



Backflow Prevention Frequently Asked Questions

Q: What is backflow?

A: The City of Lubbock's 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 City's 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.

Q: What is a cross-connection?

A: A cross-connection is an actual or potential connection between a public water system line and any other line, which contains water or fluids of a questionable or unknown source or quality. When this situation occurs, the drinking water supply can become contaminated during a backflow condition. An example would be a garden hose attached to a service sink with the 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.

Q: What is the most common form of cross-connection?

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

Q: Is Lubbock the only city in Texas enforcing backflow regulations?

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

Q: What is a cross-connection control program or a backflow prevention program?

A: This program is required by the State of Texas to detect and prevent possible sources of non-drinking water from entering a public drinking water system. The program is a combined cooperative effort between plumbers, health officials, water system operators, property owners and certified testers to follow guidelines for controlling cross-connections and implementing means to ensure their enforcement so that the public drinking water supply will be protected both in the city main and within private facilities. The elements of a program define the type of protection required and responsibility for the administration and enforcement. Other elements ensure continuing education programs.

Q: What is a backflow preventer and why are they needed?

A: A backflow prevention assembly is an approved, testable assembly, which uses valves to prevent potential contaminants from flowing into the drinking water system. Two commonly required devices are the Double Check Valve Assembly (DC) and the Reduced Pressure Zone Assembly (RP). Both of these devices protect drinking water systems from backflow.

Q: What is a Customer Service Inspection (CSI)?

A: A customer service inspection is an inspection of a facility to determine if cross-connections exist or if there is the potential for a backflow situation to occur. A CSI must be performed in order for the Backflow Prevention Department to determine which type of protection is needed to prevent backflow or to eliminate cross-connections. A report is filled out for the facility and must be kept on file for ten years with the City of Lubbock.

Q: Who needs a backflow preventer?

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

- Commercial and Residential Irrigation Systems
- Fire Sprinkler Systems
- Medical Facilities
- Processing Plants

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

Q: Must my home or business have backflow prevention?

A: 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.

Usually residential facilities are exempt from the rule unless a specific cross-connection is identified. 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.

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

A: A backflow issue exists if a lawn irrigation sprinkler malfunctions and a city water main breaks at the same time. When the water pressure drops, it creates a vacuum that sucks some water, which may be contaminated, into the city water supply. An example of this situation would be if a homeowner found worms, along with rust, and other debris in his bathtub when he filled the tub. These contaminants came into the water system after a contractor installed a sprinkler system and used an unapproved atmospheric vacuum breaker. When the sprinkler system malfunctioned and the city water main broke, it created the suction that pushed the contaminated water into the bathtub.

Q: How would a backflow issue occur in a commercial building?

A: An example of this situation includes customers in a bank observing yellow water flowing from a drinking fountain and green ice rolling out of an ice machine. The contaminants were traced to an error by a maintenance person. A pump for the air conditioning system burned out and the maintenance person, unaware of the danger, connected the system to another pump used for potable water. The result caused large doses of bichromate of soda to be forced into the drinking water supply, causing the dramatic appearance of yellow water and colored ice cubes.

Q: Why does a softdrink dispensing machine require backflow protection?

A: Soft drink dispensers (post-mix carbonators) use carbonated water mixed under pressure with syrup and water to provide soft drink beverages. Many, if not most internal water pipes, are made of copper.

When carbonated water comes into 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.

Q: Is my home or my business “grandfathered” in?

A: There is no “grandfathering” of backflow devices which are out of compliance with current regulations. The State considers backflow regulations to be a health and safety issue. These issues must be addressed in a timely matter for the safety of the public water supply and the health of our customers.

Q: Why is the City responsible for enforcing the rules, since they are State of Texas (TCEQ) rules?

A: The EPA enforces the backflow regulations by delegating the responsibility to the State or the Texas Commission on Environmental Quality (TCEQ). The TCEQ then enforces the backflow regulations by requiring the City to administer the backflow program locally. The City is inspected annually by the TCEQ to determine if the City is administering the program according to regulations.

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

A: It is the responsibility of the customer to ensure that the backflow prevention assembly is in proper operating condition at all times. The City of Lubbock Water Utility Backflow Department sends notices to customers reminding them when a test is due.

Q: When are backflow devices required to be tested?

A: All devices are required to be tested upon installation of the device. Health hazards devices must be tested annually. Low hazard irrigation systems (those with double check devices) must be tested every three years. Any time a device is worked on or repaired it must also be retested.

Q: Why do backflow devices have to be retested?

A: 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.

Q: Who do I call to have a test completed?

A: Any certified backflow prevention assembly tester who is registered with the city of Lubbock, may be called on to test the device. If the device is located on a fire system, the tester must be employed by and Approved Fireline Contractor. The Backflow Department maintains a list of both registered testers and approved fire line testers. Please call 775-3596 to request a list. The tester will return the original report of the test to the Backflow Department and will give the customer a copy of the test report.

Q: What will a test cost?

A: The cost of having a device tested varies among testers. The cost is also dependant on several factors, including the size of the device, where the device is located, the type of device, etc. You may want to call several Certified Testers to obtain quotes for your test.

Q: Who can I contact for more information on backflow prevention?

A: The City of Lubbock Backflow Prevention Department may be reached at 775-3596 or you may visit our website at <http://water.ci.lubbock.tx.us> for more information.