



CROSS-CONNECTION CONTROL PROGRAM

2020

Approval No. 2011-075772-01



CROSS-CONTAMINATION CONTROL PROGRAM 2020

Town of Westville

May 2020

REVISION LIST:

<u>REV.</u>	<u>DESCRIPTION</u>	<u>DATE</u>
3	Revised Final	May 21, 2020
2	Final	May 20, 2020
1	Draft	May 19, 2020



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1.0 Purpose & Scope

Public Health Officials have long been concerned about cross-connections and backflow connections in plumbing systems and in public drinking water supply distribution systems. Such cross-connections, which make possible the contamination of potable water, are ever-present dangers. Cross-connections are the links through which it is possible for contaminating materials to enter a potable water supply. The contaminant enters the potable water system when the pressure of the polluted source exceeds the pressure of the potable source. This action may be called backsiphonage or backflow. Essentially it is reversal of the hydraulic gradient that can be produced by a variety of circumstances.

The intention of this cross-connection program is to create and ensure a more reliable potable water system within the Town of Westville. This will be achieved through the mitigation and elimination of potential hazards due to backflow and / or cross-connections. A safe reliable water system allows consumers to enjoy their water with confidence.

2.0 Background

The Westville Water Utility is owned and operated by the Town of Westville under authorizations from the Nova Scotia Utility Review Board and Nova Scotia Department of Environment. The Westville Public Works Department is responsible for all utility operations. Administration of the utility falls under the Public Works Department, with billing and accounting services performed by Town Office Staff. A municipal structural outline shown in the following sub-sections summarizes the responsibilities and duties of each organization member.

The Utility operates a Class II Water Distribution System (Approval # 2011-075722-01) that is subject to monitoring and reporting to the Nova Scotia Department of the Environment. Westville purchases potable water from a neighbouring municipality, the Town of New Glasgow. This arrangement was entered into in 1996.



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The water from the Town of New Glasgow passes through the Municipality of the County of Pictou distribution piping on the Westville Road and enters Westville at the town line formally called Bear Brook where it is metered. The Town of Westville provides potable water to the Municipality of the County of Pictou for the community of Alma and the Northumberland Regional High School via Hamilton Road, where it is metered.

As participants in an inter-connected distribution system it is critical for the Town of Westville (and all parties) to safeguard and protect the quality of water as per the Canadian Drinking Water Standards & Guidelines via programs such as the Cross Connection Control Program. This program was created under the direction of the Nova Scotia Department of the Environment.

3.0 Definitions

Backflow - Whenever there is a physical connection between a potable water system and a non-potable environment, backflow may occur due to either backsiphonage or backpressure.

Backsiphonage - Backflow caused by negative or reduced pressure in the potable water supply piping.

Backpressure - Backflow caused by a potable water system that is connected to a non-potable water supply operating at a higher pressure.

BFP - Backflow Prevention Device.

Cross Connection - An existing connection or a potential connection between any part of the potable water system and any environment containing other substances in a manner which under any circumstances would allow such substances to enter the potable water system (e.g. a garden hose immersed within a floor mop bucket).

CSA - Canadian Standards Association.



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Customer - A party, be it residential or commercial, whom agrees to purchase water from the Utility.

NSE - Nova Scotia Department of the Environment

NSUARB - Nova Scotia Utility and Review Board.

Potable Water - Water that is safe to consume (drink) and meets all Canadian Drinking Water Standards & Guidelines.

Utility - The party who collects and distributes potable water. To be used interchangeably with the Town of Westville in this document.

4.0 Budgets & Costs

All cost associated with surveying, hazard assessment, records / data management, education, and outreach will be absorbed by the Utility and / or the Town of Westville.

The customer is responsible for payment as mentioned in the *Cross Connection Control & Backflow Prevention Program*.

5.0 Utility Roles & Responsibilities

The Utility is responsible for the maintenance of the water distribution system within the Town limits and the supply and / or provision of potable water to the customer shut off valve or property line. A meter is supplied to each customer at the time of service hook-up and thereafter as deemed necessary by the Utility. At the time of meter installation / inspection, a backflow prevention device must have been installed (See Figure 1).



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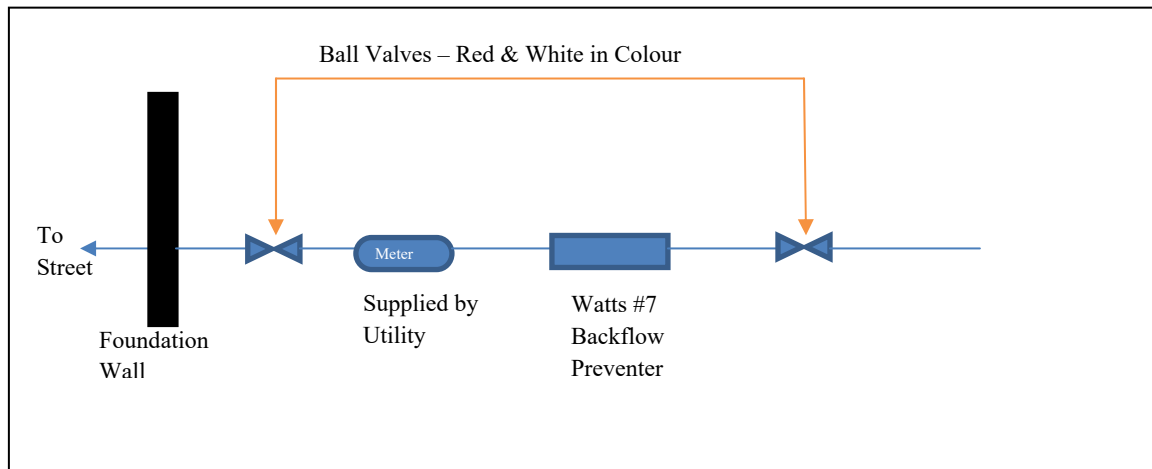


Figure 1: Backflow Preventer Installation Schematic

6.0 Customer Roles & Responsibilities

Customers are responsible for the service line maintenance and repairs from the shut off valve or property line to their tap(s). All service lines must have a backflow prevention device installed at the customer's expense.

The customer shall bear the cost of maintenance and repairs of the service line including the cost and responsibility of reinstatement of all property belonging to them or another customer that may be disrupted during repair.

For a typical residential meter / BFP device please see Figure 1 above.

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7.0 Cross-connection Control & Backflow Prevention

- 1) In the event of any breach, contravention or non-compliance by a person of any of the provisions in subsections (2), (3), (4) or (5), the Utility may:
 - a) suspend water service to such person, or;
 - b) give notice to the person to correct the breach, contravention or non-compliance within 96 hours, or a specified lesser period, provided that, if such person fails to comply with such notice, the Utility may immediately suspend water service to such person.

- 2) No person shall connect, cause to be connected, or allow to remain connected to a Water System, or a plumbing installation, without the prior written approval of the Utility, any piping fixtures, fittings, container or sanitary appliance in a manner which may cause water, wastewater, or any other liquid, chemical or substance, to ingress or egress the Water System.

- 3) Where in the opinion of the Utility, there may be a exist a risk of contamination to the Water System, the Utility may, despite subsection (1), require a Customer, at the Customer's sole cost and expense, to install at any point on the Customer's Water Service Connection or water service pipe, one or more backflow prevention (BFP) devices, which devices shall be of a quality and type approved by the Utility.

- 4) All BFP devices installed pursuant to subsection (3) shall be maintained in good working order, inspected and tested by a certified tester approved by the Utility, at the expense of the Customer, and carried out annually or at such other intervals as the Utility / NSUARB may require.



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- 5) A Customer shall submit a report in a form approved by the Utility respecting all tests performed pursuant to subsection (4) on a BFP device within thirty (30) days of a test, such report form to be displayed on or adjacent to the BFP device on which the tester shall record:
 - a) The name and address of the owner of the device;
 - b) The location, type, manufacturer, serial number, and size of the device, and;
 - c) The test date, the tester's initials, the tester's name, the name of the tester's employer, and the tester's license number.

- 6) The Utility shall maintain a program for the issuance, renewal and cancellation of Cross-connection Control Tester's Licenses, which shall include minimum standards, insurance requirements, fees and administrative procedures.

- 7) Selection and Installation of all BFP devices shall conform to the latest edition of CSA B64.10. Maintenance and field-testing of all BFP devices shall conform to the latest edition of CSA B64.10.1.