

**P**ublic water systems depend on pressure to keep water flowing from the treatment plant to your property. This is done by maintaining a higher water pressure within the public water system than the pressure on the property side of the water meter. However, when the public water system pressure drops or property side pressure rises, a reverse flow or backflow incident will occur. When this happens it is possible for water from the customer's plumbing system to flow back into the public water system. If the water in the customer's plumbing system has come into contact with pollutants or contaminants, then these can enter into the public water system and cause illness or, in extreme cases, death.

**Y**our City of San Diego Public Utilities Department, like public water agencies across the nation, ensures the public water system remains safe and free of hazards by maintaining an effective Cross-Connection Control Program. A component of this program is to require the installation of backflow prevention assemblies to prevent dangerous situations and to ensure the City's drinking water meets all state and federal standards.

The following are common answers to questions about backflow prevention:

### **Do backflow incidents really happen?**

**Yes!** Here are just a few examples:

- Chula Vista, CA - for two years several businesses were drinking and washing their hands in treated sewage water.
- Altadena, CA – snow foam was pumped into the water system due to lack of backflow protection.

- Santa Fe Springs, CA – liquid detergent from a metal treatment plant entered the water supply system through a cross-connection.
- W. Sacramento, CA – coolant flowed back into water lines after a backflow prevention device failed during maintenance on the building's cooling system.

### **Who is required to have a backflow prevention assembly?**

All 1.5" and larger meters for multi-family, commercial/industrial, and dedicated irrigation meters regardless of size are required to have a backflow prevention assembly at each meter. Most single or dual family residences do not fall under this mandate unless the property is being equipped with a fire suppression system or fire service. The requirement for these services are determined during the plan review process and may be omitted by fire system design methods. Others may be required on a case by case basis.

### **How can I help prevent a dangerous backflow condition?**

You can help by working with your Public Utilities Department Cross-Connection Control Program and by submitting plans or requesting permits for proposed plumbing work within your property. Our program, which is required by the State of California Department of Public Health, focuses on preventing intrusion of hazards into the public water system. In addition to this program, City building inspectors help to ensure that all plumbing work and engineering controls are correctly installed and in place to protect inhabitants of the building from issues related to cross-connection.



### **What is an approved backflow assembly?**

An approved backflow assembly is a piece of equipment consisting of various components that are tested and approved by the University of Southern California Foundation for Cross-Connection Control and Hydraulic Research. Your Public Utilities Department requires that all backflow assemblies utilized to protect the Public Water System be of the reduced principal (RP) type and meet these standards.

### **Does my backflow assembly need to be tested?**

Yes. Your Public Utilities Department requires that you hire a certified backflow tester, from our district approved list, to perform a test of all backflow assemblies at the time of installation, replacement, repair, and annually to ensure the equipment is operating properly. Once tested, you must ensure the test is forwarded to the Cross-Connection Control Program.

**The test form can be scanned and emailed to: [crossconnect@sandiego.gov](mailto:crossconnect@sandiego.gov), it may also be mailed to: 9192 Topaz Way San Diego, CA 92123**

## What happens if I do not test or install a backflow after being notified to do so?

Noncompliance with this requirement can result in service termination and or fines placed upon the property.

## Where are most common cross-connection found?

- Wash basins and service sinks
- Laboratory equipment
- Irrigation or lawn sprinkler systems
- Swimming pools and spas
- Solar heating systems
- Cooling towers
- Fire sprinkler systems
- Auxiliary water supplies (wells, storage tanks)
- Photo developing equipment
- Chemical feed equipment
- Hose attachments
- Food and beverage processing
- Ornamental fountains
- Boilers
- Hose bibs



## Are cages required as part of the backflow installation?

Cages are not required but can help to prevent theft. Your Cross-Connection Control Inspector can provide alternatives to theft prevention.

## Mandating Authorities

There are several Mandating Authorities regarding Cross-Connection Control and Backflow Prevention:

- Code of Federal Regulations, Safe Drinking Water Act of 1986
- Code of California Regulations Title 17 and Title 22
- State of California Water Code, Chapter 1, Section 110, Chapter 8, Section 500 and Chapter 723, Sections 13553, 13554.2, and 13554.3
- State of California Health and Safety Code Section 13114.7
- California Plumbing Code (CPC)
- California Fire Code (CFC)
- City of San Diego Municipal Code (MC) Chapter IV, Article 4, Section 44.00 and Chapter VI, Article 7, Section 67.00
- City of San Diego Fire Department



## Cross-Connection Control Program & Backflow Prevention

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THE CITY OF SAN DIEGO

# Protecting Our Drinking Water



## Cross-Connection Control and Backflow Prevention Program

