

safe
drinking water
is everyone's responsibility

CROSS-CONNECTIONS AND
BACKFLOW PREVENTION



What is a cross-connection?

A cross-connection is a **connection between potable water (safe for human consumption) and non-potable water (not safe for human consumption).**

These connections are prohibited under City By-Law # P-102. Cross-connections are normally created by mistake but are **serious health and safety hazards.**



HIGH HAZARD CROSS CONNECTION NEVER USE SPRAY ATTACHMENTS

Cross-connection example

A garden hose connected to an outdoor faucet, left running with the hose end lying in a bucket of car wash soap is a common example.



ALWAYS PLACE YOUR WATER HOSE ON THE GROUND



NEVER SUBMERGE A WATER HOSE INTO A SOAP FILLED BUCKET

What is backflow?

Backflow is the reversal of the normal flow of water within a water piping system. If a cross-connection exists, backflow can cause non-potable water containing pollutants or contaminants to enter the potable water piping system.

Backflow is a hidden hazard and will normally go unnoticed until someone gets **sick from drinking a glass of contaminated water.** Results of backflow can even be fatal if the contaminant is toxic.



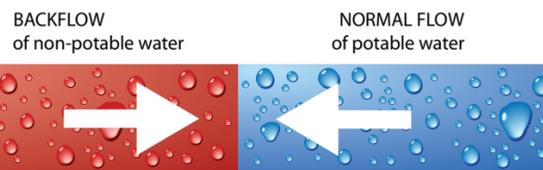
PROTECT YOUR FAMILY

How does backflow happen?

Backflow happens when the water supply pressure drops causing water in a building's piping system to be sucked or siphoned backward (back siphonage). Backflow can also happen if the water pressure within a building increases above the water supply pressure, pushing the water in a reverse direction (back pressure).



REVERSAL OF THE NORMAL FLOW OF WATER



A turned on garden hose is the most common cause of water contamination. Backflow can draw unsafe water and chemicals from your garden hose into your home's drinking water system when system pressure fluctuation occurs.



Backflow prevention

The best way to prevent hazardous backflow is to eliminate all existing cross-connections. If a cross-connection cannot feasibly be eliminated, it must be protected by an approved backflow prevention device selected and installed in conformance with the *Canadian Standards Association (CSA B64.10).*

Backflow prevention devices

A backflow prevention device is designed to allow water to flow in the normal direction but to **stop water from flowing in the reverse direction.** These devices are installed on water lines to protect the drinking water supply from hazardous cross-connections and backflow occurrences. There are various types of backflow preventers for different applications. The two main categories of backflow preventers are non-testable devices and testable assemblies.



TAP WITH BUILT-IN VACUUM BREAKER
The *National Plumbing Code of Canada* requires this non testable device in all new homes.



HOSE CONNECTION VACUUM BREAKER
This non testable device simply attaches to the water faucet and is available in hardware stores. It can also be installed on your laundry sink.



Residential homes are required to have a **non-testable dual check valve (DuC) backflow preventer installed on the water service entrance.**

Did you know ?

Moncton drinking water is clean, clear and safe, and exceeds the *Guidelines for Canadian Drinking Water Quality.*



By-Law P-102 / Section 11.(1)

No owner or other person shall connect, cause to be connected, or allow to remain connected, any piping, fixture, fitting, container or appliance, in a manner which, under any circumstances, could allow water, waste water, or any other substance to enter the city's water system by backflow of the water or by any other means.

Owner's responsibility

RESIDENTIAL

For the safety of the people in your home, it is necessary to properly protect or eliminate all individual cross-connections. Some of the most common cross-connections found in residential homes are: water feed line to a boiler/water heating system, garden hose left running and lying in bucket of soap, older style toilet tank without anti-siphon fill valve.



NEVER SUBMERGE WATER HOSE INTO POOL

In a backflow situation, dirty water from your pool can be sucked back into your drinking water system.

Owner's responsibility

COMMERCIAL

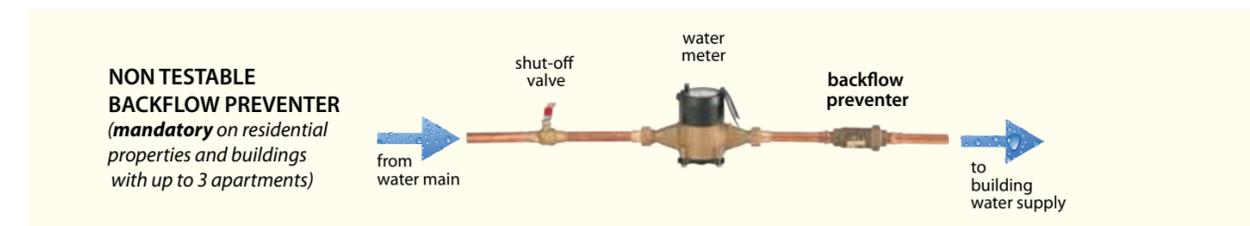
For the safety of the people in your business or commercial building, it is necessary to properly protect or eliminate all individual cross-connections. There can be several cross-connections within a commercial facility and these connections can be difficult to find. It is recommended that commercial properties be thoroughly inspected by a certified inspector to ensure proper backflow prevention is in place. Some of the most common cross-connections found in a commercial facility are: water feed line to detergent dispenser, water feed line to boiler/water heating system, hose connections, etc.

The City requires that all commercial buildings (including apartment buildings with more than 3 units) have a **testable backflow preventer installed on the water service entrance. The City also requires that all fire protection water service entrances be protected with a testable backflow preventer.**

Commercial owners are responsible for keeping track of all testable backflow preventers within their building(s) and to ensure that testing is completed by the annual due date. The owner is also responsible for keeping updated contact information with the City's Building Inspection Department.



TESTABLE BACKFLOW PREVENTER
Double check valve assembly (DCVA)



NON TESTABLE BACKFLOW PREVENTER (mandatory on residential properties and buildings with up to 3 apartments)



Installation, testing and inspection

Commercial and Residential

- 1) The City requires a plumbing permit for the installation and removal of backflow preventers.
- 2) Testable backflow prevention assemblies are required to be tested initially upon installation and annually thereafter.
- 3) Testing must be performed by an individual who is licensed with the Province of New Brunswick as a backflow tester. Most plumbing companies have a licensed backflow tester on staff.
- 4) All test reports must be forwarded to the City's Building Inspection Department.

Please contact us if you are unsure of any unprotected cross-connections within your building. Our Plumbing Inspectors are certified in *Cross-connection Control / Backflow Prevention* and will help you identify the risks within your building, at no cost.

Backflow prevention program

The City of Moncton is proud to have one of the most comprehensive backflow prevention programs in Atlantic Canada.

A large database of all existing backflow preventers is maintained and new devices are registered upon installation. Annual testing is monitored and inspections are carried out on a regular basis. We look forward to your co-operation with this very important program, which will help to sustain clean, safe drinking water for everyone in our community.



MONCTON

CITY OF MONCTON
Building Inspection Department

655 Main Street
Moncton, NB
E1C 1E8

506 856-4375
plumbing_plomberie@moncton.ca