which a *backflow prevention device* is installed shall ensure that such device is in good repair at all times.

13.2 In addition to any other provision of this by-law, the Town may at any time order an *owner* to engage the services of a qualified *tester* to conduct tests, provide reports and undertake any other measures required for the prevention of *backflow* or the protection of a cross connection.

14. Removal of *Backflow Prevention Devices* Prohibited

14.1 No person shall remove a *backflow prevention device* or 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 device unless such removal is:

(a) to facilitate the repair of the device and such device is replaced immediately after such repair is carried out; or

(b) to replace the device with another device that meets or exceeds the provisions of the by-law.

15. Offenses

15.1 Every person who contravenes any provision of this by-law is guilty of an offence and, upon conviction, is liable under any provisions of the Provincial Offences Act, R.S.O. 1990, Chapter P. 33

16. Appendices

16.1 Appendices A through C inclusive and the *CSA Standard* shall form part of this by-law.

Read a first, second and third time and finally passed this 23rd day of January, 2012

MAYOR – WAYNE HURST

CLERK – BRENDA M. PERCY

Appendix "A"
By-law 2012-08

Function	Licensed Plumber with Tester's License	* Journeyman Plumber with Tester's License	** Apprentice Plumber with Tester's License	Fire Sprinkler Fitter with Tester's License	Lawn Irrigation System Installer with Tester's License	Building Official Qualified in Part 7 OBC with Tester's License
1.) Carry out Cross Connection Control Survey	✓	✓				✓
2.) Install, Relocate or Replace Backflow Prevention Device	✓	✓	✓			
3.) Repair of Backflow Prevention Device	✓	✓	✓			
4.) Testing of Backflow Prevention Device	✓	✓	✓			
5.) Functions 1.) through 4.) with respect to Fire Protection Systems	✓	✓	✓	✓		
6.) Functions 2.) through 4.) with respect to Lawn Sprinkler Systems	✓	✓	✓		✓	

* Required to be employed by a Licensed Plumbing Contractor.
** Required to be employed by a Licensed Plumbing Contractor and under the direct supervision of a Journeyman Plumber.

Town of Amherstburg

Cross Connection Control Survey

Facility Name		**Address**	
Date of Survey		**Survey Conducted by**	
Owner		**Owner Phone**	
Owner Address			
Contact Person		**Phone**	
Type of Use		**Hazard Level of Facility**	
Location of Water Service			
Size and Type of Service			
Premise Isolation on Water Service	**Yes**	**No**	
Installed Devices			
Type of Device #1		**Acceptable Protection**	**Yes** **No**
Serial #	**Make**	**Model**	**Size**
Test Tag on Device **Yes** **No**	**Date of last test**		**Orientation**
Tester Information			
Type of Device #2		**Acceptable Protection**	**Yes** **No**
Location			
Serial #	**Make**	**Model**	**Size**
Test tag on Device **Yes** **No**	**Date of last test**		**Orientation**
Tester Information			

Type of Device #3	**Acceptable Protection Yes No**		
Location			
Serial #	**Make**	**Model**	**Size**
Test tag on Device Yes No	**Date of Test**	**Orientation**	
Tester Information			

Comments on Installed Devices:

Actual or Potential Cross Connections within Building (See photos)

Location	Hazard Level	Protected Y/N
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		

All non-potable water pipe labelled Yes No

Backflow Prevention Device Test Report Form

Submit completed form to the Amherstburg Building Department
271 Sandwich St. S. Amherstburg, ON N9V 2A5
email: backflow@amherstburg.ca *Fax: 519 736-9859*

Facility Information	
Facility Address:	Postal Code:
Business name:	
Occupant:	Phone #
Owner:	Phone #
Owner Address:	Postal Code:
Contact person:	Phone #

Tester Information		
Testing Company:		Phone #
Tester's name:		OWWA Cert. #
Test Kit Model	Serial #	Calibration Date:

Device Information		
Device Manufacturer:	Model #	Size:
Type of Device:	Serial #	
Device Location:		
Date of test:	Passed Failed	
Line pressure at time of test: psi	Orientation of device: Horizontal Vertical	
If replacing an existing device, provide serial # of original device:		

Reduced Pressure Backflow Device

Check Valve No. 1	**Check Valve No. 2**
Pressure Differential across Check Valve No. 1 _____psi.	Pressure Differential across Check Valve No. 2 _____psi.
Leaked Closed tight	Leaked Closed tight

Relief Valve Failed to open Opened @_____psi

Buffer _____psi (Difference between reading @ Check valve No.1 and pressure at which relief valve opened)

Shut off valve #1 Leaked Closed tight **Shut of valve #2** Leaked Closed tight

Double Check Valve Assembly

Check Valve No. 1	**Check Valve No. 2**
Pressure drop across valve _____psi	Pressure drop across valve _____psi
Leaked Closed tight	Leaked Closed tight
Shut Off Valve No. 1	**Shut Off Valve No. 2**
Leaked Closed tight	Leaked Closed tight

Pressure Vacuum Breaker

Air inlet valve opened @ _____psi. Failed to open	Check valve Leaked Closed tight Pressure drop across valve _____psi
Shut Off Valve No. 1	**Shut Off Valve No. 2**
Leaked Closed tight	Leaked Closed tight

Tester's Signature:_____