

MUNICIPALITY OF LEAMINGTON

BY-LAW 281-01

Being a by-law to provide for backflow prevention and to regulate the connection of water services to the municipal water system.

WHEREAS Section 7 of the Building Code Act, S.O. 1992 c. 23, as amended, authorizes the Council of a Municipality to enact by-laws to provide for classes of permits including permits in respect of any stage of construction.

AND WHEREAS Part 1 of the Public Utilities Act R.S.O. c.P 52., as amended, authorizes the Council of a Municipality to enact by-laws to regulate supply and to prohibit wrongful use of water in order to ensure the security of the municipal water system.

AND WHEREAS the Council for the Municipality of Leamington deems it necessary to provide for backflow prevention to protect the safety of the municipal water supply.

NOW THEREFORE THE CORPORATION OF THE MUNICIPALITY OF LEAMINGTON BY ITS COUNCIL ENACTS AS FOLLOWS:

INTERPRETATION

1 In this by-law:

- 1) "Authorized Functions List" means the list of functions and the persons authorized to carry out such functions as set out as Schedule A of this By-law;
- 2) "Auxiliary Water Supply" means any water source or system, other than the Municipal water supply, that may be available in a building or on any property;
- 3) "Backflow" means the reversal of the normal direction of flow of water;
- 4) "Backflow Prevention Device" means a device that prevents backflow;
- 5) "Building" shall have the same meaning as set out in the Building Code Act, S.O. 1992, chap. 23, as amended, or any successor thereof;
- 6) "Building Code" shall have the same meaning as set out in the Building Code Act, S.O. 1992, chap. 23, as amended, or any successor thereof;
- 7) "Chief Building Official" shall mean the Chief Building Official appointed by the Council for The Corporation of the Municipality of Leamington;
- 8) "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;
- 9) "Cross-Connection Survey Form" means the form set out as Schedule B of this By-law;
- 10) "CSA Standard" means the standards established for backflow prevention in Article 7.2.10.10 of the Building Code;
- 11) "Installation Guide" means the installation drawings governing the installation of backflow prevention devices as set out in the CSA Standard, as amended from time to time;

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- 12) "Municipality" means The Corporation of the Municipality of Leamington;
- 13) "Municipal Water Supply" means the municipally owned and maintained potable water distribution system;
- 14) "Owner" means any person, firm or corporation having control over property to which the 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;
- 15) "Potable Water" means water that is safe for human consumption;
- 16) "Premises Isolation" means isolation of the water located within a building or structure from the Municipality's water supply;
- 17) "Selection Guide" means the Backflow Prevention Device Selection Guide set out in the CSA Standard, as amended from time to time;
- 18) "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;
- 19) "Structure" means anything constructed or built permanently or temporarily which is provided with a source of potable water;
- 20) "Tester" means a person who is licensed as tester of backflow prevention devices;
- 21) "Test Report" means a report in the form set out in the CSA Standard, as amended from time to time;
- 22) "Test Tag" means a tag in the form set out as Schedule C of this By-law;
- 23) "Water Meter" means the water meter installed within the premises to record the amount of water supplied to such premises by the Municipality; and
- 24) "Zone Isolation" means the isolation of the water located within an area of a building or structure from any potable water system located within such building or structure.

APPLICATION OF BY-LAW

- 2(1) This By-law applies to existing agricultural, industrial, commercial, institutional and residential buildings and structures,
- (2) In addition to and notwithstanding section 2(1) of this By-law, this By-law applies where a condition exists that may be hazardous or detrimental to the municipal water supply.

CROSS-CONNECTION PROHIBITED

- 3(1) No person or owner shall connect, cause to be connected, or allow to remain connected to the Municipality's water supply any piping, fixture, fitting, container, appliance, vehicle, machine or the like in a manner which may under any circumstance allow water, waste or any other liquid, chemical or substance to enter such supply or system, except in compliance with the provisions of this By-law.
- (2) Every owner of property to which this By-law applies shall ensure that a backflow prevention device is installed in respect of premises isolation, source isolation and zone isolation in every building or structure where a Municipality's water supply exists.
- (3) No person or owner shall connect, cause to be connected, or allow to remain connected to the Municipality's water supply any auxiliary water supply.

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PERSONS PERMITTED TO CARRY OUT WORK

- 4 Only the persons listed in the Authorized Functions List shall carry out the corresponding functions set out in such List.

APPLICATION OF CSA STANDARD

- 5(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.
- (2) Wherever the CSA Standard and this By-law are inconsistent, the provisions of this By-law shall prevail.

SELECTION OF BACKFLOW PREVENTION DEVICES

- 6(1) Every owner of a building or structure of a type set out in section 2 of this By-law shall, every five years or as otherwise required by the Municipality, cause to be carried out a survey of each of the owners buildings and structures with respect to all existing cross-connections and all existing and required backflow prevention devices according to CSA Standard:
- (2) Every owner shall ensure that every backflow prevention device required on the owners property is a testable device and is the proper device to be used pursuant to CSA Standard.
- (3) Notwithstanding section 6(2) where a source backflow prevention device has been installed by the manufacturer of equipment using potable water for an operating process of said equipment, the cross-connection is required to be reviewed by the surveyor to determine if the backflow prevention device has not been compromised in any way by the installation of equipment, piping, relocation or removal of backflow prevention device and/or repair and maintenance of said device or equipment. Testable backflow prevention devices are subject to Section 9 of this By-law. Cross Connections of this type are required to be included on the Cross Connection Survey form.

INSTALLATION OF BACKFLOW PREVENTION DEVICES

- 7 No person shall install a backflow prevention device unless a permit has been issued therefore by the Chief Building Official:

OWNERS OBLIGATIONS

- 8(1) Every owner of property on which a backflow prevention device is installed shall ensure that such device is in proper working order at all times.
- 8(2) Every owner who has a backflow prevention device located on the owner's 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 Municipality and also when it is cleaned, repaired, overhauled or relocated;
 - b) in the event that such device is malfunctioning or otherwise not in proper working order, the device is immediately repaired or replaced.

TESTING OF DEVICES

- 9(1) Every person who tests a backflow prevention device shall carry out such testing in accordance with this By-law and the CSA Standard.

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- (2) Every person who tests a backflow prevention device shall:
- a) within 14 days of carrying out such test, provide a legible Test Report to the Municipality in respect of such test;
 - b) upon finding that such device is malfunctioning or otherwise not in proper working order, immediately notify the owner of the premises and the Municipality of such condition.

INSPECTIONS

- 10(1) The Municipality may at any reasonable time enter onto the property of any owner to inspect for compliance with the By-law.
- (2) Where the Municipality finds that a cross connection exists on any property that may allow contamination of the municipal water supply then the Chief Building Official may take either or both of the following actions:
- a) order the owner to eliminate the condition and in doing so may prescribe the time period for compliance with such Order; or
 - b) shut off the Municipal water supply to the property or any portion thereof until the condition is eliminated.

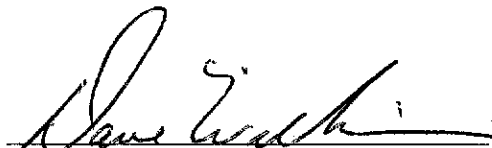
GENERAL PROVISIONS


- 11(1) In addition to any other provision of this By-law, the Municipality may at any time order an owner to conduct tests, provide reports and undertake any other measures required for the prevention of backflow of water into the municipal water supply.
- (2) Schedule A through C inclusive shall form part of this By-law.

PENALTY

- 12(1) Every person who contravenes any provision of this By-law or fails to comply with an Order issued by the Chief Building Official pursuant to this by-law is guilty of an offence, and upon conviction is liable for a fine pursuant to the provision of the Provincial Offences Act, R.S.O., 1990, c.P. 33, as amended.
- (2) Any contravention of this By-law shall constitute a separate offence for each day that contravention continues.

READ A FIRST, SECOND AND THIRD TIME AND FINALLY ENACTED THIS
10TH DAY OF SEPTEMBER , 2001.


DAVE WILKINSON
Mayor


BRIAN R. SWEET
Municipal Clerk

SCHEDULE "A"
of By-law 281-01

AUTHORIZED FUNCTIONS LIST

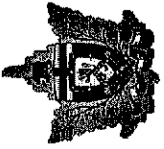
ITEM	FUNCTION	Professional Engineer with Tester's Licence	* Certified Engineering Technologist with Tester's Licence	Licensed Master Plumber with Contractor and Tester's Licence	** Journeyman Plumber with Tester's Licence	*** Apprentice Plumber with Tester's Licence	Fire System Sprinkler Fitter with a Tester's Licence	Lawn Irrigation System Installer with Tester's Licence
1	Carry out Cross Connection Survey	✓	✓	✓	✓			
2	Install, Relocate or Replace Backflow Prevention Device			✓	✓	✓		
3	Repair of Backflow Prevention Device	✓	✓	✓	✓	✓		
4	Test Backflow Prevention Device	✓	✓	✓	✓	✓		
5	Items 1, 2, 3 & 4 above in Respect of Fire Protection Systems						✓	
6	Items 3 & 4 above in Respect of Lawn Sprinkler Systems							✓

* Required to be under the direction of a Professional Engineer.

** 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 or Master Plumber.

NOTE: A building permit is required pursuant to the Building Code Act to install a backflow prevention device. The provisions of the Act pertaining to such building permit continue to apply to each installation in addition to the provisions of this by-law. Permits are required for devices as noted in the Cross-Connection Survey Form.



SCHEDULE "B"
Of
By-law 281-01
CROSS-CONNECTION SURVEY FORM

Plumbing System π Fire Protection System π		Date (Y/M/D)					
		Page #					
Facility:		Report Given to:					
Surveyor:							
Address:		Owner:					
		Phone #:					
		Licence #:					
Location of Cross Connection	Existing Protection Type	Serial # (If Applicable)	Date of Last Test (If Applicable)	Acceptable Protection Yes/No	Required Upgrade	Selection From	REMARKS
PREMISE							
PREMISE							
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
		AG - Air Gap *AVB - Atmospheric type Vacuum Breaker *DCAP - Dual Check Valve Type with Atmospheric Port *DCVA - Double Check Valve Assembly Type *DUC - Double Check Valve Type *DUCV - Dual Check Valve Type with Intermediate Vent HCVB - Hose Connection Type Vacuum Breaker				*LACV - Listed Alarm Check Valve LFVB - Laboratory Faucet Type Vacuum Breaker N - None *PVB - Pressure Type Vacuum Breaker *RSCV - Resilient Seated Check Valve *RP - Reduced Pressure Principle Type * - Building Permits required for the installation of these devices	

NOTE: Surveyor required to submit copies of this report to Municipality of Learnington and owner of property.

SCHEDULE "C"
Of
By-law 281-01

TEST TAG

Front of Tag

Municipality of Leamington 38 Erie Street South Leamington, Ontario, N8H 2Z3 (519) 326-5761		DATE INSTALLED		
BACKFLOW PREVENTION ASSEMBLY TAG		YY	MM	DD
ADDRESS				
TYPE OF ASSEMBLY II RP πDCVA πPVB		MANUFACTURER		SIZE
MODEL NUMBER:			SERIAL NUMBER"	
LOCATION:				
DO NOT REMOVE				

Reverse side of tag

TEST DATE			TESTER'S COMPANY	TESTER'S NO.	TESTER'S INITIALS
YY	MM	DD			
DO NOT REMOVE					

BACKFLOW PREVENTION DEVICE SELECTION GUIDE
APPENDIX "D"

By-law 281-01

INTERPRETATION

In addition to those terms defined in section 2.0 of By-law #281-01, the following terms shall have the corresponding meanings for the purposes of this Appendix:

“air gap (AG)” means the unobstructed vertical distance through air between the lowest point of the water supply outlet and the flood level rim of the fixture or device into which the outlet discharges;

“back siphonage” means backflow caused by pressure below atmospheric in the supply system;

“double check valve assembly (DCVA)” means a backflow prevention device consisting of two force-loaded, independently acting check valves, including tightly closing resilient-seated shutoff valves located at each end of the assembly and fitted with properly located resilient-seated test cocks.

“dual check valve (DuC)” means a backflow prevention device consisting of two independently acting, force-loaded, soft-seated check valves in series. This device does not have a relief port or test cocks. This device is designed for use under continuous pressure;

“dual check valve with atmospheric port (DCAP)” means prevention device that consists of two independently acting check valves separated by an intermediate chamber with an atmospheric port. A chamber pressure higher than the supply pressure is required to open the port when there is a positive pressure on the supply side. This device is designed for use under continuous pressure;

“dual check valve with intermediate vent (DuCV)” means a backflow prevention device that consists of two independently acting check valves biased to a normally closed position. Between the check valves there is a relief port that is biased to a normally open position. This device is designed for use under continuous pressure;

“reduced pressure principle assembly (RP)” means a backflow prevention device that consists of a mechanically independently acting, hydraulically dependent relief valve located in a chamber between two independently operating, force-loaded check valves, the intermediate chamber pressure always being lower than the supply pressure when there is a positive pressure on the supply side. The unit includes properly located resilient-seated test cocks and tightly closing resilient-seated shutoff valves at each end of the assembly. This device is designed for use under continuous pressure;

“minor hazard” means any cross-connection or potential cross-connection that constitutes only a nuisance, with no possibility of any health hazard;

“moderate hazard” means any minor hazard that has a low probability of becoming a severe hazard;

“severe hazard” means any cross-connection or potential cross-connection involving any substance that could be a danger to health;

“vacuum breaker” means a device that will prevent backflow when pressure in the system upstream of the device falls below atmospheric pressure. Air is only admitted downstream of the device;

Appendix "D" – Backflow Prevention Device Selection Guide – By-law 281-01

“vacuum breaker, atmospheric type (AVB)” means a vacuum breaker designed to be under pressure only when water is being drawn from the system and for short, intermittent periods of time;

“vacuum breaker, hose connection type (HCVB)” means a vacuum breaker consisting of a single force-loaded check valve biased to a normally closed position. Downstream of the check valve is a means of automatically venting to atmosphere that is force-loaded or biased to a normally open position. If there is no flow through the device, the check valve is closed and the vent is open. The device is designed to be under pressure only when water is being drawn from the system and for short, intermittent periods of time;

“vacuum breaker, laboratory faucet type (LFVB)” means a vacuum breaker consisting of two independently acting check valves force-loaded or biased to a normally closed position. Between the check valves there is a relief port that is force-loaded or biased to a normally open position. When the laboratory faucet is off, the check valves are closed and the port is open; when the faucet is on, the check valves are open and the port is closed; and

“vacuum breaker, pressure type (PVB)” means an assembly containing an independently acting check valve force-loaded or biased, to a normally closed position, and an independently operating air inlet valve force-loaded or biased to a normally open position and located on the discharge side of the check valve. The assembly is equipped with properly located resilient-seated test cocks and tightly closing resilient-seated shutoff valves located at each end of the assembly. The device is designed for use under continuous pressure;