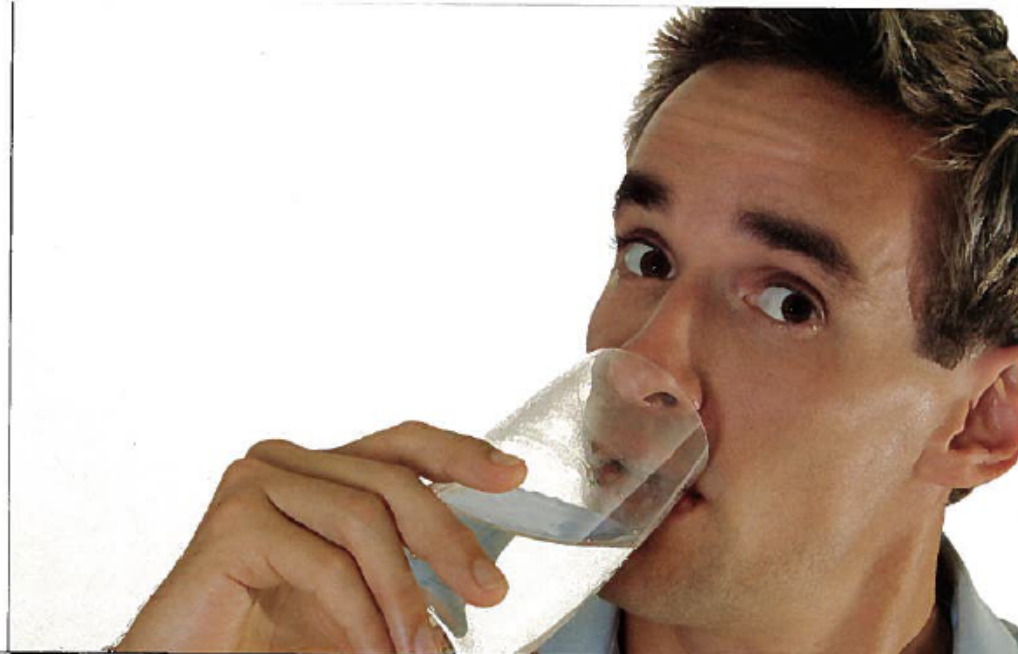


Backflow Prevention is a two-way proposition

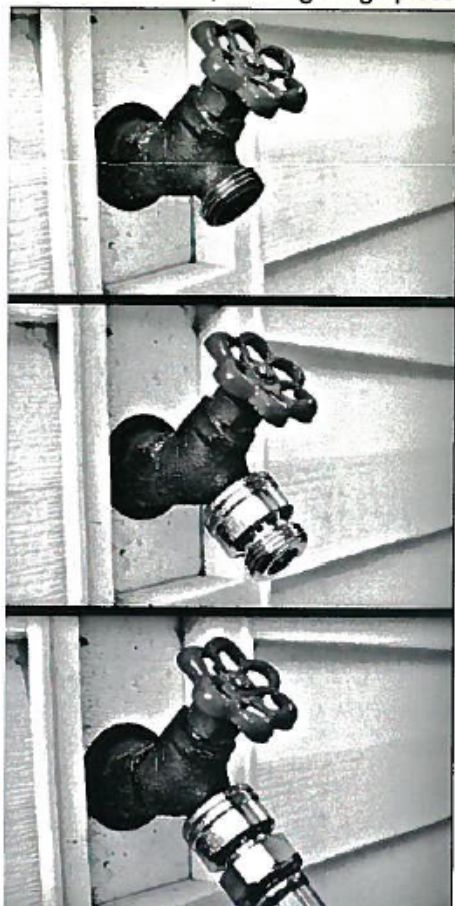
Your water department is responsible for ensuring the water delivered to your home is safe for everyone to drink, but it cannot control what happens at your residence. Your water utility needs your help in protecting your home and the public water system from backflow. *Backflow* is the reverse flow of foreign material into water mains. *Cross connections* allow backflow. These are connections between the potable water system and anything that could allow dangerous and objectionable material to enter the water supply lines.



Backflow events occur because of *backsiphonage* or *backpressure*. Backsiphonage happens when there is negative pressure in a pipe, creating a vacuum, and something foreign is sucked into the water supply. The vacuum may be caused by high demand from firefighting or a water main break, customer demand during a heat wave or a power outage to a pump. Household hoses connected to an outside faucet with the open end in another container are a common cause of backsiphonage. Backpressure occurs when the pressure in your home plumbing is greater than the pressure coming in from the utility water main. This can happen when your hot water heater overheats, creating a high-pressure situation.

Consider these real situations:

- While a resident was filling a pesticide sprayer with a garden hose, the water pressure dropped. Because the hose end was immersed in the pesticide, the pesticide was sucked back into the hose and into the water supply. A short time later, the resident, as well as several neighbors, became ill after drinking water from the faucets in their homes.
- Parasitic worms were discovered in the domestic water of two homeowners. Water backsiphoned through a residential irrigation system into the public water system because of a faulty backflow preventer on the residential irrigation system. When a nearby water main break caused a vacuum in the public water system, dirty, wormy water was sucked from the irrigation system into the public water system.



A hose bibb is an easy way to protect home plumbing from backsiphonage.

Chemicals such as those used to fertilize your lawn and those used for cleaning around your house can cause a variety of serious health problems if ingested. Irrigation water is often untreated and unsafe to drink. Even chlorinated pool water can contain bacteria that may be hazardous if consumed.

Fortunately, keeping your water safe from these contaminants, and others like them, is easy. Take the following precautions to protect your drinking water:

NEVER: Submerge hoses in buckets, pools, tubs, sinks or other containers.

ALWAYS: Keep hose ends clear of possible contaminants. An *air gap* of two inches (25 mm) or more between the hose end and the receptacle is the safest and simplest way of preventing backflow and back-siphonage. Think of how a sink faucet is designed to be above the overflow rim.

DON'T: Use spray attachments containing chemicals on hoses without a backflow prevention device. The chemicals used on your lawn or for cleaning are toxic and can be fatal if ingested.

DO: Buy and install inexpensive backflow-prevention devices, called *hose bibbs*, for all threaded faucets around your home (see photo left). They are available at hardware stores and home improvement centers. Installation only takes a couple of minutes. If your drinking water is in any way connected to another source, like the irrigation water in the real life example above, you will need to install a backflow preventer, such as a reduced-pressure principle device.