

**THE CORPORATION OF THE TOWN OF ESSEX
BY-LAW # 321**

Being a by-law to provide for Backflow Prevention.

WHEREAS Municipal Corporations are authorized to enact by-laws pursuant to the provisions of Part 7 of the Ontario Building Code S.O. 1997 (Ontario Regulation 403/97) as amended to more particularly provide for backflow prevention and regulate the connection of individual water services to the municipal potable water supply system;

AND WHEREAS within the scope of Part 9 of Ontario Regulation 403/97, being the Ontario Building Code, and Ontario Ministry of Health requirements no person or owner shall connect, cause to be connected or allow to remain connected to the municipal potable water supply system for the Corporation of the Town of Essex or any other potable water system, any piping, fixture, fitting, container appliance, vehicle, machine, auxiliary water supply or the like in a manner which may under any circumstance allow water, waste water or any other liquid, chemical or substance to enter such municipal potable water supply or system;

AND WHEREAS the Municipal Council for the Corporation of the Town of Essex is of the opinion that cross connections to the municipal potable water supply system can occur, whether intended or accidental, during normal water pressure fluctuations within the municipal water supply transmission systems and as a result of internal plumbing changes on owners' premises particularly when municipal potable water service is supplied to owners for specific applications such as greenhouses, irrigation including surface or sub-surface field and lawn irrigation and certain commercial and industrial equipment or establishments.

AND WHEREAS the Municipal Corporations are authorize to enact by-laws pursuant to Part 1 of the Public Utilities Act, R.S.O. c.P. 52 as amended to regulate supply and to prohibit wrongful use of water in order to secure to the inhabitants of the municipality a continued and abundant supply of pure and wholesome water;

AND WHEREAS the Municipal Council for the Corporation of the Town of Essex is further of the opinion that backflow prevention and regulation of the connection of individual water services to the municipal potable water supply system is required to protect the inhabitants and municipal water consumers of the Corporation of the Town of Essex from any hazardous or detrimental infiltration of the municipal water supply system;

NOW THEREFORE THE MUNICIPAL COUNCIL OF THE CORPORATION OF THE TOWN OF ESSEX HEREBY ENACTS AS FOLLOWS:

1. **SHORT TITLE**

1.0 This by-law may be cited as the "Backflow Prevention By-law" for the Town of Essex.

2. **INTERPRETATION**

2.0 For the purposes of this by-law the following terms and definitions shall apply:

"**Town of Essex**" means the restructured and amalgamated municipality known as the Corporation of the Town of Essex created by a Province of Ontario Order made under the Municipal Act R. S. O. 1990, c.M.45 subsection 25.2(6)(B) and dated November 19, 1997, and being composed of the former municipalities of the Town of Essex, Town of Harrow, Township of Colchester North, Township of Colchester South and includes its employees, servants and agents;

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

"**AWWA**" means the American Water Works Association;

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“Authorized Functions List” means the list of functions and the persons, authorities or agencies authorized to carry out such functions as set out in Appendix “A” to this by-law;

“Auxiliary Water Supply” means any Water source or system, other than the municipal potable water supply for the Town of Essex that may be available in any building or structure or on any property location. The auxiliary water may include water from another purveyor’s public water supply or from any natural source, such as a well, lake, spring, river, stream, or harbour; auxiliary water may also include used waters or industrial fluids.

“Backflow” means the flowing back or reversal of the normal direction of flow;

“Backflow Prevention Device” means an approved Canadian Standard Association (CSA) device that is designed to prevent backflow;

“Building” shall have the same meaning as set out in the Ontario Building Code Act S.O. 1997, (Ontario Regulation 403/97) as amended or any successors thereof;

“Council” means the Municipal Council for the Corporation of the Town of Essex.

“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 change over device, container, appliance, vehicle, machine, and any other temporary or permanent connecting arrangement through which backflow may occur;

“Cross-Connection Survey Form” means the corresponding form set out in Appendix “B” of this by-law;

“CSA Standard” means the document entitled CSA-B64.10-01 *Manual for the Selection and Installation of Backflow Prevention Devices*; and CSA-B64.10.1-01 *Manual for the Maintenance and Field Testing of Backflow Prevention Devices* or any successor thereof;

“Individual Protection” means isolation of the water located within or having flowed through a source, or potential source of contamination, on land or within a building or structure on such land, including an appliance, device, equipment, fixture, machine, water system or the like from any potable water system;

“Owner” means any person, partnership, syndicate, cooperative, association, firm or corporation and includes but is not limited to the Owner registered on the title of the property and any occupant of any land, 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 on land, or within a building or structure on such land, from the municipal potable water supply;

“Structure” means anything constructed or built or in the process of being constructed or built, permanently or temporarily, which is provided with a source of potable water;

“Tester” means any person firm or agency licensed or otherwise approved by the Town of Essex to undertake testing of backflow prevention devices within the geographical limits of the Town of Essex and who meets the qualifications specified in the CSA Standard for “Certified Backflow Prevention Device Testers”;

“**Test Report**” means a report in the form set out as Appendices “C” and/or “D” of this by-law;

“**Test Tag**” means a tag in the form set out as Appendix “E” of this by-law;

“**Water Meter**” means the municipal water meter located in front of or on land or within a building or structure on such land and which measures and records the amount of water supplied to such land building or structure by the Town of Essex municipal water system; and

“**Zone Isolation**” means the isolation of any non-municipal water located within an area of land or within a building or structure on such land from any municipal potable water system located on such area of land or within a building or structure on such land.

3. **APPLICATION OF BY-LAW**

3.0 This by-law applies to all lands, *buildings*, and *structures* connected to a *potable* municipal water supply within the *Town of Essex*, including multi-residential *buildings* and *structures* but saving and except residential occupancies within the scope of Part 9 of Ontario Regulation 403/97 (Ontario Building Code).

3.1 In addition to and notwithstanding Section 3.0 above, this by-law shall apply within the *Town of Essex* where a condition exists on any land or within a *building* or *structure* on such land, that may be hazardous or detrimental to the municipal *potable* water supply.

4. **CROSS-CONNECTION PROHIBITED**

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

4.1 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 CSA approved *backflow prevention device* is installed in respect of *premise isolation*, *individual protection* and *zone isolation* on such land and in every *building* or *structure* on such land where a *Town of Essex* Municipal *potable* water supply or any other *potable* water supply exists.

4.2 Under no condition shall any person or owner connect, cause to be connected, or allow to remain connected to the *Town of Essex potable* municipal water supply any *auxiliary water supply*.

5. **PERSONS PERMITTED TO CARRY OUT WORK**

5.0 Only those persons listed in the *Authorized Functions List* shall carry out the corresponding functions set out in such list.

6. **APPLICATION OF C S A STANDARD**

6.0 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

applicable *CSA Standard*.

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

7. SELECTION OF BACKFLOW PREVENTION DEVICES

- 7.0 Every *owner* of such land or of such *building* or *structure* on such land of a type as set out in Section 3 of this by-law, shall ensure that a CSA approved *backflow prevention device* is installed in accordance with all of the requirements of this by-law.
- 7.1 Every *owner* as defined in this by-law shall ensure that *every backflow prevention device* required for *premise isolation* on his, her, its or their property location is a CSA approved testable device and is the appropriate device to be used in accordance with Section 7.2 of this by-law.
- 7.2 *Premise isolation backflow prevention devices* shall be installed for all moderate and severe hazard water services and shall be selected using the *CSA Standard*.
- 7.3 Despite Section 4.3.4 2(a) of the *CSA Standard*, a dual check valve device shall not be used for *premise isolation*.
- 7.4 *Backflow prevention devices for individual protection* or *zone isolation* shall be determined using the *CSA Standard*.
- 7.5 *Backflow prevention devices* for fire protection systems shall be determined using the *CSA Standard*.
- 7.6 Despite Sections 7.2; 7.4 and 7.5 of this by-law, the *Town of Essex* may require that a particular *backflow prevention device* be used in respect of any *cross-connection*.
- 7.7 Despite Section 7.3 where a *backflow prevention device*, for the purpose of *individual protection*, has been installed by the manufacturer of equipment using municipal potable water for the operating of said equipment, the *cross-connection* is required to be reviewed by a qualified *tester* to determine if the *backflow prevention device* has not been compromised in any way by the installation of equipment, piping, relocation or removal of the *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* described in Appendix "B".

8. INSTALLATION OF BACKFLOW PREVENTION DEVICES

- 8.0 Every person installing a *backflow prevention device* shall ensure that:
- (i) Such device is installed in accordance with acceptable engineering practices and the requirements of the Ontario Building Code (Ontario Regulation 403/97) as amended, this By-law, and the *CSA Standard*;
 - (ii) Such device is installed in a *building* or *structure* on every water service connection feed to the supplied land and or *buildings* or *structures* for the municipal *potable* water supply source;
 - (iii) Such device is located in such a manner so that in the event of a *backflow*, the device prevents infiltration into and/or contamination of the *Town of Essex's* municipal *potable*

water supply as well as any other *potable* water system;

- (iv) Where such device is installed in respect of *premise isolation* all piping between the municipal *water meter* and such device is clearly labelled "no connection permitted";
 - (v) Where such device is installed in respect of *individual protection* or *zone isolation*, all piping between the point of contamination and the point at which the device is located is labelled "non-potable water"; and
 - (vi) Where such device is installed in a public pool as defined in the Ontario Building Code (Ontario Regulation 403/97) as amended, all exposed water and chlorine piping within the water treatment service room shall be colour coded by means of:
 - (a) painting the entire outer surface of the piping, or
 - (b) coloured bands at least 25 mm (1 in) in width that are spaced along the piping at intervals of not more than 1200 mm (4 ft. 1 in)
 - (c) colour coding referred to in (a) & (b) above shall be yellow for chlorine, and blue for municipal potable water.
- 8.1 In accordance with Section 7.7.2.1 of the Ontario Building Code S.O. 1997, as from time to time amended, non-potable water piping shall be identified by markings that are permanent, distinct and easily recognized as per CGSB Standard CAN/CGSB-24.3 as from time to time amended .
- 8.2 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.

9. TESTING AND SURVEYS

- 9.0 The *Town of Essex* may designate one or more qualified employees or engage the services of one or more qualified persons, firms or agencies who are licensed or otherwise approved by the *Town of Essex* to undertake the testing of *backflow prevention devices* within the *Town of Essex*.
- 9.1 Every *tester* of a *backflow prevention device* shall carry out such testing in accordance with this By-law and the *CSA Standard*.
- 9.2 In addition to the testing methods set out in the *CSA Standard*, test procedures established by the *ASSE* or *AWWA* for testing *backflow prevention devices* may be employed.
- 9.3 Despite Section 3.1.3.1 of the *CSA Standard*, every *tester* of a *backflow prevention device* shall enter the result of such test on a *Test Report*.
- 9.4 Every *tester* of a *backflow prevention device* shall:
- (i) within 14 days of carrying out such test provide a legible *Test Report* to the *Town of Essex* in respect of such test;
 - (ii) upon completing such test, complete and affix a *Test Tag*, Appendix "E", to the device or immediately adjacent to the device on the piping connected thereto; and
 - (iii) upon finding that such device is malfunctioning or otherwise

not in proper working order, immediately notify the owner of the subject lands and the *Town of Essex* of such condition.

- 9.5 The *Town of Essex* shall require that every owner who has a *backflow prevention device* located on his, her, its or their lands shall ensure that:
- (i) such device is tested by a *tester* when it is first installed and annually thereafter or, when requested by the *Town of Essex* and also when it is cleaned, repaired, overhauled or relocated;
 - (ii) when such device is tested, that a *Test Report* of such test is provided to the *Town of Essex* within 14 days of the test being conducted; and
 - (iii) in the event that such device is malfunctioning or otherwise not in proper working order, immediately notify the *owner* and the *Town of Essex* of such condition.

9.6 Every *owner* of such land or of such *building* or *structure* on such land of a type as set out in Section 3 of this by-law, shall cause to be carried out a survey of each of his, her, its or their land, *buildings* and *structures* with respect to all existing *cross-connections* and all existing and required *backflow prevention devices* every five (5) years or as otherwise required by the *Town of Essex* and:

- (i) Shall ensure that such survey is carried out on a *Cross-Connection Survey Form* by a person, agency or authority permitted to do so, and otherwise licensed, authorized or approved by the *Town of Essex* pursuant to the *Authorized Functions List*; and
- (ii) Shall ensure that the completed *Cross-Connection Survey Form* is provided to the *Town of Essex* within 14 days of the survey being conducted.

10. INSPECTIONS AND REMEDIAL WORKS

10.0 The *Town of Essex* may designate one or more qualified employees or engage the services of one or more qualified persons, firms or agencies who are licensed or otherwise approved by the *Town of Essex* to undertake the testing of *Backflow Prevention Devices* and to inspect and enforce compliance with the provisions of this by-law. For these purposes, said qualified employees, authorized persons, firms or agencies shall have free and unencumbered access at all reasonable times and from time to time upon reasonable notice being given to enter upon all portions of land, including surface and sub-surface areas, and all parts of every *building* or *structure* and other premises to which *potable* municipal water is supplied.

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

10.2 Issue an Order of Compliance to the owner to eliminate the condition and in doing so may prescribe the time period for compliance with such Order; or

10.3 May cause such remedial works to be undertaken to prevent any hazardous or detrimental infiltration of the municipal water system or take such other action as is deemed necessary for the protection of the inhabitants and municipal water consumers of the *Corporation of the Town of Essex*; or

- 10.4 Shut off the water supply to the subject lands, *buildings* or *structures* or any portion thereof until the hazardous condition is eliminated.
- 10.5 The cost of any works undertaken by the *Town* or its agents to remove an unsafe condition as defined in the Ontario Building Code Act, shall be added by the clerk of the municipality to the collector's roll and collected in the same manner and with the same priorities as municipal real property taxes.

11. **GENERAL PROVISIONS**

- 11.0 In addition to any other provision of this by-law, the *Town of Essex* 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 protection of a *cross-connection*.
- 11.1 Any person, authority or agency authorized by the *Town of Essex* for the purposes of inquiring into, inspecting, testing and enforcing compliance with the provisions of this by-law shall have free and unencumbered access for the purposes aforesaid at all reasonable times and from time to time upon reasonable notice being given and request made to attend all portions of land and parts of every *building* or *structure* and other premises to which a *potable* municipal water is supplied including surface and sub-surface areas and all other or any on site private water supply lines. Under such circumstances no owner or person occupying or in charge or apparently in charge of such lands or *buildings* or *structures* or other premises shall refuse such access to any such authorized person, authority or agency.
- 11.2 Appendices "A" through "E" inclusive, which are attached herewith and form part of this by-law and the *CSA Standard* as from time to time amended shall form part of this by-law.
- 11.3 A *building* and/or plumbing permit may be required pursuant to the provisions of the Building Code Act as amended to install a *backflow prevention device*. The provisions of the Act pertaining to such building/plumbing permits 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*.
- 11.4 The *owner* of lands, *buildings* and *structures* being serviced with a municipal *potable* water supply shall be responsible for all costs associated with the installation, testing, operation and future maintenance of the *Backflow Prevention Device*.

12. **DATE OF COMPLIANCE**

- 12.0 All *owners* of lands, *buildings* and *structures* within the *Town of Essex* who install a new municipal *potable* water supply service after the enactment of this by-law shall immediately comply with the provisions of this by-law.
- 12.1 Subject to Section 3 of this by-law, all *owners* of lands, *buildings* and *structures* within the *Town of Essex* who presently have an existing municipal *potable* water supply services prior to the enactment of this by-law shall substantially comply with the provisions of this by-law including the installation of the appropriately sized C.S.A. approved backflow prevention device within 90 days of receipt of notice.
- 12.2 Any by-laws inconsistent with this by-law be and the same are hereby

repealed.

13. **PROVINCIAL OFFENCES ACT**

- 13.0 Every person who contravenes any provision of this by-law is guilty of an offence, and upon conviction is liable to a fine of not more than Two Thousand Dollars (\$2,000.00) exclusive of costs for each day of offence and such penalty and costs shall be recoverable under the provisions of the Provincial Offences Act, R.S.O. 1990, c.P. 33 as amended.

READ a FIRST and SECOND time this 4th day of June, 2001

READ a THIRD time and FINALLY passed this 4th day of June, 2001

**THE CORPORATION OF THE
TOWN OF ESSEX**


MAYOR


CLERK