# CROSS CONNECTION AND BACKFLOW PREVENTION

KENTUCKY AMERICAN WATER

## Backflow Prevention and How to Comply

All non-residential customers are required to take steps to prevent cross connections and backflow to the water system. This includes the installation of an approved backflow prevention device and having it tested annually. In some cases, residential customers are also required to install backflow prevention devices (new service connections, as well as permanently installed fire sprinklers and lawn sprinklers). Failure to comply can result in water service disconnection. Kentucky American Water can help to determine if you are in compliance, and we are available to answer any questions that you may have related to backflow prevention.

## Why backflow prevention is important

Drinking water that meets regulations leaving the water treatment facility can become contaminated in the distribution (pipeline) system by backflow when:

- A drinking water distribution main is unprotected because of the lack of a properly installed and functioning backflow prevention device on the service connection at the customer's supply.
- A physical cross connection is made between the drinking water distribution main and a contaminant source.
- Backflow conditions occur.

## How to prevent backflow contamination

Backflow contamination can be prevented. All non-residential water utility customers are required to have an approved and functioning backflow-prevention device installed and have it tested on an annual basis.

Kentucky American Water requires customers to have someone who is qualified install and test backflow devices. The cost of the device, maintenance and installation is the responsibility of the customer. We recommend that customers obtain a cost estimate before installation. For a link to resources that provide listings of qualified testers, visit www.kentuckyamwater.com. Under the "Ensuring Water Quality" menu, select "Cross Connection."

### We're here to help

We will work with customers to answer any questions that they may have regarding backflow prevention and the corrective actions necessary to ensure compliance. If you have any questions, please contact Kenny Roney, Senior Cross Connection Specialist at 859-268-6310.

## What is a cross connection and backflow?

**Cross Connection** is any actual or physical connection between a potable (drinkable) water supply and any source of non-potable liquid, solid or gas that could contaminate drinking water under certain circumstances.

**Backflow** is the reverse flow of water or other substances through a cross connection into the treated drinking water distribution system. There are two types of backflow: backpressure and backsiphonage.

**Backpressure** happens when the pressure of the contaminant source exceeds the positive pressure in the water distribution main. An example would be when a drinking water supply main has a connection to a hot water boiler system that is not protected by an approved and functioning backflow preventer. If pressure in the boiler system increases to where it exceeds the pressure in the water distribution system, backflow from the boiler to the drinking water supply system may occur.

**Backsiphonage** is caused by a negative pressure (vacuum or partial vacuum) in the water distribution system. This situation is similar in effect to the sipping of water through a straw. Negative pressure in the drinking water distribution system can happen because of a water main break or when a hydrant is used for fire fighting.