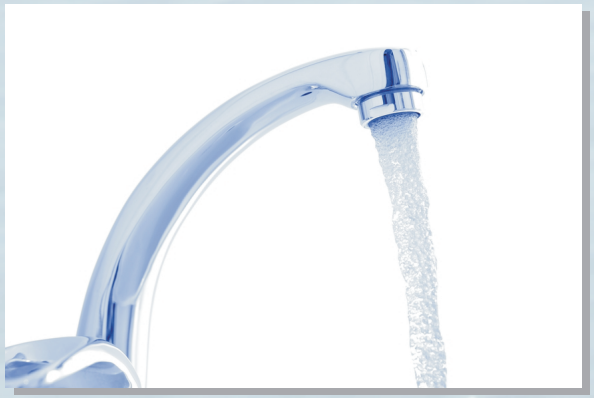
## Norwell Water Department

The Norwell Water Department is responsible for the protection of the public potable water system from contamination or pollution due to backflow or back-siphonage of contaminants or pollutants, through water service connection.

The Norwell Water Department will maintain a Cross Connection Control Program in accordance with the regulations of Massachusetts Department of Environmental Protection (MassDEP) regulations 310 CMR 22.22.

The Norwell Water Department has primary responsibility for preventing water from unapproved sources, or any other substances, from entering the public water system.

You can find out more information if you go to the EPA's website at:
www.epa.gov/safewater/crossconnection.html



### *Definitions:*

***Cross Connection*** — Any actual or potential connection between the public water supply and a source of contamination or pollution.

***Backflow*** — The flow of water or other liquids, mixtures, or substances into the distribution pipes of a potable supply of water from any source or sources other than its intended source. Backsiphonage is one type of backflow.

***Backpressure*** — Backflow that occurs when the pressure in an unprotected downstream piping system exceeds the pressure in the supplying pipe.

***Backsiphonage*** — Backsiphonage results from negative pressures in the distributing pipes of a potable water supply.

### *Technology:*

***Pressure Vacuum Breaker Device*** — Used to prevent back-siphonage, this device consists of vacuum breakers with a spring loaded check valve and a spring loaded air inlet valve.

***Double Check Valve Device*** — Used to prevent backflow under backsiphonage or backpressure conditions, this device consists of two independently acting, tightly closing, resilient seated check valves in series with test ports.

***Reduced Pressure Zone Backflow Device*** — This device protect against backsiphonage and backflow, similar to the double check valve device, but it also contains an independently acting pressure relief valve between the two check valves.

NorwellWater

# Cross Connection Control Program

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## Where Can a Cross-Connection Occur?

Cross-connections can occur at many points throughout a distribution system and a community's plumbing infrastructure. Cross-connections can be identified by looking for physical interconnections (or arrangements) between a customer's plumbing and the water system. Some specific examples of backflow incidents that can occur are:

- Lawn chemicals back-flowing through a garden hose into indoor plumbing and potentially into the distribution system
- A physical connection between a private well line for irrigation and a residential potable service connection
- Back-siphonage of "blue water" from a toilet water closet into the building's water supply
- Carbonated water from a restaurant's soda dispenser entering a water system due to back pressure
- Backflow of boiler corrosion control chemicals into an office building's water supply

## Commercial

### *Fire Sprinkler Systems*

Backflow inspections and tests are important to ensure that there is not a reversal of the flow of water from the fire sprinkler system back into the public potable water system. According to MassDEP 22.22 and NFPA (National Fire Protection Association) 25 code, sprinkler backflow prevention devices should be inspected and tested on an annual basis to ensure proper operation. Please contact our office for more details or to schedule an inspection with one of our Cross-Connection specialists.

### *Business Establishments Serving Food and Drink*

Soda machines or drink dispensing machines should have a dual check valve built in. A dual check valve prevents the reverse flow of contaminated water and carbon-dioxide gas, from entering the potable water supply due to backflow or back pressure.

### *Carwashes*

All carwashes should have a reduced pressure zone backflow device on the water service to prevent water contaminated with detergent from entering the public potable water supply.

## Residential

Outside water taps and garden hoses tend to be the most common sources of cross-connection contamination at home. The garden hose creates a hazard when submerged in a swimming pool or when attached to a chemical sprayer for weed killing. Fertilizers, cesspools, or garden chemicals may contaminate garden hoses that are left lying on the ground.

In-ground sprinkler systems must have backflow devices installed on them. The Massachusetts Department of Environmental Protection (MassDEP) recommends inspecting in-ground sprinkler systems every year. Many are unaware of this recommendation, especially those customers who may have installed a system recently. Please call our office for more details and to schedule a convenient time for our Cross Connection Specialist to complete an inspection.