Backflow Prevention
Frequently Asked Questions

What is backflow?

The City of Ephrata water system is designed to keep water flowing from our distribution system to you, the customer. Backflow can occur due to high pressure on the customer side, or low pressure in the Cities water system. Backflow is the undesirable reversal of water flow in a potable water system through a cross-connection. This situation may allow liquids, gases, non-potable water, and other substances from any source to enter a public water system.

What is a cross-connection?

A cross-connection is an actual or potential connection between a public water system line and another line which contains water or fluids of a questionable or unknown source or quality. When this occurs, the drinking water supply can become contaminated. An example would be a garden hose attached to a service sink with the opposite end of the hose submerged in a tub full of detergent. Another example would be a garden hose attached to a faucet and the other end lying in a swimming pool.

What is the most common form of cross connection?

A garden hose is the most common form of cross-connection. A hose can easily be connected to the drinking water supply and then used for a variety of potentially dangerous applications.

Is Ephrata the only city in Washington enforcing backflow regulations?

No, all public water systems in the State of Washington are required to implement cross-connection control programs.

What is a backflow preventer and why are they needed?

A backflow prevention assembly is an approved, testable assembly, which uses valves to prevent potential contaminants from flowing into the drinking water system. The most common required device is the Double Check Valve Assembly (DCVA), the Reduced Pressure Zone Assembly (RPZA), and the Pressure Vacuum Breaker Assembly (PVBA).

Who needs a backflow preventer?

Backflow preventers are required if an actual or potential hazard for a cross connection exists. A few examples of hazards include:

- Residential Irrigation System
- Fire Sprinkler System
- Medical Facility
- Processing Plant
- Post carbonated beverage dispenser
- Car Wash
- Veterinary Clinic

The City of Ephrata Water Department will determine which type of protection is required based on the degree of hazard that the property represents to the drinking water supply.

Must my home or business have backflow prevention?

Many businesses must install and maintain backflow prevention devices. Common examples are manufacturing facilities, process plants, medical facilities, restaurants, laboratories (including school chemistry and biology labs), and buildings with boilers, fire sprinkler systems and irrigation systems.

For example, single-family residences with a lawn irrigation system require backflow prevention. Multi-family residences with a boiler or fire sprinkler system require backflow prevention.

How would a backflow issue occur with a lawn irrigation system?

A backflow issue could occur if the City's water main were to break and water pressure drop. This would create a "back siphonage" to the irrigation system, which may be contaminated and pulled into the city's water supply.

How would a backflow issue occur in a commercial building?

Examples of this would be yellow water flowing from a drinking fountain or green ice from an ice machine.

In this situation, the contaminants were traced to an error by maintenance. An air conditioner pump burned out, and unaware of the danger, maintenance connected the system to another pump used for potable water. The result caused large doses of dichromate of soda forced into the drinking water supply. This then caused the dramatic appearance of yellow water and colored ice cubes.

Why does a soft drink dispensing machine require backflow protection?

Soft drink dispensers (post-mix carbonators) use pressured carbonated water mixed with syrup. Many, if not most, internal water pipes are made of copper. When carbonated water comes in contact with copper, it chemically dissolves the copper from the pipe. This copper-carbonate solution has been proven to be a risk to the digestive system.

Who is responsible for the testing and maintenance of the backflow prevention assembly?

It is the responsibility of the customer to ensure that the backflow prevention assembly is in proper operating condition at all times. All devices are required to be tested upon installation or repair.

When are backflow devices required to be tested?

High health hazard devices and Low hazard irrigation systems (those with double check devices) must be tested every year.

Why do backflow devices have to be retested?

Backflow devices are mechanical devices with working internal pieces. A piece of debris or the calcification of water can cause the device to stop working.

Who do I call to have a test completed?

Any certified backflow prevention assembly tester (BAT) may test the device. A list of local certified Backflow Assembly Testers is available on the City of Ephrata website (Ephrata.org) or by contacting the Ephrata Water Department. All Tests are required to be submitted to the City of Ephrata Water Department.

Who can I contact for more information on backflow prevention?

The City of Ephrata Water Department may be reached at: (509) 754-4601 ext. 306