

## What you can do

*Check your faucets* to be sure that all faucet endpoints are above the flood level of the sink, tub, basin or other apparatus they supply.

*Protect faucet extensions* by installing proper backflow prevention devices (hose bibb vacuum breakers) on all faucets capable of having a hose or other extension attached.

*Check drain lines* (refrigerator drink dispensers, water softeners, heat exchangers) to be sure there is an adequate air gap between the drain line and floor drain or sewer line into which they discharge.

*Never use unprotected faucets* to fill non-drinking water containers (water beds, wading pools, stock tanks, hot tubs.)



From the "Manual of Cross-Connection Control," University of Southern California, comes a few documented cases of backflow incidents:

- ⇒ 1979. North Dakota. The municipal water system was contaminated with DDT from a hose-type aspirator sprayer.
- ⇒ 1986. Washington. Herbicide 2,4-D was back siphoned into the community's water system causing residents to go without water for four (4) days.
- ⇒ 1990. Colorado. During a routine check of the heating boiler in a middle school, a valve was left open allowing the boiler water containing the antifreeze ethylene glycol to backflow into the potable water system.
- ⇒ 1990. Kansas. A malfunctioning solenoid valve on an air compressor in a dental office resulted in the backflow of air into the public water system.
- ⇒ 1991. Utah. About 100 homes were contaminated after a weed killer was back-siphoned into the public water system.
- ⇒ 1991. Indiana. Water main break cause a drop in water pressure allowing antifreeze from an air conditioning unit to back-siphon into the potable water supply.
- ⇒ 1991. Louisiana. The herbicide Paraquat and Atrazine was back-siphoned into the city water system after a water line was cut.
- ⇒ 1994. Nebraska. While working on a chiller unit at a nursing home, a hole in the coil allowed Freon to enter the circulating water and from there into the city water system.

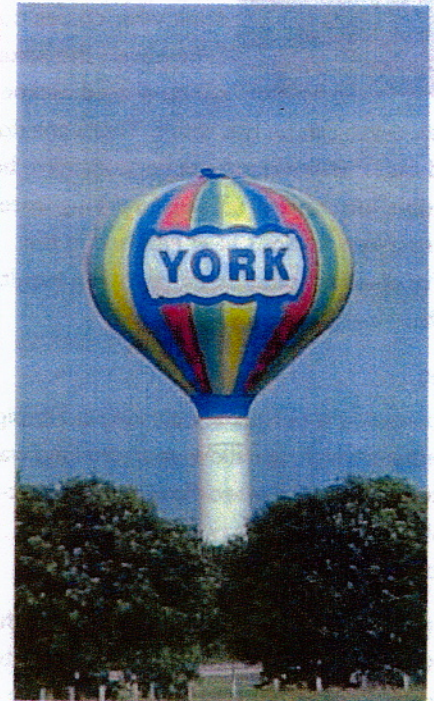
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Cross Connection and Backflow Protection.

# Let's Work Together For Safe Water



City of York Water Department

Backflow Prevention Division: 402-363-2605

**“If you don’t want to drink it, don’t connect it to your water system.”**

Public health officials have always been concerned about cross connection and backflow in plumbing systems and in public drinking water supply distribution systems. We need to have the utmost confidence in the water we drink: open the faucet and we drink what comes out. If, however, the water is contaminated, sickness and even death can be the result. There are documented cases where cross-connections have been responsible for contamination of drinking water. Many cross-connections have resulted in the spread of disease; some cases have even resulted in death.

## Terms

**Cross-connection:** a permanent or temporary piping arrangement which can allow your drinking water to be contaminated if a backflow condition occurs. All water services have potential cross-connections

**Backflow/back-siphonage:** the water flowing in the opposite direction from its normal flow possibly causing a sucking of contaminate into drinking water. This condition can be caused by any sudden drop in water pressure: water main break, an automobile breaks a nearby fire hydrant.



## Backflow at home

If the direction of water flow is reversed, due to change in pressures, backflow can allow contaminants to enter our drinking water systems through cross-connections.

A potentially hazardous cross-connection occurs every time someone uses a garden hose sprayer to apply insecticides or herbicides to their lawn. Another cross-connection occurs when someone uses their garden hose to clear a stoppage in their sewer line.

Without a backflow prevention device between your hose and hose bibb (spigot or outside faucet), the contents of the hose and anything it is connected to can backflow into the piping system and contaminate your drinking water.

Similarly, contamination can occur with unprotected lawn sprinkler systems, boilers, and incorrectly installed water softeners.

## Backflow at work

Industrial, commercial and health facilities are subject to many types of cross-connections: fire systems, heating and cooling systems, mixing tanks, mortuaries, printing plants, vet clinics, meat processing plants. Such situations are considered “high hazard”.

## Backflow at leisure

Recreational facilities are not immune to danger: campgrounds, golf courses, swimming pools, park fountains. A child’s wading pool can be a source of contamination with an unprotected hose draped over the side.

## Health affects for your family

Contaminated drinking water can cause “stomach flu”. The Centers for Disease Control in Atlanta and the U.S. Environmental Protection Agency have documented many cases directly attributing the follow illnesses to contaminated drinking water: Brucellosis, Campylobacter, Chemical Poisoning, Cholera, Diarrhea Enteritis, Dysentery, Giardiasis, Hepatitis, Hookworm Paratyphoid Fever, Typhoid, Polio.

## Protect yourself and your neighbors

The City of York is making every effort to protect our public water supply by complying with the U.S. Department of Environmental Control and Nebraska Health and Human Services regulations by implementing a comprehensive cross-connection control ordinance in 1993. The program consists of the following components:

- public education
- survey of each water customer’s facilities
- installation of protective devices where needed
- annual testing of high hazard backflow prevention devices.

By working together we can have a high level of confidence that the public water supply is protected from possible contamination due to cross-connection.

Ongoing vigilance by all consumers for possible cross-connections can keep our drinking water clean.

*If you don’t want to drink it, don’t connect it to your water system.*