Additional Backflow Device-Specific Requirements

Lawn Irrigation Atmospheric Vacuum Breaker
Shall not be installed when subjected to continuous pressure. Down stream shut off valves are not permitted.

Lawn irrigation systems with chemicals introduced into the system's drinking water supply via installed product tanks and/or pumping systems shall be protected against backflow by a reduced pressure principle backflow preventer (RPZ) tested pursuant to ASSE 1013 or other approved testing in accordance with the Michigan Residential Code.

The potable supply to a boiler - (with no chemical additives) must be equipped with a backflow preventer with an intermediate atmospheric vent compliant with ASSE 1012 or other approved testing.

The potable water supply to a solar energy system must be protected with a backflow preventer with an intermediate atmospheric vent compliant with ASSE 1012 or other approved testing. Where chemicals are used, the system must be protected with a reduced pressure principle backflow preventer (RPZ) tested pursuant to ASSE 1013 or other approved testing.

Water supplies to pool fills, fire sprinkler systems and water-activated sump pumps must also be protected against backflow and back pressure.

Who may test, repair and install backflow assemblies/devices?

Pursuant to State of Michigan Law – Public Act 407 (State Plumbing Act) of 2017, only Licensed Plumbing Contractors may perform work on a commercial, industrial, or residential plumbing system. Act 407 states that backflow preventers are a part of the plumbing systems, and that only Licensed Plumbers may perform work on them.

You must obtain the services of a certified backflow testing / Licensed Plumbing Contractor to perform backflow assembly testing, installations, relocations and repairs. If a backflow preventer is to be replaced or installed, a Plumbing Permit must be first obtained from the State of Michigan.

Why is testing required?

Backflow assemblies are mechanical devices and are subject to failure from wear and tear, corrosion, freezing, water conditions, and misuse. Testing ensures that the assemblies are operating as required to prevent backflow of contaminated or polluted water into the public drinking water supply.

How much does testing cost?

Residents should contact a licensed plumber to obtain pricing to test their residential backflow assemblies. Cost of testing varies between contractors and by the number of backflow assemblies within the plumbing system.

For more information contact:
Department of Public Services
Water Division

City of St. Louis | 300 N. Mill Street
St. Louis, Michigan 48880 | 989.681.2613

Department of Public Services Water Division

Residential Cross Connection Control Program

A Safe Drinking Water Act EGLE Mandate requires all testable backflow devices for all residential properties to be tested.

The exterior water connections of all residential properties must be inspected and evaluated for potential cross contamination with non-drinking water sources or plumbing systems.

All device testing, repair, relocation and replacement must be completed by a certified backflow testing / licensed plumbing contractor at the resident's expense. All test reports must be submitted to the City of St. Louis

FREQUENTLY ASKED QUESTIONS

CITY OF ST. LOUIS
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for more information

All testing must be performed by a licensed plumbing contractor certified in testing

What is a Cross Connection?

A Cross Connection is any arrangement of piping on a building's plumbing system that could result in backflow of contaminants into the public drinking water supply system. A common example is a garden hose attached to an outdoor hose faucet with the end of the hose lying in a mud puddle or your swimming pool. Other examples are hoses attached to a laundry tub with the end of the hose submerged in a tub full of detergent, supply lines connected to bottom-fed tanks, and supply lines connected to boilers.

What is backflow?

In Cross Connection terms, a backflow refers to a reversal of flow from a building's plumbing system back into the public drinking water supply system. A backflow may occur when there is a pressure drop in the public drinking water supply system from a water main break or other failure. A backflow may also occur when a plumbing fixture such as a boiler or pump generates more pressure than the public supply system and pushes water back into the public drinking water supply system.

What are common causes of backflow contamination?

Irrigation systems may contain pesticides, herbicides, and biological organisms such as bacteria and worms, animal droppings, and other contaminants.

Garden hoses may be submerged in swimming pools, mud puddles, utility sinks, buckets, etc. and can act as a siphon hose.

Boilers create back pressure that pushes contaminated water back into the water supply. Boiler tanks can contain bacteria and mold or chemicals to prevent freezing or corrosion.

Responsibilities

The City of St. Louis Department of Public Works / Water Division is the entity charged with providing safe drinking water to St. Louis residents and businesses. State and Federal Laws (Safe Drinking Water Acts) require that the City of St. Louis protect the public water supply to the customer's tap. The Plumbing Code, Michigan Residential Code, and the City of St. Louis Code of Ordinances also require that the City verify that cross connections on private plumbing systems do not pose a contamination risk to the public water supply through the enforcement of the Michigan Department of Environment, Great Lakes, and Energy (EGLE) Law and Rules for Cross Connection Control.

As part of the cross connection control program, the Water and Sewer Division will be performing inspections of commercial, and industrial plumbing systems to ensure that cross connections are properly protected from backflow with approved backflow prevention assemblies, devices or methods of protection. This may include testable and non-testable devices. Testable devices must be tested.

Consumers also share in the responsibility for protecting the water supply by properly maintaining their plumbing systems in a safe condition.

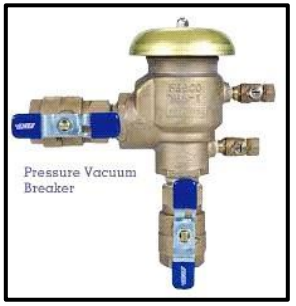
Due to the EGLE requirements for all residential properties to be included in a municipality's Cross Connection Program, the City of St. Louis Water Division shall require that all testable backflow assemblies be tested at least every 3 years except lawn irrigation systems that are permitted to be tested every 5 years.

This shall require a licensed plumber ASSE 5110 certified in backflow testing to access the property to perform testing on, and repair or replace, if necessary, all testable backflow assemblies.

Typical Testable Backflow Device

Pressure Vacuum Breaker (PVB) installed in Lawn Irrigation System under continuous pressure

This backflow prevention assembly is common to most irrigation systems and is typically installed on the outside of the building or residence. The device is designed to prevent any irrigation system contaminants such as pesticides or herbicides from back flowing into the public water supply system. An approved PVB is required on **all** irrigation systems.



except under circumstances when specific exceptions are met.

Typical Non-Testable Backflow Device

Hose Bib Vacuum Breaker

This backflow prevention device is common to most hose bib (spigot) systems and is an effective way of preventing contaminants from back flowing through a garden hose and into the public water supply system. An approved Hose Bib Vacuum Breaker is required on **all** hose bibs. Various types of devices are commercially available such as frost free and anti-siphon.