



Cross-Connection Control Requirements for Fire Services

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 (reversal of flow from a customer's premises into the potable water distribution system). The program is administered by the Water Quality Division of San Francisco Water, Power and Sewer. Any modifications to an existing fire service must meet the requirements of the Cross-Connection Control Program. You must contact the Senior Water Quality Inspector of the Cross-Connection Control Program before making any modifications whatsoever to a fire service. The purpose of this brochure is to explain the program's requirements.

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. Connections between the drinking water distribution system and fire services are cross-connections. All cross-connections must be protected with the appropriate backflow prevention assembly.

What is the required protection for NEW fire services in San Francisco?

Dedicated services (non-dockside/marine): All dedicated fire services must be protected with a double-check detector assembly (DCDA). No other type of assembly, including a double-check valve, is acceptable. All assemblies installed in San Francisco must be on the "Approved Backflow Prevention Assemblies" list developed by the University of Southern California Foundation for Cross-Connection Control and Hydraulic Research.

The DCDA must be installed as close as possible to the point of connection (POC) with the potable water system but in no case more than 25 feet from the POC. The assembly must be tested immediately after installation by a tester approved to work in San Francisco, and test results must be reported to the Cross-Connection Control Program within five days.

Combination services (non-dockside/marine): All combination fire services with components not certified for potable use (e.g., black iron pipe) must be protected with a double-check assembly (DC). All assemblies installed in San Francisco must be on the "Approved Backflow Prevention Assemblies" list developed by the University of Southern California Foundation for Cross-Connection Control and Hydraulic Research.

Water Quality Division requires that the DC be installed within 12 inches of the center of the domestic tee to the inlet of the backflow prevention assembly.

Dockside/marine: All dockside/marine fire services must be protected by a reduced pressure detector assembly (RPDA).

The RPDA must be installed as close as possible to the POC with the potable water system but in no case more than 25 feet from the POC. In addition, the RPDA must be installed on the landward side of the sea wall.

What procedures must be followed when changes are made to an EXISTING fire service?

Before removing, installing, relocating, or replacing a backflow prevention assembly on a fire service, you must obtain a **permit** for the work from the San Francisco Department of Building Inspection, Plumbing Inspection Division. 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>. (After the work has been done, call Plumbing Inspection Services at (415) 558-6070 to schedule a plumbing inspection.)

If you are removing an existing backflow prevention assembly, contact Customer Services Bureau and find out what to do with the red-top water meter attached to the assembly. If a meter goes missing, the property owner will be charged to replace it at a cost likely to exceed \$1,000.

After an assembly has been removed, you or your representative must call the Cross-Connection Control Program at (650) 652-3199 and provide the service address, serial number, and permit number within 30 days of the removal. If an assembly is installed, moved or replaced, the assembly must be tested immediately, and your tester must enter test results into the Cross-Connection Control Program's database within five days of the test. The permit number must be included in that submittal.

Who is responsible for the cost of installing backflow prevention assemblies?

All costs associated with backflow protection on fire services are the responsibility of the property owner. These costs include purchase, installation, permitting, testing (both upon installation and annually thereafter) and maintenance.

Who is permitted to test backflow prevention assemblies?

Testers who work in San Francisco must have a valid Permit to Operate issued by the San Francisco Department of Public Health. A list of companies employing Authorized Backflow Prevention Assembly Testers is available at www.sfdph.org/backflow.

Where can I get additional information?

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