THE CORPORATION OF THE TOWN OF LINCOLN

BY-LAW NO. 07-63

A By-Law To Amend By-Law Number 01-134, Being A By-Law To Provide For The Regulation Of Water Supply And Rates And Charges In The Town Of Lincoln, By Adding A Schedule And Appendices Respecting Backflow Prevention.

WHEREAS the Town of Lincoln is required to operate and maintain its two water distribution systems in accordance with the Safe Drinking Water Act, S.O. 2002, c.32 and O. Reg. 170/03

AND WHEREAS the Safe Drinking Water Act, 2002, Section 19, places a certain level of care on those who have oversight of municipal dinking water systems

AND WHEREAS the Town of Lincoln wishes to protect its residents and other users of the Town's drinking water from deleterious and harmful contaminants that may enter the water distribution systems through back flow

NOW THEREFORE, THE COUNCIL OF THE TOWN OF LINCOLN ENACTS AS FOLLOWS:

1. THAT Part VIII Cross Connection and Backflow Prevention, Sections 64 through72 inclusive of By-Law No. 01-134 are hereby repealed and replaced with the following new section:

"Backflow and cross connection measures including the installation, testing and maintenance of backflow prevention devices, and reporting to the Town of Lincoln by property owners, shall be carried out in accordance with the provisions of Schedule B of this By-Law, which schedule constitutes an integral part of this By-law."

2. By-Law No. 01-134 is hereby amended by adding thereto Schedule "B" as attached hereto as Schedule "A".

By-law read a FIRST time this 16th day of July, 2007
By-law read a SECOND time this 16th day of July, 2007
By-law read a THIRD time and FINALLY PASSED this 16th day of July, 2007

MAYOR:

CLERK:

SCHEDULE "A" TO BY-LAW NO. 07-63
(being a new Schedule "B" to By-Law 01-134)

PART 1 DEFINITIONS AND SCHEDULES

1. In this By-law, including the schedules attached hereto; the following terms shall have the corresponding meanings:

   a. "ASSE" means the American Society of Sanitary Engineering;

   b. "AWWA" means the American Water Works Association;

   c. "authorized functions list" means the list of functions and the persons authorized to carry out such functions as set out as Attachment "I" of this Schedule;

   d. "auxiliary water supply" means any water source or system, other than the Town's water supply, that may be available in a building or on any property;

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

   f. "BFPD" or "backflow prevention device" means a device that prevents backflow;

   g. "building" means a structure supplied with water by the Town of Lincoln;

   h. "cross connection" means any temporary, permanent or potential water connection that may allow backflow of contaminants, pollutants, infectious agents, other material or substance that will change the water quality in the waterworks distribution system and includes swivel or changeover devices, removable sections, jumper connections and bypass arrangements;

   i. "Cross-Connection Survey Form" means a report form in a format established by the Town of Lincoln;

   j. "CSA Standard" means the document entitled CAN/CSA-B64.10-94 & Amendments - Manual for the Selection, Installation, Maintenance, and Field Testing of Backflow Prevention Devices published in 1994 by the Canadian Standards Association, or any successor thereof;

   k. "customer" means an owner, as defined in this By-law, who enters into a verbal or written contract with the Town to take water from the Town or to receive water related services from the Town;

   l. "Director" means the Director of Public Works for the Town of Lincoln or authorized representative;

   m. "Installation Guide" means the CSA standard;

   n. "meter" means "water meter";

   o. "mixed use" means residential properties including single family homes where there is a business activity in addition to the property being a home;

p. "owner" shall include any person who or any firm or corporation that is the registered owner of the property under consideration or any agent thereof, a person entitled to a limited estate in land, a trustee in whom land is vested, a committee of the estate of a mentally incompetent person, an executor, an administrator and a guardian, but shall not include a lessee, tenant, or the agent of a lessee or tenant;

q. "potable water" means water that is fit for human consumption;

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

s. "premise isolation" means isolation of the water located within a property or from the Town's water supply;

t. "risk" means degree of danger posed to health by a cross-connection. Risks shall be divided into the following three categories, as per section 4.2 of the CSA Standard:

   1) low risk – any cross-connection or potential cross-connection that constitutes only a nuisance, with no possibility of any health hazard;
   2) medium risk – any minor hazard as defined in item (1) that has a low probability of becoming a severe hazard;
   3) high risk – any cross-connection or potential cross-connection involving any substance that could be a danger to health;

u. "Selection Guide" means the Backflow Prevention Device Selection Guide set out in CAN/CSA-B64, 10-94;

v. "structure" means anything constructed or built permanently or temporarily which is provided with a source of potable water;

w. "survey" means a cross-connection survey which is a complete review of a water system that receives potable water from the Town or systems located within a property to determine if any cross-connection exists;

x. "tester" means a person who is licensed as a tester of backflow prevention devices;

y. "test report" means a report in the form established by the Town of Lincoln;

z. "test tag" means a tag in the form established by the Town of Lincoln;

aa. "Town" means the Corporation of the Town of Lincoln;

bb. "water" means potable water supplied by the Town;

cc. "water distribution system" means mains with connections to feeder mains, feeder mains within subdivision lands, services, fire hydrants, and shut-off valves and all other appurtenances thereto;

dd. "water meter" means the water meter owned and installed by the Town within a premises to measure and record the amount of water supplied to such premises by the Town; and used by the customer.

PART II APPLICATION OF BY-LAW

2. This By-law applies to all existing industrial, commercial, institutional and residential properties, except single family homes and those residential properties with three (3) stories or less in building height, that are connected to and receive water from the Town's water distribution system. Notwithstanding the foregoing, this By-law shall also apply to residential properties including single family homes where there is a mixed use.

3. In addition to and notwithstanding Sections 2 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 water supply as determined by the Director.

PART III CROSS-CONNECTION AND OTHER PROHIBITIONS

4. No person shall connect, cause to be connected, or allow to remain connected to the water distribution system any piping, fixture, fitting, container or appliance, in a manner which under any circumstances, may allow water, waste water, non-potable water, any source of pollution or any other liquid, chemical or substance to enter the Town's water distribution system.

5. In addition to Section 4 and in accordance with all other provisions of this By-law, every owner of property to which this Schedule applies shall ensure that an appropriate backflow prevention device is installed in respect of premise isolation where such property is connected to the Town's water supply.

6. No person or owner shall connect, cause to be connected, or allow to remain connected to the Town's water supply any auxiliary water supply.

7. No person or owner shall tamper with or remove a backflow prevention device after it has been installed and no owner of a property in which a backflow prevention device is installed shall cause or permit the tampering or removal of such device, unless 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.

8. While any device is being repaired or replaced, no bypass or temporary water supply line shall be used unless it is equipped with a backflow prevention device of the same level of protection as the previously existing device.

PART IV PERSONS PERMITTED TO CARRY OUT WORK

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

PART V APPLICATION OF CSA STANDARD

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

11. Wherever the CSA Standard and this By-law are in conflict, the provisions of this Schedule shall prevail.

PART VI CROSS-CONNECTION SURVEYS

12. Every owner of a property of a type set out in Section 2 of this By-law, shall, carry out an initial survey of each owned property with respect to all existing cross-connections and all existing and required backflow prevention devices as per the Compliance Schedule as set out in Attachment II.

13. Every owner shall ensure that the survey required in Section 12 is carried out by a person permitted to do so pursuant to the Authorized Functions List, Attachment "I", and that the Cross Connection Survey Form is provided to the Town within 14 days of the survey being completed.

PART VII SELECTION OF BACKFLOW PREVENTION DEVICES

14. Every owner shall ensure that every backflow prevention device required for premise isolation on its property is a testable device and is the proper device to be used pursuant to Section 10 of this By-law.

15. Backflow prevention devices for premise isolation shall be determined using the Selection Guide in CAN/CSA-B64, 10-94.

16. Despite Section 10, when the type of cross-connection is not identified in the CAN/CSA-B64.10-94 Selection Guide, the Town may require that a particular backflow prevention device be used in respect of any cross-connection.

17. Despite section 15, the minimum type of backflow prevention device that the Town will require for premise isolation is as per Attachment III.

18. Despite section 4.3.4.2(a) of the CSA Standard, a dual check valve device shall not be used for premise isolation.

19. Despite Section 10 where the manufacturer of equipment has installed a source backflow prevention device, the cross-connection is required to be reviewed by the surveyor listed in Attachment I to determine if the backflow prevention device meets the requirements of the Selection Guide. Cross Connections of this type are required to be included on the Cross Connection Survey described Part VI of this By-law.

20. When the owner of a property of a type set out in Section 2 makes any process or operational changes that may increase the hazard level, the owner shall perform a survey within 30 days of completion of the changes and that the survey shall be provided to the Town within 14 days of the survey being completed.

PART VIII INSTALLATION OF BACKFLOW PREVENTION DEVICES

21. 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.

22. Every person installing a backflow prevention device shall ensure that:

    a. such device is installed in accordance with acceptable construction practices and the requirements of the Ontario Building Code,(Ontario Regulation 403/97) as amended, this By-law, the Installation Guide and the CSA Standard;

b. such device is readily accessible for inspection, testing and maintenance;

c. such device is located in such a manner so that in the event of backflow the device prevents contamination of the Town's water supply and any other potable water system;

d. where such device is installed for 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 Director;

e. where such device is installed for premise isolation, all piping between the water meter and such device is clearly labeled "no connection permitted".

23. Every owner of property upon which a backflow prevention device is installed shall ensure that such device is in proper working order at all times.

24. A building permit may be required pursuant to the Building Code Act, 1992, S.O. 1992, Chapter 23, as amended to install a backflow prevention device. The owner or agent of the owner is responsible for acquiring all applicable permits.

25. Installation of an appropriate backflow prevention device shall occur prior to the date set out in the Compliance Schedule (Attachment II).

PART IX TESTING DEVICES

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

27. In addition to the testing methods set out in section 6 of the CSA Standard, test procedures established by the ASSE or AWWA for testing backflow prevention devices may be employed.

28. Despite section 6.3.1 of the CSA Standard, every person who tests a backflow prevention device shall enter the results of such test on a Test Report.

29. Every person who tests a backflow prevention device that is for premise isolation shall:

a. within 14 days of carrying out such test, provide a legible Test Report to the Town in respect of such test;

b. upon completing such test, complete and affix a Test Tag to the device or immediately adjacent to the device on the piping connected thereto; and

c. upon finding that such device is malfunctioning or otherwise not in proper working order, immediately notify the owner of the premises and the Town of such condition.

30. Every owner who has a 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 Town and also when it is cleaned, repaired, overhauled or relocated;

b. when a device used for premise isolation is tested that a Test Report of such test is provided to the Town within 14 days of the test being conducted;

c. in the event that such device is malfunctioning or otherwise not in proper working order, the device is immediately repaired or replaced; and

d. all existing backflow prevention devices shall be tested no later than the date set out in the Compliance Schedule (Attachment II).

PART X GENERAL PROVISIONS

31. The Town may at any reasonable time enter onto the property of any owner to inspect for compliance with this Schedule.

32. Where the Town finds that a condition exists on any property that may allow contamination, or creates a potential risk of contamination of the Town's water supply or the contamination of any other potable water system on such property, including any residential building or structure, the Town may:

a. order the owner to eliminate the condition and in so doing may prescribe the time period for compliance with such Order;

b. shut off the water supply to the property or any portion thereof until the condition is eliminated;

c. have such work done at the owner's expense and may recover the costs by adding the costs to the tax bill and collect them in the same manner as taxes in default of compliance with such order.

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

34. Attachments "I" through "II" inclusive and the CSA Standard shall form part of this By-law.

PART XI DATE OF COMPLIANCE

35. Installation of Backflow Prevention Devices shall occur prior to the date set out in the Compliance Schedule (Attachment II).

ATTACHMENT "I "

To Schedule "A" of By-Law No. 06-84

Town of Lincoln

AUTHORIZED FUNCTIONS LIST

ITEM	FUNCTION	*Professional Engineer	*Certified Engineering Technologist	**Journeyman Plumber	***Apprentice Plumber	Fire System Sprinkler Fitter	Lawn Irrigation System Installer
1	Perform Cross-Connection Survey	X	X	X			
2	Install, Repair, Relocate or Replace Backflow Prevention Device			X	X		
3	Test Backflow Prevention Device	**Anyone with a Tester's License as per CAN/CSA-B64.10-94 is permitted.**					

* Must be employed by a designated member firm of the Consulting Engineers of Ontario

** Must have valid and current Ontario Certificate of Qualification

*** Required to be a registered Apprentice in Ontario, employed by a Plumbing Contractor and under the direct supervision of a Journeyman Plumber

COMPLIANCE SCHEDULE - ATTACHMENT "II"

To Schedule "A" of By-Law No.06-84

Activity	Compliance Date
Open House for Owners	Tuesday, May 15, 2007
Initial Survey	Tuesday, September 17, 2007
Initial Survey Report to Town	Monday, October 1, 2007
Installation of BFPD	Tuesday, April 1, 2008
Initial BFPD Test Report to Town	Tuesday, April 15, 2008
Annual BFPD Test Results	April 15 each year after 2008

MINIMUM DEVICE REQUIREMENTS - ATTACHMENT "III"
To Schedule "A" of By-law No. 06-84

Table 1: Device By Zoning

Zone	Type
Agricultural (A)[1]	RP[2 5]
Estate Residential (ER)	No Device Required[3 5]
Hamlet Residential (HR)	No Device Required[3 5]
Residential (R1)	No Device Required[3 5]
Residential (R2)	No Device Required[3 5]
Residential (R3)	No Device Required[3 5]
Residential (RM1)	No Device Required[3 5]
Residential (RM2)	No Device Required[3 5]
Residential (RM3)	No Device Required[3 5]
Neighbourhood Commercial (NC)	RP[5]
General Commercial (GC)	RP[5]
Rural Commercial (RUC)	RP[5]
Recreational Commercial (RC)	RP[5]
Prestige Industrial (PI)	RP[5]
Industrial (IN)	RP[5]
Extractive Industrial (EI)	RP[2 5]
Institutional (I)	DCVA[5]
Open Space (OS)	DCVA[4 5]
Various Site Specific Zonings [6]	Need and/or type of device will be assessed based on hazard type as per CAN/CSA B64. 10-01

[1] - Where the service line is 1" or less in diameter and serves only the owners primary residence, a BFPD is not required.

[2] - Where an air gap is used and maintained at all mixing stations on the property a DCVA may be permitted.

[3] - Where the service line is 1" or greater in diameter and serves a home occupation, a BFPD is required as per Table 2 of CAN/CSA B64.10-01, based on hazard type.

[4] - Where the service line is 1" or less in diameter and serves only public washrooms and/or drinking fountains, a BFPD is not required.

[5] - Where the service line supplies only a fire suppression system the BFPD shall be sized as per Table 2.

[6] - Where the permitted use is low risk, no BFPD shall be required.

Legend:

"RP" - Reduced Pressure Principle Assembly

"DCVA" - Double Check Valve Assembly

Table 2: Device For Fire Protection Services

Type of Device	Pipe material approved for Potable Water		Pipe material not approved for Potable Water	
	Residential partial flow through system	Class 1 system	Class 1,2, or 3 system	With antifreeze or other additives; any class
DuCF	×			
SCVAF	×	×		
DCVAF	×	×	×	
RPF	×	×	×	×

Legend:

Class 1 system - an assembly of pipe and fittings that conveys water from the water service pipe to the fire sprinkler outlets and that has direct connections only from public water mains, has no pumps, tanks, or reservoirs, and has all sprinkler drains discharging to atmosphere, dry wells, or other safe outlets.

Class 2 system - an assembly of pipe and fittings that conveys water from the water service pipe to the fire sprinkler outlets, that is the same as Class 1 system but also includes a booster pump in the connection from the street mains.

Class 3 system - an assembly of pipe and fittings that conveys water from the water service pipe to the fire sprinkler outlets and that has direct connections from public water supply mains, elevated storage tanks (either open or closed), fire pumps taking suction from aboveground covered reservoirs or tanks, and pressure tanks. In Class 3 systems, storage facilities are only filled from, or connected to, the public water supply, and the water in the tanks is maintained in a potable condition. Class 3 systems resemble Class 1 systems in all other respects.

Class 4 system - an assembly of pipe and fittings that conveys water from the water service pipe to the fire sprinkler outlets and that has direct connections from public supply mains (similar to Class 1 and Class 2 systems) and an auxiliary supply located within 518 m (1700 ft) of the pumper connection.

Class 5 system - an assembly of pipe and fittings that conveys water from the water service pipe to the fire sprinkler outlets and that has direct connections from public supply mains and that is also interconnected with an auxiliary water supply.

Class 6 system - an assembly of pipe and fittings that conveys water from the water service pipe to the fire sprinkler outlets and that is a combined industrial and fire protection system and is supplied from the public water supply mains only, with or without gravity storage or pump suction tanks.

DuCF - Dual Check Valve Assembly for firefighting

SCVAF- Single Check Valve Assembly for firefighting

DCVAF - Double Check Valve Assembly for firefighting

RPF - Reduced Pressure Principle Assembly for firefighting