Need More Information?

These regulations have been developed in n effort to prevent the contamination of drinking water and to protect public health.

For more information on cross connection control, fire sprinkler systems, backflow prevention, approved devices or regulations please contact the Drinking Water Section at 860.509.7333; or if you need to reach us after normal business hours (from 4:30 p.m. to 8:30 a.m.), please contact the CTDPH at 860.509.8000. Information can also be accessed online at www.ct.gov/dph

For information on standards and listings of approved devices, contact the American Water Works Association's Standards Program at 1.800.926.7337 or log on at www.awwa.org. Also, the American Society of Sanitary Engineering can be contacted at 1.440.835.3040 or at www.asse-plumbing.org.

The CT Department of Public Safety requires that certain regulations are met when a fire sprinkler system is connected to a drinking water supply. For more information please contact them at 860.685.8310 or www.ct.gov/dps/site/default.asp

Keeping Connecticut Healthy

DPH

Connecticut Department of Public Health

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Connecticut Department of Public Health

Drinking Water Section

Introduction to

CROSS CONNECTION CONTROL

What is a Cross Connection?

A cross-connection is any connection between a public water system, and any source of "non-potable" or "non-drinkable" liquid, solid or gas. Under certain conditions, a "non-drinkable" substance could either be pulled or pushed into a drinking water supply. This is called backflow.

Backflow can reverse the flow of water or other substances into the public water system, resulting in chemicals or contaminants getting into the drinking water. In other words, the water is flowing in the opposite direction from what was intended.

How Could That Happen?

A potential cross connection happens every time someone uses their garden hose to fill their swimming pool or apply insecticides to their lawn and there is an increase or decrease in pressure. Backpressure is what happens when the pressure in the system is greater than the pressure in the drinking water line. This increase in pressure may allow a system to push a harmful substance back into the water main. Backsiphonage means a decrease in pressure that could allow substances to be sucked or pulled back into the water main – similar to what happens when you drink through a straw.

What's wrong with this Picture?

If pressure were lost in the system while the bucket was being filled, the soapy water could be siphoned into the drinking water supply! Increases or decreases in pressure can happen when there is a lot of water leaving the drinking water system, such as during a water main break. Even when there is an unusually heavy water demand during something as routine as fire fighting, water pressure drops, allowing for backsiphonage.

Think about what could happen if the bucket were filled with insecticide, or some other toxic chemical! Keep in mind that this can happen at a home, business, restaurant; anywhere an unprotected drinking water line is connected to a contaminant. Various outbreaks of gastrointestinal distress, hepatitis A, and Legionnaires disease have been reported due to instances of unprotected cross connections.

Typical cross connections are:

- Irrigation sprinkler systems
- Air conditioning systems
- Laboratory equipment
- Photo developing equipment
- Boilers
- Dishwashers
- Swimming pools
- Solar heat systems
- Fire sprinkler systems
- Coffee vending machines
- Soda machines

Can This Be Prevented?

The best way is to eliminate all cross connections. This is not always possible, so to take precautions, certain devices to prevent backflow can be purchased. Devices can be installed that stop the flow of water by "automatically shutting their valves" when water attempts to flow backward. These "backflow prevention devices" can be purchased at your local hardware store and are easily installed.

Public water systems are required by law to check that their customers' backflow prevention devices meet certain regulations. Each public water system is responsible for using the required devices and using trained technicians to be sure the devices are working properly. The CT Department of Public Health's, Drinking Water Section makes sure that all public water systems in CT comply with these laws to provide you with clean drinking water free of contamination!