

FAQ about Backflow and Cross-Connections

Q: What is backflow and why is it a problem?

A: Our water system is designed to provide constant water pressure to all residential customers in the system. Backflow is the undesirable reversal of water flow in that system through a cross-connection. This only occurs in rare instances, such as a major break in an underground main or other damage to the system. In those cases a complete loss of pressure in the system may occur with the possibility that water from a source other than our storage tank is introduced into the mains. Even more rare is a case where pressure within a residence builds up and forces water from the home into the public water supply. Either of these situations may allow liquids, gases, non-potable water, and other objectionable substances, from any source, to enter the 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 event.

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. For example, 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 hot tub or swimming pool. Another common form of cross-connection exists if a lawn irrigation sprinkler malfunctions and a water main breaks at the same time. When the water pressure drops, it creates a vacuum that sucks some water, which may be contaminated by fertilizer or weed-killer, into the water supply.

Q: What is a backflow preventer and why is it 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. A backflow prevention device called a Double Check Valve Assembly (DCVA) protects each HHWC connection. It is the chief deterrent to a backflow event for our system. In some special instances, such as when a resident operates a photo lab, even as a hobby, an additional, more restrictive backflow prevention device is required inside the residence that is a Reduced Pressure principle Backflow Assembly (RPBA).

Q: Is HHWC the only water system enforcing backflow prevention and

cross-connection control (CCC) regulations?

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

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

A: This program is required by the State of Washington Department of Health (DOH) 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 system mains and at each service connection. 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 Cross Connection Survey?

A: It is a survey of each customer's connection to determine if cross-connections exist within any given connection that could contaminate the community water supply if a backflow situation were to occur. HHWC has conducted two cross-connection surveys of the entire community: in 2007 and in 2014. Cross-Connection surveys are also conducted when new construction is involved. Surveys, conducted by mail, require each homeowner to self-report the presence, or absence, of specific items in the home that could be particularly susceptible to contamination of the community water source in a backflow event. The results of the survey are then interpreted by the on-site system manager and King Water, the system operator, to determine if additional protection of the system in the form of an RPBA needs to be installed at any point on the customer’s side of a given connection.

Q: Who has to complete a Cross-Connection Survey Form?

A: All customers with a water connection are legally required to complete the survey. The completed surveys are on file with HHWC. Both new and existing customers are obligated to report changes in their home that may warrant notification to HHWC that they have installed a device/item in their residence or other connection that is of significant risk of contaminating the water supply in a backflow event.

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: Whom should I contact for more information on backflow prevention and cross-connections?

A: King Water Company or the Department of Drinking Water, WA DOH. Or search WAC, Chapter 246-290, Drinking Water Regulations.