TOWN OF TRENTON
WATER WORKS DEPARTMENT
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TOWN OF TRENTON

Cross Connection Control Program (CCC)

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1. Overview

Trenton Water Utility sources, protects, treats, and delivers safe drinking water to residents, commercial and industrial properties within the Town of Trenton. Trenton Water Utility also provides potable water supply to the community of Hillside. Nova Scotia Environment (NSE) requires that municipal water utilities enforce the installation of Backflow Prevention Devices (BFPD) on all water services with cross connections where there is a high to moderate potential for backflow resulting in the possible contaminating materials to enter the potable water system. A cross connection is a piping arrangement that allows a potable water system to be connected to a source of potential pollution or contamination. The protection against cross connections is to prevent backflow into potable water. Backflow / back siphonage is the reverse flow of water and/ or other substances entering the drinking water supply from any source other than the water distribution piping. This can occur when the pressure of the polluted source exceeds the pressure of the potable water source.

The Town's first step in its Cross-Connection Control Program is to develop and implement a program to oversee the installation and maintenance of Backflow prevention Devices. BFPD Devices are required on industrial, commercial, and institutional buildings, multi-unit apartment buildings, sprinkler service lines and all new services where, in the opinion of the Town, there is a potential risk of contamination of the potable water supply system.

2. Background

The Trenton Water Utility is owned and operated by the Town of Trenton under the authorization from the Nova Scotia Utility and Review Board (NSUARB) and NSE. The water utility is operated and maintained by the Trenton Water Department and is responsible for maintaining and operating the water source, well transmission and treatment. The distribution system is maintained by the Public Works Department. Administration, billing, and accounting is performed by the Town Office Staff.

The Utility operates a Class II water treatment and Class II water distribution facility (Approval 2001-075328-01) that is subject to monitoring and reporting to the NSE. Trenton potable water supply is provided by four groundwater wells within the Town of Trenton boundary. Trenton Water Utility distributes water within the Town of Trenton and the community of Hillside.

The Utility is an inter-connected distribution system, it is critical to safeguard and protect the quality of water as per the Canadian Drinking Water Standard & Guidelines. This program was created under the direction of the NSE.

3. Definitions

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

Back siphonage – 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.

Cross Connection – A connection between any part of the potable water system and any environment containing other substances that could lead to the potential contamination of the potable water system.

Customer – A party, be it residential, commercial, or industrial, who is both connected to the Town water system and purchases potable water from the Trenton Water Utility

Potable Water – Water that is safe to consume and meets the Canadian Drinking Water Standards & Guidelines.

Utility – The Party who collects and distributes potable water.

BFPD – Backflow Prevention Device

CSA – Canadian Standard Association

NSE- Nova Scotia Environment

NSUARB – Nova Scotia Utility and Review Board

4. Budgets and Costs

All costs associated with surveying, hazard assessment, record management, public education and outreach will be the responsibility of Town of Trenton.

The customer is responsible for the costs as mentions in section 6.0.

5. Utility Roles & Responsibilities

The Town of Trenton is responsible for the maintenance of the water distribution system within the Town of Trenton's limits and the supply of potable water to the customer shut off valve. A water meter is supplied and installed to each customer at the time-of-service hook-up. The Town will maintain a license database of approved BFPD installers.

6. Customer Roles & Responsibilities

The customers are responsible for the service line maintenance and repairs from the shut off valves to their taps. Backflow prevention devices (BFPD) are required in all industrial, commercial, and institutional buildings within the Town of Trenton. Apartment buildings with more than four units and buildings sprinkler systems require BFPD. All new residential construction and all existing waterline replacements will require BFPD to be installed.

7. Backflow Prevention Device Selection

Methods of Backflow Prevention:
The Town of Trenton recognizes the following methods or types of backflow prevention devices used for the prevention of backflow:

- Air Gap (AG)
- Reduced Pressure Principle Assembly (RP)
- Double Check Valve Assembly (DCVA)

Selection Process:
The type of BFP device is based on the degree of hazard that the specific location represents to the drinking water supply. **A Backflow Prevention Device Application Form must be filled out by a professional engineer or certified plumber**, in accordance with the CSA B64.10 and CSA B64 series, to determine the degree of hazard. Table 1 and Table 2 define BFPD types and defines Degree of Hazard.

Table 1 – Types of Backflow Prevention Devices

CSA Standard No.	Type of Device	Minor Degree of Hazard	Moderate Degree of Hazard	Severe Degree of Hazard	Device Under Continuous Pressure
–	Air Gap	X	X	X	No
B64	Reduced Pressure Principle Assembly (RP)	X	X	X	Yes
B64	Double Check Valve Assembly (DCVA)	X	X	–	Yes

Table 2 – Degrees of Hazard

Degree of Hazard	Definition
Minor (MH)	Any cross connection or potential cross connection that constitutes only a nuisance and that results in a reduction in only aesthetic quality of the water.
Moderate (MoH)	Any minor hazard (MH) connection that has a low probability of becoming a severe hazard.
Severe/High (HH)	Any type of cross connection or potential cross connection involving water that has additives or substances that under any concentration, can create a danger to health.

8. Testing and Maintenance

It is the customer's responsibility to ensure that all BFPD are tested when installed and annually afterwards. If the device fails its test, maintenance or repair is required immediately. The device must be retested immediately after any repairs, maintenance, or when the device has been moved, reinstalled, or changed locations.

BFPD must be tested annually, at minimum, because they have internal seals and springs that are subject to wear and fatigue.

BFP must be conducted by a certified tester and a record card must be placed on or beside the BFPD indicating the following:

- The test date
- The testers certificate number, name, initials, and the name of his/her employer
- BFP type, manufacture, serial number, and size of device
- The name and address of the owner of the device

BFP Devices testing must be performed by a certified tester and a copy of the annual BFP test results must be sent to the Town of Trenton, by either the customer or the BFP tester, within a 10-day period.

A copy of the annual BFPD test results must be sent to the Town of Trenton. The tests results can be submitted to the following:

By email:	By fax:	By mail:
trenton_wtp@eastlink.ca	Attn: Cross Connection Control 902-752-0090	Town of Trenton C/o: Cross Connection Control P.O. Box 328 Trenton NS, B0K 1X0

Trenton By-Law No.2021-001 (Cross Connection Control) specifies that the Town may give notice to correct any non-compliance with the Cross Connection Control Program, including annual testing of BFPD's, and as a last resort, the Town may suspend water service. The Town will always prefer to work with the property owner to find a solution, but backflow hazards will be taken seriously as they are a potential risk to public health.

9. Approved Backflow Prevention Device Testing Services

The following is a list of approved BFPD testers within the Town of Trenton. If any service provider not on the list below is to be utilized to conduct the test, the Town must approve of the service provider before the test is conducted.

Service Provider	Telephone Number	Address

10. Thermal Expansion Awareness

It is important to address Thermal Expansion when installing backflow prevention devices to ensure effective operation of your water system.

- Failure to address this potential problem within your premises may cause damage to your water heater and/or plumbing system.

- To prevent any damage to private property caused by thermal expansion, you are responsible to have a licensed plumber inspect your plumbing system to determine if there is a closed plumbing system. If so, you should have the plumber install an appropriate device to eliminate the problems that can occur because of thermal expansion.