



Water Quality Division, Cross-Connection Control Program  
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## Consumer Guide to Backflow Prevention

The City and County of San Francisco has a cross-connection control program to protect the city's drinking water distribution system from contamination caused by backflow. Under normal conditions, water from the distribution system flows into a consumer's premises. When backflow occurs, water from the consumer's premises flows into the distribution system. If that water is contaminated because of activities on the consumer's premises (for example, addition of rust-inhibiting chemicals to a boiler or use of photo-processing chemicals), the water can carry contaminants into the distribution system, possibly causing illness or even death.

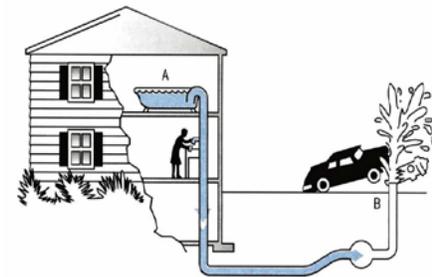
The city's cross-connection control program is a joint effort by the San Francisco Public Utilities Commission, the Department of Building Inspection, and the Department of Public Health. The program is administered by the Water Quality Division.

### *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.

### *How does backflow occur?*

Backflow 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).



*Example of a Cross-Connection*

### *How does San Francisco protect against backflow?*

The city requires the installation of backflow prevention assemblies whenever a potential hazard is present within a consumer's premises. Assemblies can be required near the water meter (as close as practical, but no more than 25 feet away) to protect the public water supply and/or at the location of an internal hazard, such as a boiler, to protect the plumbing system within a consumer's premises. If multiple hazards exist, more than one backflow prevention assembly may be required, for example, one on a boiler and another on an irrigation system.

### *What is a backflow prevention assembly?*

A backflow prevention assembly is a mechanical device that prevents water from flowing backwards. There are several types of backflow prevention assembly; the degree of hazard determines which type must be installed at a given location.

***As an owner of a backflow prevention assembly, what are my responsibilities?***

You are responsible for arranging for annual testing of your backflow prevention assemblies by a tester approved to work in San Francisco. The tester must have a valid Permit to Operate issued by the San Francisco Department of Public Health. Approved testers are on the department's list of Certified Backflow Prevention Assembly Testers, available at <http://www.sfdph.org/dph/EH/CrossFlow/>.



*Example of a  
Backflow Prevention Assembly*

Water Quality Division will send you a notice at the beginning of the month in which your backflow prevention assemblies must be tested. The notice will include "Backflow Assembly Test Report" form(s), which you must give to your tester so that he or she can report the test results to the Cross-Connection Control Program. If you cannot meet with your tester on site to provide the form(s), you can tell your tester the PIC number listed on the notice, and he or she will be able to obtain the forms directly from the Cross-Connection Control Program. Your tester must submit the test reports within five calendar days of the test date. He or she should provide you with proof that the forms have been submitted as required.

If a backflow prevention assembly needs to be moved, removed, or replaced, a plumbing permit must be obtained from the Department of Building Inspection. A copy of the signed permit must be submitted to the Cross-Connection Control Program within 30 days of permit approval. Note that whenever an assembly is moved or repaired, or a new assembly is installed, the assembly must be tested immediately and test results submitted as described above.

***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.

***Where can I get additional information?***

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