

# **The Corporation of the Municipality of Grey Highlands**

## **By-law No. 2023-065**

### **A By-law to Prevent Backflow and Control Cross-connections for Properties with Plumbing Connected to the Grey Highlands Water Distribution System**

**Whereas**, Section 11(2)(6) of the Municipal Act, 2001, S.O. 2001, c.25, as amended, authorizes a municipality to pass By-laws respecting the health, safety and well-being of persons; and

**Whereas**, Section 11 (3)(4) of the Municipal Act, 2001, S.O. 2001, c.25, as amended, authorizes a municipality to pass By-laws respecting public utilities and Section 11 of the Safe Drinking Water Act, 2002 S.O. 2002, CHAPTER 32 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**, Section 80(1) of the Municipal Act, 2001, S.O. 2001, c.25, as amended, authorizes a municipality, at reasonable times, to enter on land to which it supplies a public utility to inspect, repair, alter or disconnect the service pipe or wire, machinery, equipment and other works used to supply the public utility or to inspect, repair, replace or alter a public utility meter; and

**Whereas**, Section 80(2) of the Municipal Act, 2001, S.O. 2001, c.25, as amended, authorizes a municipality to, for the purposes of s. 80(1 ), shut off or reduce the supply of the public utility to the land; and

**Whereas**, Section 80(3) of the Municipal Act, 2001, S.O. 2001 , c.25, as amended, authorizes the municipality to enter on the land to shut off the supply of the public utility; to remove any property of the municipality or to determine whether the public utility has been or is being unlawfully used, if a customer discontinues the use of a public utility on land or a municipality lawfully decides to cease supplying the public utility to land; and

**Whereas**, Section 82(1) of the Municipal Act, 2001, S.O. 2001, c.25, as amended, states that a municipality is not liable for damages caused by the interruption or reduction of the amount of a public utility supplied to a municipality or to the land of any person as a result of an emergency or a breakdown, repair or extension of its public utility if, in the circumstances, reasonable notice of its intention to interrupt or reduce the supply is given; and

**Whereas**, Section 391 of the Municipal Act, 2001, S.O. 2001, c.25, as amended, authorizes the municipality to impose fees or charges on persons for services or activities provided or done by or on behalf of it, for costs payable by it for services or activities provided or done by or on behalf of any other municipality or any local board and for use of its property including property under its control; and

**Whereas**, Section 445 of the Municipal Act, 2001, S.O. 2001, c.25, as amended, states that if a municipality is satisfied that a contravention of a By-law of the municipality passed under this or any other Act has occurred, the municipality may make an order requiring the person who contravened the By-law or who caused or permitted the contravention or the owner or occupier of the land on which the contravention occurred to do work to correct the contravention; and

Whereas, Section 446 of the Municipal Act, 2001, S.O. 2001, c.25, as amended, states that if a municipality has the authority under this Act or under a By-law under this or any other Act to direct or require a person to do a matter or thing, the municipality may also provide that, in default of it being done by the person directed or required to do it, the matter or thing shall be done at the person's expense.

**Now Therefore the Council of the Municipality of Grey Highlands hereby enacts as follows:**

## **1.CITATION**

1.1. This by-law may be cited as the "Backflow Prevention and Cross Connection Control By-law".

## **2.DEFINITIONS**

2.1. The following words and phrases shall have the meaning ascribed to them as follows:

- i. **"ASME"** means the American Society of Mechanical Engineers;
- ii. **"ASSE"** means the American Society of Sanitary Engineers.
- iii. **"Authorized Functions"** means those functions which are required to be undertaken and/or completed by a Qualified Person and which authorized functions are set out in Schedule "A" of this by-law;
- iv. **"Auxiliary Water Supply"** means any water supply to a plumbing system other than the Water Distribution System;
- v. **"Backflow"** means the flowing back of, or reversal of the normal direction of flow of water or any other substance, into the Water Distribution System;
- vi. **"Backflow Prevention Device"** means a testable device that prevents backflow, and which meets the standards set out in section 4.3;
- vii. **"Building"** shall have the same meaning as set out in the Building Code Act, S.O. 1992,c23, as amended, or any successor thereof;
- viii. **"Building Code"** means the Building Code Act, 1992 and/or any regulations made under Section 34 of the Building Code Act, 1992 as amended or re-enacted from time to time;
- ix. **"Chief Building Official"** means the Chief Building Official appointed by the Municipality of Grey Highlands;
- x. **"Cross Connection"** means any actual or potential connection between a system providing potable water 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;

xi.        “**Cross Connection Inspection Report**” means a complete review of any plumbing system(s) to determine if any cross connection exists or may exist, which includes identification/evaluation of existing Backflow Prevention Devices, cross connections, potential corrective measures and recommendations, submitted in/on the form approved by the Director from time to time ;

xii.       “**CSA Standard**” means the document entitled CAN/CSA-B64.10 Selection and Installation of Backflow Preventers/Maintenance and Field Testing of Backflow Prevention Devices published by the Canadian Standards Association, as contained in the Building Code;

xiii.       “**Director**” means the person holding the title of Director of Environmental Services for the Municipality of Grey Highlands, or his/her designate;

xiv.       “**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 preventions device, provides security, increases accessibility for testing and repair, and provides freeze protection;

xv.        “**Fire Protection System**” means any system within a building or structure for the suppression of a fire, including by not limited to any system consisting of a water sprinkler system or dry foam, or a system described in the CSA Standard;

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

xvii.       “**Municipality**” means the Corporation of the Municipality of Grey Highlands;

xviii.      “**Owner**” means registered owner of the property;

xix.       “**OWWA**” means the Ontario Water Works Association;

xx.        “**Plumbing**” means plumbing as defined in the Building Code Act and includes a private water main, a water service extension and a plumbing system;

xxi.       “**Plumbing System**” means a system of connected piping, fittings, valves, equipment, fixtures and appurtenances contained in plumbing;

xxii.       “**Potable Water**” means water that is safe for human consumption;

xxiii.      “**Premise Isolation**” means separation of any building which contains a plumbing system or any portion of a plumbing system on a property from the Water Distribution System by way of a Backflow Prevention Device or such other method as the Director, in its sole discretion, has approved;

xxiv.      “**Property**” means any real property including any buildings or structures located thereon and includes a condominium unit in a

condominium corporation and the common elements in a condominium corporation;

xxv. **“Property Isolation”** means separation of the entire property and all plumbing systems thereon from the M Water Distribution System immediately after the curb stop or curb stops (in the case of multiple connections to the Water Distribution System);

xxvi. **“Qualified Person”** means a person possessing the required registrations and required documentation set out in Schedule “B” of this By-law;

xxvii. **“Test Report”** means a report prepared by a Qualified person, in the form as approved by the Director from time to time ;

xxviii. **“Tester’s Certificate”** means a current Cross Connection Control certificate issued by OWWA or ASSE;

xxix. **“Water Distribution System”** means any drinking water supply system owned and maintained by the Municipality;

xxx. **“Water Meter”** means the water meter installed to record the amount of water supplied to such premises by the Municipality; and

xxxi. **“Water Service Connection”** means a piping connection that conveys water from the water distribution system to the plumbing system.

### **3.APPLICATION AND ADMINISTRATION**

3.1. This by-law applies to all properties where upon a plumbing system or an in-ground irrigation system exists which is connected to the water distribution system.

3.2. The by-law shall be administered by the Director unless another Municipal official is specifically referred to in the by-law. Where under the terms of this by-law decision, approvals, notices and certificates are to be made, given or issued by the Municipality, such decisions, approvals, notices and certificates may be made, given or issued by the Director or other named Municipal official.

### **4.PROTECTION FROM CONTAMINATION AND BACKFLOW PREVENTION**

4.1. No person, shall connect, cause to be connected, or allow to remain connected to the Water Distribution System any plumbing system, piping, fixture, fitting, container or appliance, in a manner which under any circumstances, may allow untreated water, wastewater, any course of pollution or any other liquid, chemical or substance to enter the water plumbing system or water distribution system.

4.2. No industrial, commercial, institutional, and multi-residential buildings shall remain connected to the Water Distribution System unless Premise Isolation exists.

4.3. 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:

- i.To facilitate the repair of the device and such device is replaced immediately after such repair is carried out; or
- ii.To replace the device with another device that meets or exceeds the provisions of this by-law; or
- iii.To comply with a Director's Order.

In no instance shall a property or building, as applicable be without a Backflow Prevention Device for more than five (5) days.

4.4. Where Premise Isolation or Property Isolation is required under this By-law, no person shall install a Backflow Prevention Device that is intended to provide such Premise Isolation or Property Isolation unless it conforms to the following,

- i.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,
- ii.ASME A112.18.1/CAN/CSA-B125-01 or CSA-B125.3 Plumbing Fittings, and
- iii.the Building Code.

4.5. Alternate Standard - Notwithstanding section where an owner wishes to install a Backflow Prevention Device that does not comply with subsection 4.4 (i) or (ii) but such device has been certified by the CSA or a certification body recognized by the Standards Council of Canada, such Backflow Prevention Device shall be deemed to meet the requirements of section 4.4.

4.6. New Dwelling Unit Construction and Connection – No person shall construct and connect a new dwelling to the Water Distribution System unless a dual check valve has been installed.

## **5.CROSS CONNECTION INSPECTION REPORT**

5.1. Requirement to Submit Report - The owner of property having connection(s) to the Water Distribution System shall retain a Qualified Person to prepare a Cross Connection Inspection Report in the form available on the Municipal website or from the Director where:

- i.the Municipal Water Service Account for the property identifies it as:
  - 1.institutional,
  - 2.commercial,
  - 3.industrial (I.C.I), or
  - 4.any combination of the foregoing; or
- ii.the property has 1 or more dwelling units located thereon;
- iii.the property has an in-ground irrigation system(s);

iv.the Director has issued an Order under subsection 5.2.

The Cross Connection Inspection Report required under subsections i, ii. and iii. shall be submitted no later than 6 months after written notice from the Director requiring the submission of a Cross Connection Inspection Report (Notice Requiring Submission of a Report) has been issued and thereafter the earlier of: a) every five (5) years from the date of the previous report or b) a date no later than 30 days after a change of use of the property has occurred.

The Cross Connection Inspection Report required under subsection iv. shall be submitted on or before the date set out in the Order.

5.2. Exemption - Notwithstanding section 5.1ii., unless specifically ordered by the Director pursuant to section 5.3, the requirement of section 5.1 does not apply to the following:

i.properties whereupon there exists only one dwelling unit;

ii.properties whereupon two dwelling units exist and such dwelling units have separate connections to the Water Distribution System.

5.3. Director's Order to Complete Report - Where the Director has grounds to believe (which grounds may be revealed through an inspection by the Director under section 6.1 or upon other information) that a condition exists that may be hazardous or detrimental to the potable water supply to a property or any buildings thereon, the Director may, in writing, order the owner of such property to undertake and prepare a Cross Connection Inspection Report in the form prescribed by the Director and to submit such report on or before the date set out in the Director's Order to Submit Report

5.4. Auxiliary Water Supply - Notwithstanding section 3.1 of this By-law, the owner of any Property whereupon an auxiliary water supply exists, shall, within 2 years of the enactment of this by-law provide the Director with a Cross Connection Inspection Report completed by a Qualified Person (the initial Cross Connection Inspection Report) and every 5 years thereafter or upon the written request of the Director.

## **6.INSPECTIONS AND ORDERS**

6.1. Director's Inspection – Notwithstanding any obligation to submit a Cross Connection Inspection Report imposed under this by-law, the Director may, upon the giving of reasonable notice, enter onto any property and into buildings and structures located thereon that may be connected to the Water Distribution System for the purpose of performing inspections to determine whether cross connections may exist.

6.2. Access Refused - Where access is refused, 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 property or building as applicable until such time as access is provided.

6.3. Compliance Order - Upon the conduct on an inspection under section 6.1, the review of a Cross Connection Report or the receipt of other information, if the Director determines that a condition which is contrary to Part 4 of this by-law exists or has the potential to exist, the

Director may issue a Compliance Order to the owner and/or such other person and/or take such precautionary actions as may be required to obtain compliance with this by-law and protect the Water Distribution System, including shutting off the supply of water to the premise or property.

6.4. Upon receipt of a Compliance Order, the owner and/or other responsible person shall retain a Qualified Person(s) to undertake such work and report on such work to the Director as set out in the Order.

6.5. Failure to comply with the Compliance Order' shall entitle the Director to:

i.shut off the water service or services upon the giving of 5 days written notice;

ii.shut off water service, without notice to the owner 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 of health; and/or

iii.request that the Chief Building Official consider issuing an unsafe building order pursuant to the Building Code.

## **7. PREMISE ISOLATION/PROPERTY ISOLATION**

7.1. Where, in the opinion of the Director, a risk of possible contamination of the Water Distribution System exists, the Director may in a Compliance Order issued under section 6.3, direct an owner of property to install premise isolation or property isolation, in accordance with section 7.2 and 7.3 in addition to any other source of protection devices that may exist.

7.2. Premise isolation shall be installed:

i.In a building of moderate or severe hazards in accordance with premise isolation requirements as stated in the Building Code; or

ii.As specified by the Director based on Part 4 of this by-law.

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

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

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

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

## **8.ANNUAL FIELD-TESTING OF BACKFLOW PREVENTION DEVICES**

8.1. The owner of a property whereupon a Backflow Prevention Device exists (as identified in a Cross Connection Inspection Report), shall submit a current Test Report on an annual basis to the Director.

8.2. No person shall undertake or complete any testing for the purpose of preparing a Test Report unless the equipment used to test the Backflow Prevention Device has been verified or calibrated for accuracy, as described in the CSA Standard.

8.3. If a test conducted under section 8.1 reveals that a Backflow Prevention Device is not in good working condition:

i. the Qualified Person shall provide such test to the Director within (5) days of conducting such test; and

ii. the owner of the property shall have a Qualified Person make repairs or replace the device within five (5) working days.

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

8.5. If an owner fails to have a Backflow Prevention Device tested, the Director may notify the owner that the Backflow Prevention Device must be tested within a specified time.

8.6. If an owner fails to have a Backflow Prevention Device tested within the time specified in the notice, the Director may shut off the water service or water services until a positive test result has been received by the Director or until confirmation that a new Backflow Prevention Device has been installed.

## **9. GENERAL PROVISIONS**

9.1. No person shall install a Backflow Prevention Device except under authority of a permit issued under the Building Code.

9.2. No person shall undertake or complete an Authorized Function unless that person is a Qualified Person for the purposes of the specific Authorized Function as set out in Schedule "A".

9.3. 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.

9.4. Where a time frame is set out in this by-law or an Order or Notice issued hereunder for carrying out an action, the time for compliance may be extended in writing by the Director or Chief Building Official.

9.5. 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 most restrictive prevail.

## **10. SCHEDULES**



10.1. The following Schedules are attached to and form part of this by-law:

- i.Schedule A - Authorized Functions
- ii.Schedule B - Qualified Persons – Requirements

**11.ENFORCEMENT AND PENALTIES**

11.1. Every person who contravenes and provision of this by-law, or an officer or director of 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 of repetition of the offence by the person convicted.

11.3. In this by-law where the Municipality is given the power to direct or require a person to do a matter or thing, the Municipality may do the matter or thing at the person’s cost if the person defaults in doing it and the Municipality may recover the costs of doing the matter of thing by action or in accordance with Section 446 of the Municipal Act, 2001.

Read a first, second and third time, and finally passed on May 17 2023.

The Corporation of the  
Municipality of Grey Highlands

Original Signed By

\_\_\_\_\_  
Paul McQueen, Mayor

Original Signed By

\_\_\_\_\_  
Raylene Martell, Municipal Clerk

Status: Passed

**SCHEDULE 'A' to By-law 2023-065**  
**AUTHORIZED FUNCTION LIST**

| Item | Authorized Function   | Professional Engineer (P.Eng.) with Tester's Certificate | * Certified Engineering Technologist (C.E.T) 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 Tester's Certificate | Lawn Irrigation System Installer with Tester's Certificate | Municipal staff within Public Utilities Division with Tester's Certificate |
|------|---|--|--|--|---|--|--|--|--|
| 1    | Carry out a 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, and 4 in relation to fire protection systems                 |  |  | ✓  | ✓   | ✓  | ✓  |  |  |
| 6    | Item 3 & 4 in relation to lawn sprinkler systems                            | ✓  | ✓  | ✓  | ✓   | ✓  |  | ✓  |  |
| 7    | Items 1, 2, 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' to By-law 2023-065**  
**REGISTRATION REQUIREMENTS FOR PERSONS ON AUTHORIZED FUNCTIONS LIST**

| Qualified Person   | Required Registrations   | Documentation Required   | Authorized Functions  |
|--|--|--|---|
| <b>Plumbing Companies</b><br>(master plumber, journeyman plumber and apprentice plumber) | Master plumber with tester's certificate as well as all journeyman and all apprentice plumbers with tester's certificates under his/her direction or direct supervision.   | <b>Master Plumber:</b> License and tester's certificate.<br><b>Journeyman:</b> License and tester's certificate.<br><b>Apprentice:</b> Apprenticeship contract and tester's certificate.<br><b>Calibration certificate</b> for backflow testing equipment.                                 | 1. Carry out cross connection survey.<br>2. Install, relocate or replace backflow preventer.<br>3. Repair backflow preventer.<br>4. Test backflow preventer.<br>5. Items 1, 2, 3 & 4 in relation to fire protection systems.<br>6. Items 3 & 4 in relation to lawn sprinkler systems. |
| <b>Fire and Sprinkler Companies</b>  | Master sprinkler and fire protection installer license with tester's certificate as well as all journeyman and all apprentice sprinkler and fire protection installers with tester's certificates under his/her direction or direct supervision. | <b>Master Sprinkler and Fire Protection Installer:</b> License and tester's certificate.<br><b>Journeyman:</b> License and tester's certificate.<br><b>Apprentice:</b> Apprenticeship contract and tester's certificate.<br><b>Calibration certificate</b> for backflow testing equipment. | <b>In relation to Fire Protection Systems Only</b><br>1. Carry out cross connection survey.<br>2. Install, relocate or replace backflow preventer.<br>3. Repair backflow preventer.<br>4. Test backflow preventer.  |
| <b>Irrigation Contractors</b>  | Irrigation contractor as well as all irrigation installers with a tester's certificate under his/her direction or direct supervision.  | <b>Lawn Irrigation Installer:</b> Tester's certificate.<br><b>Calibration certificate</b> for backflow testing equipment.  | 1. Repair and test backflow preventers on irrigation systems.   |
| <b>Professional Engineers/Certified Engineering Technologists</b>                        | 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.  | <b>P.Eng.:</b> PEO License Number and tester's certificate.<br><b>C.E.T under direct supervision of P.Eng.:</b> Tester's certificate.<br><b>Calibration certificate</b> for backflow testing equipment.  | 1. Carry out cross connection survey.<br>2. Repair backflow preventer.<br>3. Test backflow preventer.   |
| <b>Municipal staff within Public Utilities Division with Tester's Certificate</b>        | All Public Utilities division staff with a tester's certificate  | <b>Operators:</b> Tester's certificate.<br><b>Calibration certificate</b> for backflow testing equipment.  | <b>In relation to Municipally Owned and Operated Facilities</b><br>1. Carry out cross connection survey.<br>2. Install, relocate or replace backflow preventer.<br>3. Repair backflow preventer.<br>4. Test backflow preventer.   |