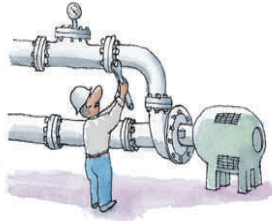


## **WHAT DOES THE LAW SAY ABOUT CROSS CONNECTION?**

Washington Administrative Code 246-290-490 regarding cross-connection control is the law concerning backflow prevention. Skyway Water and Sewer District Resolution No. 05-09-424, adopted these regulations and requires the following:

- Install a backflow assembly if there is an existing or potential cross connection.
- Have the backflow assembly tested after installation, then annually, and/or if the assembly is moved or repaired.
- A State-certified backflow tester must perform the test and send copies of the backflow prevention assembly test report to Skyway Water and Sewer District. The assembly must work properly to pass the test.
- Repair the backflow prevention assembly if it is not working properly. Have a certified tester re-test the assembly after repairs.



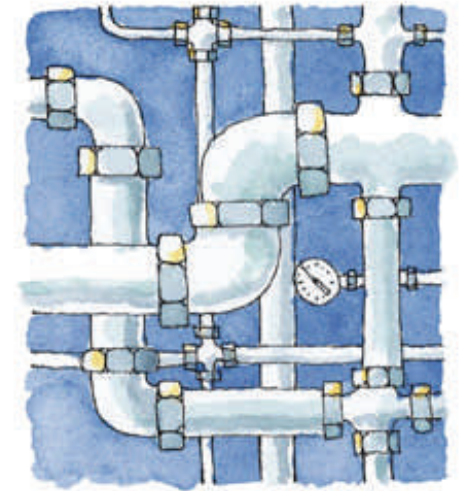
Skyway Water and Sewer District must:

- Set up and maintain backflow assembly records on water services located inside their distribution system.
- Enforce all state and local laws regarding backflow assembly installation. This includes ensuring that owners test the assemblies each year.
- Send annual test notices to backflow assembly owners.

## **WHAT IS THE COST OF PROVIDING ADEQUATE CROSS CONNECTION PROTECTION IN A BUSINESS?**

The typical cost of a needed backflow prevention assembly will vary in price depending on the size and type of the assembly. Since a backflow preventer may be the only barrier between your customers and contaminated water, your investment in installing and keeping the equipment maintained is minimal compared to the potential liability of a backflow incident.

# CROSS CONNECTIONS



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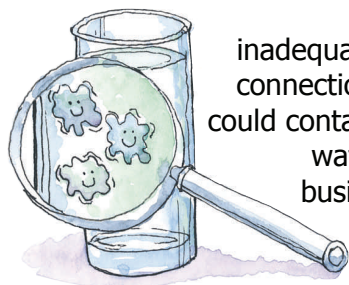
## AN INTRODUCTION

As a business owner, you must protect your drinking water system and the health of your employees, customers and neighbors, by preventing or protecting all cross connections within your premises.

### **WHAT IS CROSS CONNECTION?**

A cross connection occurs whenever a potable drinking water line is directly or indirectly linked with a non-potable piece of equipment or piping. Examples of non-potable equipment typically found in a business include dishwashers, hood washers, wash basins, service sinks, post mix beverage dispensing machines, cooling towers, heat exchangers, ice makers, irrigation systems, fire sprinkler systems, decorative ponds, X-ray equipment, medical/laboratory aspirators, photo processing equipment, etc.

### **WHY SHOULD I BE CONCERNED?**



An unprotected or inadequately protected cross connection on your premises could contaminate the drinking water, not only to your business, but in the line that supplies neighboring homes and businesses.

Severe illnesses and injuries - even death - have resulted from cross connection contamination events that could have been prevented. Such events have been known to cause outbreaks of Hepatitis A, Gastroenteritis, Legionnaire's disease, chemical poisoning, and body lesions (from exposure through showering). They also can rupture plumbing fixtures and even cause explosions.



### **WHAT IS MY LIABILITY?**

You are responsible for all unprotected or inadequately protected cross connections on your premises, and liable for any damages or illnesses they may cause. In cases where business owners have been proven at fault for cross connection contamination events, judges and juries have awarded plaintiffs substantial monetary damages.

### **WHAT IS MY RESPONSIBILITY AS A BUSINESS OWNER?**

You must have your business facility surveyed by Skyway Water and Sewer District to determine if any cross connections exist. Your cooperation is needed, at the time of the site survey. A person familiar with the plumbing system is needed to walk through the premises with the District representative (s). Each cross connection must be eliminated or properly protected by an appropriate backflow preventer. All work done on the internal plumbing system of your facility must be performed by a Washington State licensed plumber. Any changes to your plumbing must be approved by your local plumbing inspector and the District as necessary.

### **HOW CAN A CROSS CONNECTION CONTAMINATION EVENT OCCUR?**

Nonpotable water or chemicals used in equipment or a system can end up in the



drinking water line as a result of backpressure or backsiphonage. Backpressure occurs when the pressure in the equipment or system such as a boiler or air conditioning unit is greater than the pressure inside the drinking water line. Backsiphonage occurs when the pressure in the drinking water line drops (due to fairly routine occurrences such as main breaks, nearby fires, unusually heavy water demand, etc.) and contaminants are sucked out of the system and into the potable water lines.

### **HAVE THINGS LIKE THAT EVER HAPPENED?**

Yes, they have, and all too often despite the efforts of local water suppliers. There are several cases of backflow incidents documented. Some examples include:

- Post mix pop dispensers. Cases where the single check valves have leaked, letting carbon dioxide into the water system reacting with the copper pipe-thus forming **carbonic acid**.
- Pesticides from garden hose sprayers.
- Antifreeze or corrosion control chemical from cooling towers/ equipment.



The problem is not just cross connection of chemical and bacteriological potential. Gases and air have also caused damage physically to water systems, homes and buildings.