

Responsibility of SWD Cross Connection Inspector

The Southington Water Department has a full time Cross Connection Inspector. His job is to inspect facilities in town, test backflow prevention devices and submit an annual report to the State of Connecticut Department of Public Health.

Responsibility of Owner

Any customers who have testable backflow devices installed on their premises are required to inform the public water to have them tested annually.

What is a Cross Connection?

A cross-connection is any connection between a public water system, and any source of “nonpotable” 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.

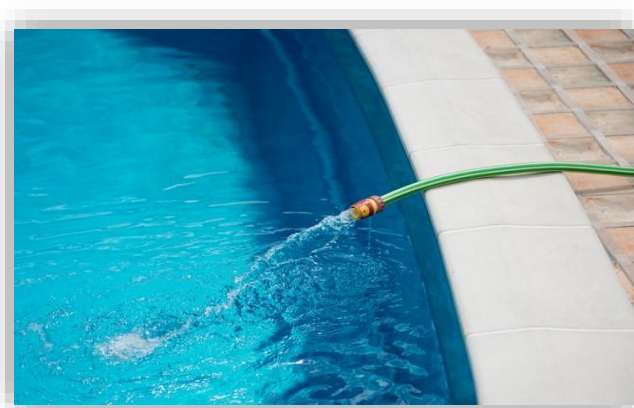
Typical Cross Connections are:

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

Common Cross Connections:

How could this 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 these Photo's?



Hose submerged in bucket



Hose connected with no Hose bib vacuum breaker

If pressure were lost in the system while the bucket was being filled, the dirty 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 firefighting, water pressure drops, allowing for back siphonage. 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.



Installed Hose Bib Vacuum Breaker

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 enforcing 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.



Air Gapped hose to Bucket

Why do backflow preventers have to be tested annually?

Mechanical backflow preventers have internal seals, springs and moving parts that are subject to fouling, wear or fatigue. If a backflow preventer is in a failed state, it could possibly be letting contaminants and pollutants back into the drinking water.