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REVISED C.8
EPW.12.086

STAFF REPORT: ENGINEERING AND PUBLIC WORKS DEPARTMENT

REPORT TO:	**Infrastructure and Recreation Committee**
MEETING DATE:	**Tuesday, October 16th 2012**
REPORT NO.:	**REVISED - EPW.12.086**
SUBJECT:	**Water Backflow and Cross Connection Control Program**
PREPARED BY:	**Brian O'Reilly, Water Meter Technician/Operator**

A. Recommendations

THAT Council receive Staff Report REVISED- EPW.12.086 entitled 'Water Backflow and Cross Connection Control Program';

AND THAT Council direct staff to prepare a Backflow Prevention By-Law, substantially in the form attached as Attachment 1 to Report EPW.12.086 for the consideration of Council upon the recommendation of the Director of Engineering and Public Works and Town's solicitor;

AND THAT Council direct staff to include fees in the 2013 Water Charges and Sewer Charges By-Law to reflect the fees and charges to be imposed for the Backflow Prevention Program which are set out in Attachment 2 to Report EPW.12.086

B. Background

Definitions

Backflow- the reversal of normal flow into a drinking water system due to a pressure differential

Cross-Contamination- any actual or potential connection between the waterworks and any source of pollution, contamination or other material/substance that could change the quality of water in the system

Background

On Monday, May 4, 2009, The Honourable John Gerretsen, the former Minister of the Environment, in regard to backflow stated "This is potentially the most serious threat to our drinking water supply."

Potable water distribution systems are exposed to a number of threats from cross-connections. To avoid system contamination, the appropriate backflow prevention devices must be installed, tested and maintained on the connections to the water system. If a cross connection is not properly protected against backflow it poses a potentially dangerous risk of illness.

The costs, both economic and social, of a major drinking water contamination can be enormous. Walkerton 2000 is estimated to have cost upwards of $64.5 million – (E.Coli, 2300 sick, 7 dead). In 2005, Stratford, a carwash cleaning agent entered drinking water system with approximately 30,000 affected and 19 seeking medical attention. This resulted in a $75,000 fine, pending litigation and huge costs incurred by the City to flush, test, and provide an alternate water supply. The loss of customer confidence was incalculable.

Without a functioning backflow program the municipality is assuming an unnecessarily large portion of the liability in the event of a backflow event. The need for a cross-connection control program to protect these systems from contamination due to backflow events has been identified as a best management practice recommended by the Ministry of the Environment. The passing of a backflow prevention by-law is a necessary step to provide the authority to manage the program.

Current Backflow Prevention for The Town

Currently, Water By-law 2008-02 deals only generally with cross connections. The Town does not have a detailed registry of the backflow prevention devices in place nor the degree of hazards which may be presented by individual businesses. It also does not have a proactive program to identify and track potential threats from backflow and a means of dealing with these threats. While building code provisions require that source isolation is installed on hazards within a building, source isolation protection devices are easily circumvented by plumbing changes once the building is occupied. Requirements for backflow are not always identified or enforced during construction and premise isolation is only required when a severe hazard building has been identified. The Building Code does not require retrofits of backflow prevention devices for existing facilities nor the ongoing inspections, maintenance or field testing of devices once installed which is critically important to protect the drinking water system.

Proposed Backflow Prevention Program and By-law

The National Guide to Sustainable Municipal Infrastructure (InfraGuide) has developed a number of best practices related to supplying safe potable water. One of these best practices resulted in the development of the InfraGuide document Methodology for Setting a Cross-Connection Control Program. The development of a Town wide cross connection control program will largely be based on this InfraGuide document.

The proposed by-law (Attachment #1) outlines the requirements that would allow for the development of a registry and the implementation of a premise isolation backflow prevention program.

The implementation strategy will start with surveys to be completed of Industrial, Commercial and Institutional (ICI) properties. Initially the focus of the program will be on high hazard properties and properties with large diameter water services. Once the high hazard properties are addressed, the program will widen its scope to include moderate hazard locations. Property owners will be required to undertake hazard surveys of their properties.

The purpose of the hazard survey is to identify all threats posed by cross connections, existing backflow prevention devices, assign the appropriate hazard ratings to each property and recommend appropriate devices. This is to ensure that all properties are protected with some sort of premise isolation. These devices must be tested annually to ensure proper functioning.

The Engineering & Public Works Department will administer the program. The program requires that:

- Testers & surveyors are properly qualified and registered
- Property owners complete and submit surveys
- Property owners are to provide proof that devices are tested annually by registered tester
- Review of surveys and test results are submitted as required to ensure that they have been completed properly
- Deficiencies are followed up to ensure compliance
- The associated program fees are processed

Attachment #2 outlines the proposed fee schedule that will be imposed for the Backflow Prevention Program. The intention is that the Backflow Prevention Program will be self-funding as much as practicable. The 2013 Water Charges and Sewer Charges By-Law will be updated to reflect the fees and charges.

On January 1, 2013, Section 19 of the Safe Drinking Water Act will come into effect. This section emphasizes the importance for anyone with decision making authority over a drinking water system to apply a statutory standard of care to their oversight activities. By establishing the Backflow Prevention Program, the Town can align with the new section and help to ensure the continued delivery of a safe public water supply.

<u>Next steps toward implementation of Backflow Program</u>

- Circulate draft by-law to stakeholders for comments
- Finalize and approve by-law
- Build internal processes, staff training and policy manual
- Communication strategy
- Invite contractors to register for Approved Tester's list
- Industrial, Commercial and Institutional (ICI) surveys
- Roll-out notice to stakeholders
- Implement program including enforcement

Staff recommends that Council direct staff to prepare the Backflow Prevention By-law as attached (Attachment #1) and that Council direct staff to include fees as set out in fee schedule (Attachment #2) in the 2013 Water Charges and Sewer Charges By-Law.

C. The Blue Mountains' Strategic Plan

The acceptance of this Report by Council furthers the Town's Strategic Plan Goal #2. - *Addressing the Town's municipal infrastructure needs through protecting the integrity of the drinking water distribution system*.

D. Environmental Impacts

This By-Law helps to ensure continued access to safe, clean drinking water for the residents and visitors to The Town of The Blue Mountains.

E. Financial Impact

There should not be a net cost to the Town. The intent is to fund the program through user fees. It is difficult to accurately forecast costs at this time therefore an annual review will be conducted to ensure fees and charges reflect the cost of administration. No new staffing is anticipated at this time as the Water Meter Technician will also function as the Backflow Program Coordinator.

F. In Consultation With

Throughout development of this by-law Financial Services, Building and Legal have been consulted.

G. Attached

Attachment #1	Draft By-Law
Attachment #2	Proposed Backflow Prevention Program Fees and Charges
Attachment #3	Next steps to implementing the Backflow Program

Respectfully submitted,

Brian O'Reilly
Brian O'Reilly
Water Meter Technician/
Backflow Program Coordinator

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EPW.12.086
Attachment #1

THE CORPORATION OF THE TOWN OF THE BLUE MOUNTAINS

BY-LAW NO. 2012-XX

Being a By-law to regulate Cross Connection and Backflow Prevention on plumbing systems as required to protect the Town of The Blue Mountains' Drinking Water Supply and Distribution System from Contamination

WHEREAS Section 11 of the Municipal Act 2001, c.25, as amended (the "Act") provides that lower-tier municipalities may pass by-laws respecting matters within the public utilities sphere of jurisdiction;

AND WHEREAS Part III of the Act under the heading "Public Utilities" provides for specific municipal powers within the public utilities sphere of jurisdiction;

AND WHEREAS Section 11 of the *Safe Drinking Water Act* requires that municipalities ensure that their respective drinking water system meets prescribed drinking water standards to the point where the system is connected to a user's plumbing system;

AND WHEREAS Part 7 of the *Ontario Building Code* requires potable water systems to be protected from contamination, but limited to specific building uses;

AND WHEREAS the Act further authorizes the Town of The Blue Mountains, amongst other things, to delegate its authority, to impose fees and charges on persons for services or activities provided or done by or on behalf of it, to provide for inspections and inspection orders, and to make orders to discontinue activity or to do work;

AND WHEREAS the Town of The Blue Mountains has developed regulations for Cross Connection and Backflow Prevention on plumbing systems as required to protect the Town of The Blue Mountains Drinking Water Supply and Distribution System from contamination;

NOW THEREFORE the Council of The Corporation of the Town of The Blue Mountains hereby enacts as follows:

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DRAFT

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SHORT TITLE

Backflow Prevention By-Law

Part 1.
Definitions

1. Definitions

For the purposes of this Schedule, the following terms shall have the corresponding meanings:

"*ASSE*" means the American Society of Sanitary Engineering;

"*AWWA*" means the American Water and Wastewater Association;

"*auxiliary water supply*" means any water supply on or available to the premises other than the Town's approved public water supply;

"*authorized functions list*" means the list of functions and the persons authorized to carry out such functions as set out in Schedule "A" of this by-law;

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

"*backflow prevention device*'' means a device that prevents backflow, certified to the CAN/CSA Standard

“*building”* shall have the same meaning as set out in the Building Code Act, S.O. 1992, c23, as amended, or any successor thereof;

“*building code*” means regulations made under Section 34 of the Building Code Act, as amended or re-enacted from time to time;

“*Chief Building Official*” means the Chief Building Official appointed by the Town of The Blue Mountains under Section 3 of the Act;

“*commercial*” means the use of land, building or structure for the purpose of buying, selling, leasing and renting commodities or accommodations, and/or supplying of services as distinguished from such uses as manufacturing or assembling of goods, warehousing, transport terminals, construction and other similar uses;

“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 connection arrangement through which backflow may occur;

“cross-connection survey” means a complete review of the potable water system or systems on the premises to determine if any cross connection exists and includes existing backflow prevention devices, cross-connections discovered, corrective measures and recommendations submitted on the Town’s standard cross-connection inspection report form;

“*CSA Standard*” means the document entitled *CAN/CSA-B64.10-11/CAN/CSA-B64.10.1-11 - Manual for the Selection and Installation of Backflow Prevention Devices/Manual for the Maintenance and Field Testing of Backflow Prevention Devices* published by the Canadian Standards Association, or any successor thereof;

“Director” means the person holding the title of Director of Engineering and Public Works for the Town or his/her designate.

“enclosure” means an above ground structure, certified to *ASSE Standard 1060 for Outdoor Enclosures for Backflow Prevention Assemblies,* designed to accommodate a backflow prevention device, which incorporates positive drainage to prevent submergence of the backflow prevention device, provides security, increases accessibility for testing and repair, and provides freeze protection;

"fire protection system" means any system within a Building or Structure for the suppression of a fire, including but not limited to any system consisting of a water sprinkler system or dry foam, or a system described in the CSA Standard;

“*hazard*” means one of three levels of hazard: minor, moderate and severe as defined by CAN/CSA B64.10;

“*industrial*” means premises used for warehousing of goods and materials, the assembly of manufactured goods, the manufacturing of goods, the repair and servicing of goods and similar uses;

“*institutional*” means a use that caters to the social, educational or religious needs of humans including places of worship, schools, senior’s residences, hospitals, recreation centers, libraries or municipal / provincial /federal offices, etc.;

“*multi-residential*” means a dwelling unit in a building containing four or more dwelling units, each of which has an independent entrance directly from the outside or through a common vestibule or common corridor;

“*occupant”* means any lessee, tenant, owner, the agent of a lessee, tenant or owner, or any person in possession of or occupying a property;

“*person*” includes a corporation and their heirs, executors, administrators, successors, or other legal representatives of a person to whom the context can apply according to law;

"*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 located on such property;

"*plumbing*" means plumbing as defined in the Building Code Act and includes a private water main, a water service extension and a plumbing system but does not include the water system;

"plumbing system" means the system of connected piping, fittings, valves, equipment, fixtures and appurtenances contained in plumbing and connected to the water meter or a water service pipe that conveys water to water supply outlets, fixtures, plumbing fixtures and devices from immediately after the curb stop;

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

"premises" means any house, tenement, building, lot, or part of a lot, or both, in, through, or past which water service pipes run;

"premise isolation" means isolation of the plumbing system within a building or structure from the Town's water distribution system;

"property" means each separately assessed parcel of land connected to the water system or fronting on the water system and includes a condominium unit in a condominium corporation and the common elements in a condominium corporation;

"property isolation" means isolation of a property from the Town's water distribution system immediately after the curb stop;

"*qualified person*" means a person with approved qualifications set out in schedule "A" of this by-law;

"*residential*" means the use of land, buildings or structures for human habitation, but excluding temporary human habitation uses such as short term accommodation, bed and breakfast establishment, tourist cabin or cottage , hotel or motel;

"tester's certificate" means a current Cross Connection Control Specialist certificate issued by a participating Canadian section of the AWWA;

"Town" means the Corporation of the Town of The Blue Mountains and includes its employees, servants and agents;

"water distribution system" means water mains with connections to trunk mains, trunk mains within municipal road allowances or easements, private mains, services, fire hydrants, and shut-off valves and all other appurtenances thereto;

"*water service connection*" means a piping connection that conveys water from the water distribution system to the plumbing system".

Part 2.
Application, Interpretation and Administration of By-Law

2.1 This By-law applies to existing buildings, buildings subsequent to occupancy and future 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 350/06 (the Ontario Building Code) or any successor ("the Ontario Building Code").

2.2 In addition to and notwithstanding Section 2.1 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 as determined by the Director.

2.3 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.

2.4 The following Schedules are attached to and form part of this By-Law:

Schedule A - Authorized Functions List

Schedule B - Town of The Blue Mountains Registration Requirements for Persons on Authorized Functions List

2.5 This By-law shall be administered on behalf of the Town by the Director unless another Town official is specifically referred to in this By-law. Where under the terms of this By-law decisions, approvals, notices and certificates are to be made, given or issued by the Town, such decisions, approvals, notices and certificates shall be made, given or issued by the Director or other named Town official.

Part 3.
Protection from Contamination and Backflow Prevention

3.1 No person, shall connect, cause to be connected, or allow to remain connected to the plumbing system or water distribution system any piping, fixture, fitting, container or appliance, in a manner which under any circumstances, may allow untreated water, wastewater, any source of pollution or any other liquid, chemical or substance to enter the water plumbing system or water distribution system. The means for "protection from contamination" shall be in accordance with the requirements of the Building Code Act as amended.

3.2 Premises isolation shall be provided for all buildings within the Town of The Blue Mountains in addition to any plumbing or building code requirements for individual or zone protection because backflow into the water system can still occur if the individual protection fails. At the discretion of the Director alternative methods may be utilized to ensure protection of the potable water supply.

3.3 Backflow Preventer Standards
The selection, installation, maintenance, and field testing of backflow preventers must follow the CAN/CSA B64.10 Standard (CSA, November 2011 or latest amendment). All approved backflow preventers must conform to the following, and shall be certified by the CSA or a certification body recognized by the Standards Council of Canada:

(a) CAN/CSA-B64 SERIES-11 Backflow Preventers and Vacuum Breakers which comprises B64.0, B64.1.1, B64.1.2, B64.2, B64.2.1, B64.2.2, B64.3, B64.3.1, B64.4, B64.4.1, B64.5, B64.5.1, B64.6, B64.6.1, B64.7, B64.8, and B64.9; and,

(b) ASME A112.18.1/CAN/CSA-B125-01 or CSA-B125.3 Plumbing Fittings; and,

(c) The Ontario Building Code

Part 4.
Cross Connection Inspection Reports

4.1 Inspection reports
The owner(s) responsible for any buildings billed for water as a "Municipal Water Service Account", being Institutional, Commercial, Industrial (I.C.I.), high density residential use building or in-ground irrigation systems, shall retain a Qualified Person as indicated in Part 13 to prepare a Cross Connections Inspection Report in the form prescribed by the Director.

4.2 Notwithstanding Section 2.1, owners of residential buildings within the scope of Part 9 of the Ontario Building Code that have access to an auxiliary water supply shall, every five (5) years or upon request, provide the Director with a Cross Connection Inspection Report completed by a qualified person.

4.3 Inspection report – submission date
The Cross Connection Inspection Report shall be submitted to the Town before the date stated in Part 9. The Cross Connection Inspection Report shall include existing backflow prevention devices, cross connections discovered, corrective measures, recommendations and a schedule of work to be completed. The method of cross connection control or selection and installation of backflow prevention devices shall

be in accordance with the Ontario Building Code. In the case of premises with access to an auxiliary water supply, a written confirmation stating that a physical separation exists shall be submitted.

4.4 Access – reasonable notice
Notwithstanding the obligations for persons to undertake a Cross Connection Inspection Report, the Director shall be allowed access, with reasonable notice, to any premises that are connected to the water distribution system for the purpose of performing inspections to locate possible cross connections. The Director may require a routine cross connection inspection of the premises (at the owner's expense) to be performed by a qualified person.

4.5 **Access not provided**
Where access is not provided, a written notice by the Director may be issued providing the time frame to allow access. If access is not provided within this time frame, the Director may, at their discretion, shut off the supply of water to the premises until such time as access is provided.

4.6 Compliance notice
If a condition is found to exist which is contrary to Part 3 of this By-law, the Director may issue such notices to the person as the case may be, as may be required to obtain compliance with these regulations, including shutting off the supply of water to the premises until such time as compliance is obtained.

Part 5.
Premise Isolation

5.1. Where, in the opinion of the Director, a risk of possible contamination of the water distribution system exists, a person on notice from the Director shall install premise isolation within the building or complete property isolation in an ASSE 1060 certified enclosure within the property line in addition to any other source of protection devices on the premises.

5.2 Premise isolation shall be installed:

(a) in buildings of moderate or severe hazard in accordance with premise isolation requirements as stated in the Ontario Building Code Part 7 Plumbing; or

(b) as specified by the Director based on Part 3 of this By-law.

5.3 Three levels of protection shall be recognized for premises isolation, according to the hazard ratings as in CSA B64.10, as follows:

(a) Premises with a minor hazard classification shall be isolated with a Dual Check Valve (DuC) backflow preventer.

(b) Premises with a moderate hazard classification shall be isolated with a Double Check Valve Assembly (DCVA) backflow preventer.

(c) Premises with a severe hazard classification shall be isolated with a Reduced Pressure Principle (RP) backflow preventer.

5.4 Where, in the opinion of the Director, a risk of possible contamination of the water distribution system may exist, the owner shall have an approved backflow prevention device installed and tested by a qualified person(s).

Part 6.
Cross Connection Compliance (Including Premise Isolation)

6.1 The Director shall review the submitted Cross Connection Inspection Reports specified in Part 4 and issue a 'Compliance Notice' that may support the recommendations contained in the Cross Connection Inspection Report. The 'Compliance Notice' may contain additional or alternative requirements deemed necessary by the Director in accordance with the provisions of this By-law.

6.2 If work is required, the owner receiving the 'Compliance Notice' shall retain a qualified person(s) to undertake the stated works before the date stated in the 'Compliance Notice' and advise the Director, in writing, of completion of the work within thirty(30) days of the date stated.

6.3 If the owner to whom the Director has issued a Notice fails to comply with the 'Compliance Notice', the Director, at their discretion, may:

(a) Instruct the owner to correct the fault at their expense within a specified time period and if the Notice is not complied with, the Director may then shut off the water service or services; and/or

(b) Request that the Chief Building Official consider issuing an unsafe order under unsafe requirements in accordance with the Ontario Building Code Act, in a condition that could be hazardous to the health or safety of persons in the normal use of the building, persons outside the building or persons whose access to the building has not been reasonably prevented; and/or

(c) Without notice to the owner, shut off water service, where the Director has determined, in their sole discretion that an immediate threat of contamination to the water system exists that may endanger public safety or health.

Part 7.
Maintenance and Field-Testing of Backflow Prevention Devices

7.1 The owner responsible for properties, premises or buildings containing backflow prevention devices shall retain a qualified person, per Part 13, to annually inspect and test, at the expense of the owner, and submit a Backflow Device Test Report on a form prescribed by the Director to demonstrate that the device is in good working condition. All equipment used to test backflow preventers shall be verified or calibrated for accuracy, as described in CAN/CSA B64.10.

7.2 If the results of a test show that a back flow prevention device is not in good working condition, the owner shall make repairs or replace the device within five (5) working days.

7.3 If an owner does not make the appropriate repairs or replace the defective device within the five (5) working days, the Director may shut the water service or services off.

7.4 If the owner fails to have a backflow prevention device tested, the Director may notify the owner that the back flow prevention device must be tested within a specified time.

7.5 If an owner fails to have a backflow prevention device tested within the specified time of the notice, when requested by the Director, the Director may shut off the water service or water services until the backflow prevention device has been tested and approved.

Part 8.
Removal of Backflow Prevention Devices Prohibited

8.1 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 this By-law.

In no instance shall the property, premise or building be without a backflow prevention device for more than five (5) days.

Part 9.
Inspection Report, Implementation and Retesting Schedule

9.1 The requirements under this regulation shall be undertaken as follows;

(a) **Municipal Water Service Accounts (Institutional, Commercial, Industrial and High Density Residential Buildings)**
(i) Submission of Cross Connection Inspection Report; within six months of the date of contact by the Director.
(ii) Implementation of Report recommendations as determined by the Director in a Compliance Notice, but not to exceed one (1) year from submission of Cross Connection Inspection Report
(iii) Cross Connection Re-inspection Report: every five (5) years from the date of the first report that was requested and upon change of use of the property, change of ownership or as required by the Director.
(iv) Testing of Back Flow Prevention Devices with test reports submitted to the Town: annually or as required by the Director.

(b) **Residential Accounts:**
(i) All new dwelling units must have a dual check valve installed, at the property owner's cost, prior to connection to the Town of The Blue Mountains Drinking Water System.
(ii) Inspection reports and scheduled testing of back flow prevention devices shall not be required for residential units except in accordance with Part 4.2 and Part 5.4 of this By-law.

Part 10.
Enforcement

10.1 This By-law shall be enforced by a Building Official appointed by the Chief Building Official or a Municipal Law Enforcement Officer employed by the Town.

Part 11.
Penalties

11.1 Every person who contravenes any provision of this By-law, or an officer or director of a corporation who knowingly concurs in such a contravention by the corporation, upon conviction, is guilty of an offence and upon conviction is liable to any penalty as provided by the Provincial Offences Act.

11.2 Where a person has been convicted of an offence, the court in which the conviction has been entered and any court of competent jurisdiction thereafter may, in addition to any other remedy and to any penalty imposed, make an order prohibiting the continuation or repetition of the offence by the person convicted.

11.3 In this By-law where the Town is given the power to direct or require a person to do a matter or thing, the Town may do the matter or thing at the person's cost if the person defaults in doing it and the Town may recover the costs of doing the matter or thing by action or in accordance with Section 446 of the Municipal Act.

Part 12.
Qualified Persons

12.1 Only those persons listed in the following Authorized Functions List (Schedule A) shall carry out the corresponding functions set out in such list.

Part 13.
General Provisions

13.1 A building permit is required to be obtained pursuant to the Building Code Act to install a backflow prevention device. The provisions of the Building Code Act and the regulations pertaining to such building permit continue to apply to each installation in addition to the provisions of this By-law.

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

13.3 In addition to any other provision of the By-law, the Chief Building Official or Director may at any time order an owner, at the owner's expense, to conduct tests, provide reports and undertake any other measures required for the prevention of backflow or cross connection.

13.4 Where a time frame is set out in this By-law for carrying out any action, the Town may extend the time for compliance beyond the established time frame on approval by the Director or Chief Building Official.

13.5 This By-law shall come into force and take effect from the enactment thereof.

ENACTED AND PASSED this ____ day of _____, 2012

_____ _____

Ellen Anderson – Mayor Corrina Giles - Clerk

SCHEDULE "A"
AUTHORIZED FUNCTIONS LIST

ITEM	FUNCTION	Professional Engineer with Tester's Certificate	* Certified Engineering Technologist with Tester's Certificate	Licensed Master Plumber with Contractor and Tester's Certificate	** Journeyman Plumber with Tester's Certificate	*** Apprentice Plumber with Tester's Certificate	Fire System Sprinkler Fitter with a Tester's Certificate	Lawn Irrigation System Installer with Tester's Certificate	Municipal staff within Water and Wastewater Division with Tester's Certificate
1	Carry out Cross Connection	✓	✓	✓	✓				
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 Relation to Fire Protection Systems	✓	✓	✓	✓	✓	✓		
6	Items 2, 3 & 4 above in Relation to Lawn Sprinkler Systems	✓	✓	✓	✓	✓		✓	
7	Items 1,3,4 in relation to municipally owned and operated facilities								✓

* 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.

SCHEDULE "B"

Town of The Blue Mountains' Registration Requirements for Persons on Authorized Functions List

Category	Required Registrations	Documentation Required	Authorized Functions	Registration Number and Fees
Plumbing Companies *Registration done by Master Plumber*	Master plumber with tester's certificate as well as all journeyman plumbers with a tester's certificate and all apprentice plumbers with tester's certificate under his/her direction or direct supervision.	**Master Plumbers License** **Journeyman Plumbers**: Journeyman's License with Tester's certificate issued by participating Canadian section of the AWWA. **Apprentice Plumbers:** Apprenticeship contract with Tester's certificate issued by participating Canadian section of the AWWA. **Calibration certificate** for backflow device testing equipment.	**1**. Carry out cross connection surveys. **2**. Install, relocate or replace backflow preventer. **3**. Test backflow preventer. **4**. Repair backflow preventer. **5**. Complete Items 1, 2, 3, and 4 in relation to fire protection systems. **6**. Complete Items 3 and 4 in relation to lawn sprinkler systems.	Pay one fee for all persons registered. Receive one registration number for all persons registered.
Fire and Sprinkler Companies	Master sprinkler and fire protection installer license as well as all journeyman sprinkler and fire protection installers with a tester's certificate and all apprentice sprinkler and fire protection installer with a tester's certificate who are under his/her direction or direct supervision.	Master sprinkler and fire protection installer license. **Journeyman:** Journeyman's License with Tester's certificate issued by participating Canadian section of the AWWA. **Apprentice:** Apprenticeship contract with Tester's certificate issued by participating Canadian section of the AWWA. **Calibration certificate** for backflow device testing equipment.	**In relation to Fire Protection Systems Only** **1**. Carry out cross connection surveys. **2**. Install, relocate or replace backflow preventer. **3**. Test backflow preventer. **4**. Repair backflow preventer.	Pay one fee for all persons registered. Receive one registration number for all persons registered.
Irrigation Contractors	Irrigation contractor as well as all irrigation installers with a tester's certificate under his/her direction or direct supervision.	Lawn irrigation installer: Tester's certificate issued by participating Canadian section of the AWWA. **Calibration certificate** for backflow device testing equipment.	**1.** Repair and test backflow preventers on irrigation systems.	Pay one fee for all persons registered. Receive one registration number for all persons registered.
Professional Engineers	Professional Engineer with tester's certificate as well as all certified engineering technologists with a tester's certificate under his/her direction or direct supervision	Professional engineer: Tester's certificate issued by participating Canadian section of the AWWA. Certified engineering technologists under direct supervision: Tester's certificate issued by participating Canadian section of the AWWA. **Calibration certificate** for backflow device testing equipment.	**1.** Carry out cross connection surveys. **2.** Repair and test backflow prevention device.	Pay one fee for all persons registered. Receive one registration number for all persons registered.
Municipal Staff	All water and wastewater division employees with a tester's certificate	Tester's certificate issued by participating Canadian section of the AWWA. **Calibration certificate** for backflow device testing equipment.	**1**. Carry out cross connection surveys. **2**. Install, relocate or replace backflow preventer. **3**. Repair backflow preventer. **4**. Test backflow preventer.	Receive one registration number for all persons registered.

Cross Connection Control Program
2012 Proposed Fee Schedule

(Separate from any fees for building permits)

Description	Amount	Payable By	Frequency
Application Fee - One fee for all persons registered	$100	Contractor	One time
Tester renewal fee	$75	Contractor	Annual
Survey Review	$100	Owner	Every 5 years
Annual Test result review	$50	Owner	Annual
Removal of device application (accompany survey)	$50	Owner	One Time
Test Tags	$5	Owner	Annual
Air Gap Certification Review	$35	Owner	Annual

Survey review to be waived for initial property survey.

Revised
EPW.12.086
Attachment # 3

Next steps to implementing the Backflow Program:

- **Circulate draft by-law to stakeholders for comments –** The by-law will be circulated to Industrial, Commercial and Institutional facilities, the Chamber of Commerce and other stakeholders to provide an opportunity to submit comments.

- **Finalize and approve by-law –** Review comments from stakeholders and make adjustments as deemed necessary. Submit for final approval.

- **Build internal processes, staff training and policy manual –** Engineering and Public Works, Financial and Building Services will have some degree of involvement and applicable processes will be developed. Training of municipal staff regarding the program will be conducted for affected staff. A *Policy Manual* will be developed which contains detailed information about the program including forms, fee schedules, basic requirements etc. in a format that is written in language that is readily accessible to staff and consumers. Upon approval of the By-law we can begin to finalize the details of the program including setting fee schedules, determining budget / source of funding, and communication with stakeholders.

- **Communication Strategy –** A communication plan outlining the program requirements and expectations would target trades and business owners at first with the opportunity to submit suggestions. The goal is to make this as easy and cost effective as practicable while maintaining the integrity of the Town's distribution system. Comments and suggestions are welcome as this will be a learning experience for all parties involved. A financial investment may be required by contractors and facility owners to varying degrees. This may be substantial for certain situations. The program outline and by-law are based on the *CSA B64.10 Standard* and certain specific requirements are non-negotiable.

- **Invite Contractors to register for Approved Tester's list –** This list must be in place prior to requesting surveys and test results. **Tester certification** and recertification is now available at a number of Colleges. Certification is a necessity for testers to be included on an *Approved Tester's List* for the Town of The Blue Mountains. Any qualified plumber may install a backflow device but only a certified tester may perform the testing.

- **Industrial, Commercial and Institutional (ICI) Surveys –**The Town will contact Industrial, Commercial and Institutional ICI facilities with a request for a facility survey to be completed. The survey results will be reviewed and recommendations made regarding the protection required. Facilities assessed as high risk will be prioritized.

- **Roll-out notice to stakeholders –** Shortly before roll-out, a notice advising businesses and residents of the upcoming changes will be published in the newspaper and possibly as a billing insert.

- **Implement program including enforcement –** The program will be phased in with ICI, large diameter services and high risk location being the initial focus. During the first few months of program implementation a considerable amount of communication will be necessary to educate and assist property owners and contractors with meeting the requirements. Enforcement could include fines and /or suspension of water services, however, attempts would be made to achieve compliance through notifications. The intent is to minimize the need for enforcement. Costs associated with obtaining compliance would be billed to the owner and if these go unpaid they would eventually go to their tax account. This may require input from Engineering &Public Works, Finance, By-law enforcement and Legal.