Water Quality Division, Cross-Connection Control Program
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Frequently Asked Questions about Backflow Prevention

What is a cross-connection?

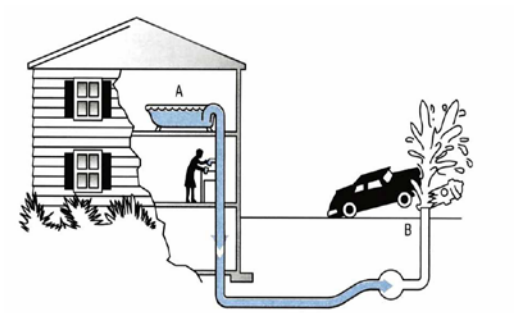
A cross-connection is an actual or potential connection between a public or consumer's drinking water system and a non-potable (non-drinkable) source of water or other fluid. Examples of cross-connections are the connections between the drinking water distribution system and irrigation or lawn sprinkler systems, hose bibs, fire sprinkler systems, carbonation units, boilers, and chemical feed equipment. Cross-connections are generally categorized as either low hazard (affecting taste and odor but not causing a health hazard) or high hazard (posing a risk to public health).

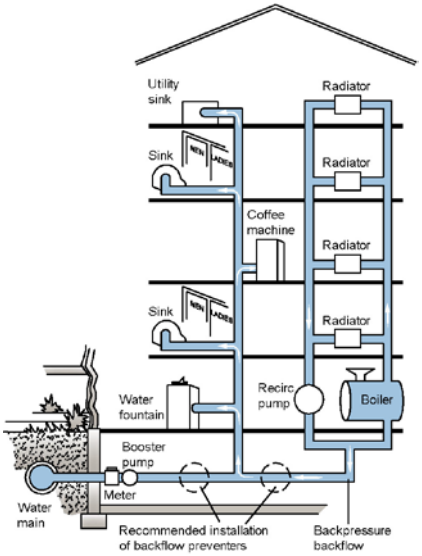
What is backflow?

Under normal conditions, water from the distribution system flows into a consumer's premises. When backflow occurs, water flows from the consumer's premises back into the distribution system (or from an isolated system, such as a boiler, into the consumer's distribution system). If that water is contaminated, it can carry pollutants into the distribution system, which can cause illness or even death.

How does backflow occur?

Backflow into the public water distribution system can occur when the water pressure in the consumer's premises is higher than the pressure in the water distribution system. This condition can be caused by a drop in water pressure in the distribution system (for example, because of firefighting or a break in a water main) or by the presence of systems within a consumer's premises that operate at higher pressures than that of the distribution system (for example, commercial boilers or steam heating systems).





Examples of Cross-Connections

What is a backflow prevention assembly?

A backflow prevention assembly is a mechanical device that prevents water from flowing backwards. To be approved for use in San Francisco, the assembly must be testable and be listed on the Cross-Connection Control Program website. There are several types of backflow

prevention assembly: reduced pressure principle (RP), double check valve (DC), double-check detector check (DCDA), reduced pressure principle detector (RPDA), and pressure vacuum breaker. In addition, air gaps and atmospheric vacuum breakers are non-testable devices that also prevent backflow. The degree of hazard determines which type of assembly or device must be installed at a given location.

Example of a backflow prevention assembly

How often must a backflow prevention assembly be tested?

Assemblies must be tested once a year. Water Quality Division will send you a notice at the beginning of the month in which your test is due.

Who is responsible for arranging for testing of a backflow prevention assembly?

The customer of record (that is, the entity to whom the water bill is addressed) is responsible for arranging for testing.

Where can I find a certified tester?

Testers approved to work in San Francisco are on the San Francisco Public Health Department's list of Certified Backflow Prevention Assembly Testers, available under the heading "Helpful Links" at *http://www.sfdph.org/dph/EH/CrossFlow/*.

How do I change the contact information for a backflow prevention assembly on my property?

To change the contact name or telephone number for a backflow prevention assembly, the customer may contact the Cross-Connection Control Program at (650) 652-3199. To open or close an account, contact Customer Services at (415) 551-3000.

What does SPID mean on my test forms?

SPID stands for "service point identification." The SPID number is the identifier used to track water meters in the databases of the Customer Services Bureau and Water Quality Division. The SPID number replaced the previously used tap number in mid-2009.

What does PIC mean on the backflow assembly test report?

PIC stands for "personal identification code." The PIC is a unique number printed on each "Backflow Prevention Assembly Test Report" that is mailed to customers when testing is due. A customer can provide the PIC number to a certified tester so that the tester can access the test forms on line from the Cross-Connection Control Program. The purpose of the PIC number is to protect customer privacy: without a PIC, which is unique to each water meter and each year, a tester cannot download a customer's test forms.

I live out of state: how do I get my test report forms to my tester?

Test forms contain a PIC (personal identification code) in the upper left part of the form. If you give this number to your certified tester, he or she can download the test forms from the Cross-Connection Control Program's website. The purpose of the PIC is to protect customer privacy:

without a PIC, which is unique to each water meter and each year, a tester cannot download a customer's test forms.

Who is responsible for sending in the completed "Backflow Prevention Assembly Test Report" forms?

The tester is responsible for returning the original, signed test reports to the Cross-Connection Control Program, either by mail or email of a high-quality scan. The test reports must be submitted within five calendar days of the test date. Testers should provide their customers with proof that the forms have been submitted as required.

What if my backflow prevention assembly fails the test?

If an assembly fails, the tester must contact the owner and get approval to try to repair the assembly and then retest it. If the assembly cannot be repaired, it must be replaced. Replacement of an assembly requires a permit from the Department of Building Inspection.

What happens if I don't have my assembly tested?

Annual testing and repair, if required, are necessary to ensure that backflow prevention assemblies are working properly. If you do not maintain your backflow prevention assembly, you put the public water system and occupants of your property at risk. If assembly test results are not received by the end of the month in which testing is required, Water Quality Division will send you a second notice requiring testing within 15 days. If you do not have your backflow prevention assembly tested, you will be referred to the San Francisco Department of Public Health, which will issue an abatement order. If you do not comply with the abatement order, further action can include a citation requiring attendance at a hearing before the Director of Environmental Health of the San Francisco Department of Public Health, referral to the City Attorney, fines, property liens and termination of water service.

How do I get a backflow prevention assembly removed?

Removal, replacement, or relocation of a backflow prevention assembly requires a plumbing permit from the Department of Building Inspection. Permits can be obtained from San Francisco's Central Permit Bureau, located at 1660 Mission Street, telephone number (415) 558-6070, or on line at *http://www.sfdbi.org/index.aspx?page=228*. The removal of an assembly must be documented on a "Backflow Prevention Assembly Test Report," which can be obtained by calling the Cross-Connection Control Program at (650) 652-3199. A copy of the signed permit must be submitted to the program within 30 days of permit approval.

I have several backflow prevention assemblies with different test dates: How can I get them tested at the same time?

If you would like to synchronize the test due dates for several assemblies on different water meters, contact the Cross-Connection Control Program at (650) 652-3199. Please be aware that, in the first year, synchronization could result in some tests being due less than 12 months after the previous test.

I have a backflow prevention assembly next to a boiler: How can I arrange to have the assembly tested at the same time that the boiler is inspected?

If you would like to synchronize the test due date for a backflow prevention assembly so that it coincides with the annual boiler inspection, contact the Cross-Connection Control Program at (650) 652-3199. Please be aware that, in the first year, synchronization could result in some tests being due less than 12 months after the previous test.

What regulations authorize San Francisco's cross-connection control program?

Cross-connection control is required by federal, state and local regulations, as summarized below:

- Federal: Safe Drinking Water Act (1974, amended 1986 and 1996) and Safe Drinking Water Act Amendments of 1986.
- State: California Health and Safety Code, Chapter 5 and Titles 17 and 22 of the California Code of Regulations (CCR).
- Local: San Francisco Health Code, Article 12A; San Francisco Public Utilities Commission Rules and Regulations Governing Water Service to Customers; San Francisco Plumbing Code, Chapter 6; and San Francisco Fire District General Order, File Code 02A.

Where can I get additional information?

Additional information is available at *www.sfwater.org/backflow*, or you can call the Cross-Connection Control Program at (650) 652-3199 between 8 am and 5 pm.