Although the water that reaches your home or business is pure and tasty, contamination can occur within your own piping system. This brochure describes potential water contamination hazards, called cross connections, and tells you how you can help keep your water safe and drinkable.

Cross Connections Are the Culprits

A cross connection is an accident waiting to happen. Any time the potable (drinking) water supply comes in contact with an objectionable or harmful substance, a cross connection is created. For example, placing a hose in a bucket of detergent, or attaching a hose to a sprayer of fertilizer creates a cross connection and a possible health hazard.

Cross connections can lead to contamination when a change in pressure within the water supply piping allows the water to flow backwards. This reversal of flow, called backflow, can allow contaminated water to flow back into the supply piping, threatening health and safety. Although under normal circumstances the city water supply is pressurized to keep water flowing to your tap, unforeseen circumstances (such as the need to fight a fire) can suddenly change the pressure in the supply piping, allowing contaminated water to seep back from your tap to the city supply.

Keeping Your Water Drinkable

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Guarding Against Contamination

Most modern water-using fixtures and appliances are made to guard against backflow. Many sinks, toilets, clothes washers and other water-using appliances have built-in backflow prevention features. However, some water-using fixtures and equipment have no built-in backflow prevention features and require added protection. In these cases backflow preventers should be installed to guard against the possibility that contaminated water could flow back into the supply piping. Following are a few common water uses that can create cross connections, and tips for preventing accidental water contamination.
The simplest solution to this hazard is to regularly disconnect the well system piping from the well supply or install an approved backflow preventer on the well connection. Hose-type backflow preventers are available at many local plumbing supply stores.

Because there are two ways to guard against backflow, it’s important to understand the differences between them:

1. **Double Check Valve Assembly (DCVA)**: This system consists of two check valves and a pressure vacuum breaker (PVB). The PVB is used to maintain a low-level vacuum in the system, preventing water from entering the well. However, it does not prevent water from entering the well when the pressure is high. The DCVA is commonly used in irrigation systems and can cause potable supply pressures to be less than well output pressures. Untreated well water can contain harmful bacteria and other contaminants that can backflow into the drinking water supply.

2. **Pressure Vacuum Breaker (PVB)**: This device is designed to prevent backflow by allowing air to enter the system when the pressure is reduced. However, it does not provide protection when the pressure is high. PVBs are commonly used in irrigation systems and well supplies that are not equipped with a DCVA system.

For more information about backflow prevention measures, contact your local water supplier (listed on the back of this brochure).