

Testing

Some backflow preventers need to be tested on a regular basis. A testable device must be tested at least every three years or more frequently if determined by the water supplier. These devices are typically found at the point of entry into the facility, usually near the water meter, or where a specific system starts, such as an irrigation or fire suppression system. A copy of the test results must be sent to the City of Bad Axe – Department of Public Works.



Cross Connection Control Program



City of Bad Axe

City Hall: (989)269-7681
Department of Public Works:
(989)269-9132

Fax (989)269-2273

www.cityofbadaxe.com

Cross Connections

A cross connection is an arrangement of piping which could allow undesirable water, sewage, or chemical solutions to enter your drinking (potable) water system as a result of backflow. Cross connections with potable piping systems have resulted in numerous cases of illness and even death.

Historically, cross connections have been one of the most serious public health threats to a drinking water supply system, and many times are present in a residential water system.



QUESTIONS CONCERNING
CROSS CONNECTION CONTROL
AND BACKFLOW PREVENTION
MAY BE DIRECTED TO THE
FOLLOWING:

City of Bad Axe

Public Works Department
989-269-9132
publicworks@cityofbadaxe.com

City Hall 989-269-7681



WHAT IS BACKFLOW AND HOW CAN IT OCCUR?

Backflow is the reversal of normal flow in a system due to a siphon or backpressure.

A siphon backflow occurs when a vacuum is created on a piping system, just like drinking from a glass with a drinking straw. A garden hose connected to a laundry tub can act as a “drinking straw” allowing undesirable liquids to be drawn through it and into the water system. Some typical siphon backflow situations include:

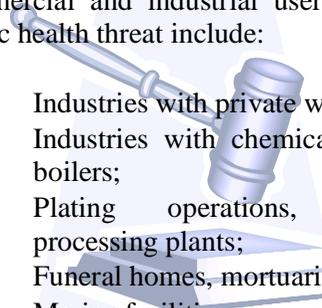
- Water main breaks or repairs occurring in the system at a point of lower elevation than your service point;
- High water flow rates exerted on a water main due to firefighting, hydrant flushing, large system demands or major piping breaks;
- Booster pumps taking direct suction from potable water supply piping; or
- Undesirable piping.

Backpressure backflow occurs whenever the drinking water supply system is directly connected to another piping system or process, which operates at a higher system pressure. Some typical backpressure situations include:

- Non-potable piping systems equipped with pumping equipment (irrigation well interconnected with a potable system, for example);
- Steam or hot water boilers; or
- Heat exchangers

WHAT IS THE LAW?

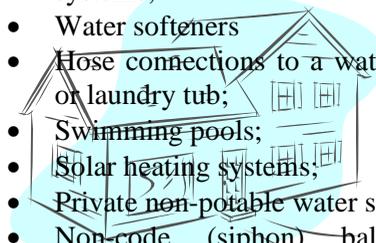
Cross connections with potable piping systems are prohibited by state plumbing codes. Additionally, Michigan water utilities are required to have a cross connection control inspection program of their water customers to eliminate and prevent cross connections. Common commercial and industrial users posing a public health threat include:

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- Industries with private wells;
 - Industries with chemically treated boilers;
 - Plating operations, chemical processing plants;
 - Funeral homes, mortuaries;
 - Marina facilities;
 - Hospitals, nursing homes;
 - Car washes, Laundromats; and
 - School facilities.

Most utilities have inspected these facilities and have had corrective action taken where necessary. However, due to the lack of staff resources, many utilities cannot effectively carry out a residential cross connection inspection program. Consequently, residential water users could remain a potential health threat to the public water supply system and to other system customers.

WHAT HAZARDS THREATEN THE HOMEOWNER?

Many common household uses for water pose a public health threat to the potable water supply system whether the home is supplied by municipal water or by a private well. Principal areas of water use in the home that pose a threat due to cross connections are:

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- A hose connected to a chemical solution aspirator to feed lawn/shrub herbicides, pesticides, and fertilizers;
 - Lawn irrigation systems;
 - Chemically treated heating systems;
 - Water softeners
 - Hose connections to a water outlet of laundry tub;
 - Swimming pools;
 - Solar heating systems;
 - Private non-potable water systems
 - Non-code (siphon) ball cock assemblies in toilets; and
 - Water driven sump drain devices.

The list of potential cross connection hazards is by no means complete. A private residence that has one or two of these situations is seriously jeopardizing its own potable water system and that of the community when it is served by a public water supply system.

WHAT CAN BE DONE?

Homeowners as well as plant managers, business owners, administrators, and school officials all must share the responsibility to protect potable water piping systems from contamination through cross connections. Each should contact either the local water utility or the local health department for assistance in locating and correcting cross connection hazards. Residents supplied by private well sources must assume total control of their water system and safeguard it from contamination. In many instances, involving residential cross connections, the installation of a hose bib (faucet) vacuum breaker can prevent a siphon of contaminates and provides adequate protection of the homeowner’s water system and consequently, the utility’s water system.

This means equipping each outside hose connection and hose connections in the basement and laundry room with a simple and inexpensive vacuum breaker. These devices can be obtained from a hardware store or plumbing supply for under \$10 each. In other instances, more elaborate protective devices may be necessary. For those situations, assistance in determining what device is appropriate may be needed.



HOSE BIBB VACUUM BREAKER
No. 8