



Backflow Prevention Frequently Asked Questions

Water suppliers, such as the City of Harker Heights, are required by the Federal and State law to implement a cross connection control program to protect the water supply from materials backing up into our drinking water. Our Codes require that potential backflow connections be fitted with backflow preventers. Cross connection control ensures safe water for all consumers of water in our system.

Please contact Mr. Todd Maxon, at (254) 953-5649 or by email tmaxon@harkerheights.gov , if you have questions about cross connections or backflow prevention issues in our water system.

1. What is backflow?

The City of Harker Heights' 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.

2. How often are backflow prevention assemblies tested?

Texas State law requires residential irrigation backflow prevention assemblies to be tested when they are installed. Backflow prevention assemblies in commercial areas will be retested every year. Residential home with septic systems requires backflow prevention assemblies to be tested every year. Residential backflow prevention assemblies in non-health hazard applications will be tested every three years. All annual or every 3-year certification certificates must be provided to the City of Harker Heights. Certifications must be state certified testers.

3. What is a cross-connection?

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 or a garden hose attached to a faucet and the other end lying in a swimming pool.

4. What is the most common form of cross-connection?

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.

5. Is Harker Heights the only city in Texas enforcing backflow regulations?

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

6. What is a cross-connection control program or a backflow prevention program?

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.

7. What is a backflow prevention assembly 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.

8. Who needs a backflow prevention assembly?

A backflow prevention assembly 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 Harker Heights will determine which type of protection is required based on the degree of hazard that the property represents to the drinking water supply.

9. Why are residential locations with an on-site sewage facility (septic system) or an irrigation system required to have a backflow prevention assembly and be tested?

Having an on-site sewage facility automatically classifies the backflow prevention assembly as a health hazard per the hazard definitions in Section 54.02 of the City of Harker heights code of ordinances. The existence of a health hazard, such as an On Site Sewage Facilities (OSSF), requires the use of a Reduced Pressure Principle Backflow Prevention Assembly (RP) on the irrigation system. Per 30 TAC 344.51(d), if an irrigation system is designed or installed on a property that is served by an on-site sewage facility, as defined in 30 TAC 285 (relating to On-Site Sewage Facilities), then:

- (1)** all irrigation piping and valves must meet the separation distances from the On-Site Sewage Facilities system as required for a private water line in 30 TAC 285.91 (10) (relating to Minimum Required Separation Distances for On-Site Sewage Facilities);
- (2)** any connections using a private or public potable water source must be connected to the water source through a reduced pressure principle backflow prevention assembly as defined in 30 TAC 344.50 (relating to Backflow Prevention Methods); and
- (3)** any water from the irrigation system that is applied to the surface of the area utilized by the On-Site Sewage Facility system must be controlled on a separate irrigation zone or zones so as to allow complete control of any irrigation to that area so that there will not be excess water that would prevent the On-Site Sewage Facilities system from operating effectively.

Per Section 54.22 of the City of Harker Heights' Code of Ordinances, all backflow prevention assemblies are required to be inspected and tested at least annually by a licensed backflow prevention assembly tester. The only exception is for residential irrigation connections without chemical additives, which are required to be inspected and tested every three years.

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

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.

11. Is my home or my business “grandfathered” in?

There is no “grandfathering” of backflow prevention assemblies 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.

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

The Environmental Protection Agency (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.

13. 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. The City of Harker Heights sends notices to customers reminding them when a test is due.

14. Who do I call to have a test completed?

Any certified backflow prevention assembly tester who is registered with the City of Harker Heights, may be called on to test the device. A current list of registered certified testers can be picked up at the City’s Public Works Department or by contacting Todd Maxon as indicated in FAQ#15. The tester will return the original report of the test to the City of Harker Heights and will give the customer a copy of the test report.

15. What will a test cost?

The cost of having a device tested varies among testers. The cost is also dependent 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.

16. Who can I contact for more information on backflow prevention?

Todd Maxon 254-953-5649 tmaxon@harkerheights.gov
Additional information can be found on the Texas Commission on Environmental Quality
<https://www.tceq.texas.gov/drinkingwater/cross-connection>