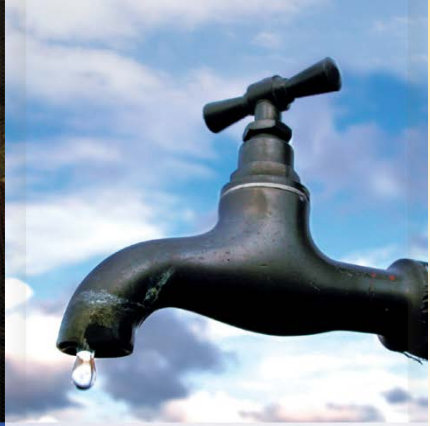
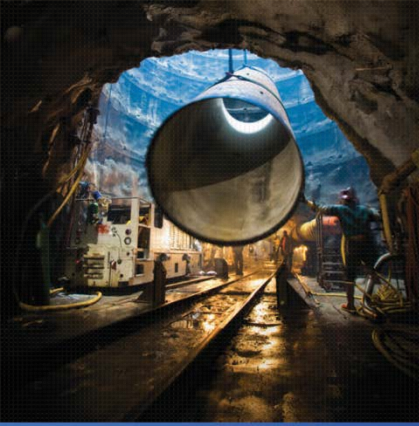


San Francisco Public Utilities Commission
Rules and Regulations Governing Water
Service to Customers



San Francisco
Water
Power
Sewer

Established by Resolution No. 19.786
Passed December 15, 1959
by the Public Utilities Commission

Effective January 1, 1960 with
Amendments to February 1, 1960

SECTION G – CROSS-CONNECTION CONTROL

Rule 1.

Applicability

- a) As a condition of receiving water service from the public water system, all property owners shall comply with Section G.
- b) Property owners shall install an approved backflow preventer at the service connection wherever any of the following conditions exists:
- i. Wastewater pumping and/or treatment plants.
 - ii. Hazardous substances handled in any manner in which the substances could enter the potable water system.
 - iii. Auxiliary water supply.
 - iv. Dual-plumbed property.
 - v. Intricate plumbing and piping arrangements.
 - vi. Repeated history of cross-connections being established or re-established.
 - vii. Dockside watering points or marine facilities.
 - viii. Dedicated irrigation service.
 - ix. Fire protection systems.
 - x. Buildings whose highest point is equal to or greater than 40 feet in height above the point of connection.
 - xi. Inadequate backflow prevention for any on-site processes that the General Manager identifies as requiring additional protection from backflow.
 - xii. Entry to a property or parts of a property is restricted so that cross-connection inspections cannot be made with sufficient frequency or at sufficiently short notice to assure that cross-connections do not exist.
 - xiii. Multiple standard service connections, at least one of which requires backflow protection for containment.
 - xiv. Water storage facility not under control of the public water system.
 - xv. Any other on-site hazard that the General Manager identifies as requiring abatement for the protection of the public water system.

Rule 2.

Definitions

The terms used in this section have the following meanings.

- a) **Approved air gap separation (AG):** a physical break between the water supply line and a receiving vessel that has been approved for such use by the General Manager and

- is in proper working order. The air gap must be located outside of the receiving vessel, be above grade, and be visible for inspection. The air gap must meet all requirements set forth in the California Plumbing Code, Chapter 6, section 603.
- b) **Approved backflow prevention assembly:** an assembly used to prevent the backflow of substances into the public water system. The assembly must be approved for such use by the University of Southern California Foundation for Cross-Connection Control and Hydraulic Research and be in proper working order.
- c) **Authorized Backflow Prevention Assembly Tester:** any person who possesses a valid certification to test, repair and maintain backflow prevention assemblies and is authorized by the General Manager to do such work in the City in accordance with these rules and regulations.
- d) **Authorized Cross-Connection Control Specialist:** any person who possesses a valid certification to administer a cross-connection control test and to conduct site surveys to assess cross-connection control requirements and is authorized by the General Manager to do such work in the City in accordance with these rules and regulations.
- e) **Authorized Representative:** a person designated by a company employing Authorized Backflow Prevention Assembly Testers or Authorized Cross-Connection Control Specialists to purchase backflow tags on behalf of the company.
- f) **Auxiliary water:** any water other than that received from a public water system. This category includes, but is not limited to, municipally supplied recycled water, wastewater, graywater, groundwater, rainwater, and alternate water sources as defined in San Francisco Health Code Article 12C and accompanying rules and regulations.
- g) **Backflow:** the flow, from any source or sources, of water that is of unknown or questionable safety for human consumption or of other liquids, gases, mixtures or other substances into the public water system.
- h) **Backflow preventer:** approved backflow prevention assembly or approved air gap separation.
- i) **Backflow tag:** tag provided by the General Manager to be affixed to a backflow prevention assembly after it has passed testing by an Authorized Backflow Prevention Assembly Tester.
- j) **City:** the City and County of San Francisco.
- k) **Containment:** Protection from backflow at the service connection.
- l) **Cross-connection:** any unprotected actual or potential connection between any part of a potable water system used or potentially used to supply water for drinking purposes and any source or system containing water or any other substance that is not or cannot be approved as safe, wholesome and potable.
- m) **Cross-connection control survey:** an inspection of all parts of a property served by the public water system to identify potential cross-connections.
- n) **Cross-connection test:** a test administered by an Authorized Cross-Connection Control Specialist to verify that no physical uncontrolled connection exists between the potable water piping and any auxiliary water piping system.
- o) **Customer:** The person or entity listed as the customer of record in the Customer Services Bureau database.
- p) **Department of Building Inspection:** San Francisco Department of Building Inspection.
- q) **Double-check valve backflow prevention assembly (DC):** an assembly of at least two independently acting check valves including tightly closing shut-off valves on each side of the check valve assembly and test cocks available for testing the water-tightness of each check valve.
- r) **Double-check detector backflow prevention assembly (DCDA):** an assembly consisting of a line-sized approved double-check valve assembly with a bypass containing a specific water meter and an approved double-check valve assembly.

- s) **Double-check detector backflow prevention assembly type II (DCDA II):** an assembly consisting of a line-sized approved double-check valve assembly with a bypass around the second check containing a specific water meter and a check valve.
- t) **Dual-plumbing:** a system that utilizes separate piping systems for auxiliary water and potable water within a property.
- u) **First certificate of occupancy:** either a temporary certificate of occupancy or a Certificate of Final Completion and Occupancy as defined in San Francisco Building Code Section 109A, whichever is issued first.
- v) **General Manager:** the General Manager of the San Francisco Public Utilities Commission, or any individual or City agency designated by the General Manager to act on his or her behalf.
- w) **On-site hazard:** any actual or potential hazard to the public water supply that may be created as a result of conditions existing on a property.
- x) **Permit to Operate:** a permit required under Rule 5 allowing persons to work as Authorized Backflow Prevention Assembly Testers or Authorized Cross-Connection Control Specialists.
- y) **Point of connection:** the customer's water meter, except for dedicated fire services, for which the point of connection is the junction of the water supply lateral and the customer's fire protection system.
- z) **Pressure vacuum breaker (PVB):** an assembly containing an independently operating, internally loaded check valve and an independently operating loaded air inlet valve located on the discharge side of the check valve. The assembly must be equipped with properly located resilient seated test cocks and tightly closing resilient seated shutoff valves attached at each end of the assembly.
- aa) **Property:** parcel, premises, building, or other structure that receives potable water from the public water system.
- bb) **Property owner:** the legal owner of a property with a water service connection.
- cc) **Public water system (PWS):** the potable water system operated and maintained by the San Francisco Public Utilities Commission.
- dd) **Reduced pressure principle backflow prevention assembly (RP):** a backflow prevention assembly incorporating not less than two check valves, an automatically operated differential relief valve located between the two check valves, a tightly closing shut-off valve on each side of the check valve assembly, and that is equipped with necessary test cocks for testing.
- ee) **Reduced pressure principle detector assembly (RPDA):** a backflow prevention assembly composed of a line-size approved reduced pressure principle backflow prevention assembly with a specific bypass containing a specific water meter and an approved reduced pressure principle backflow prevention assembly.
- ff) **Reduced pressure principle detector assembly type II (RPDA II):** a backflow prevention assembly composed of a line-size approved reduced pressure principle backflow prevention assembly with a specific bypass around the second check valve containing a specific water meter and an approved check valve.
- gg) **Water Quality Division:** Water Quality Division of the San Francisco Public Utilities Commission.
- hh) **Water service connection:** a connection to the public water system.
- ii) **Water user supervisor (site supervisor):** A person designated to be responsible for the avoidance of cross-connections during the installation, operation and maintenance of a property's pipelines and equipment.

Rule 3.

Backflow Prevention Assembly Requirements

- a) All backflow preventers and associated pipe, fittings, solder and flux must be “lead-free” as defined in the California Health and Safety Code, section 116875. This requirement does not apply to dedicated fire services or irrigation and industrial systems.
- b) The types of backflow protection that may be used for containment at permanent connections to the public water system, listed according to increasing level of protection, are double-check valve backflow prevention assembly (DC), reduced pressure principle backflow prevention assembly (RP), and air gap separation (AG). The minimum level of backflow protection by hazard criterion shall be as described in Table 1.
 - i. If more than one of the hazard criteria applies to a property, the criterion requiring the greatest degree of protection shall apply.
 - ii. If an assessment of a property cannot be made to determine the type of hazard present, the San Francisco Public Utilities Commission shall ensure that an air gap separation is installed.
- c) For isolation of a hazard within a property, the minimum level of backflow protection shall be as set forth in Chapter 6 of the California Plumbing Code, except that an RP is required for the following situations:
 - i. Carbonators: Piping downstream of the RP may not be of copper, copper alloy, or other material that is affected by carbon dioxide.
 - ii. Irrigation systems, if an existing PVB fails and cannot be repaired.
 - iii. Closed-loop boilers.
 - iv. Closed-loop radiant heating systems.
 - v. Industrial water chillers.
- d) Backflow prevention assembly requirements for permanent installations:
 - i. All backflow prevention assemblies must be testable and have passed laboratory and field evaluation tests performed by the University of Southern California Foundation for Cross-Connection Control and Hydraulic Research.
 - ii. Assemblies may not be modified in any way or installed in a manner that differs from the configuration tested and approved by the recognized testing organization.
 - iii. Assemblies, as installed, shall be field tested to ensure they are functioning properly before being placed into service.
- e) Air gaps shall meet the requirements set forth in the California Plumbing Code, Chapter 6, section 603.

Table 1: Hazard Criteria and Required Backflow Protection for Containment

(Some requirements are more stringent than those in the California Plumbing Code)

Hazard Criteria	Required Level of Protection
Sewage and Hazardous or Potentially Hazardous Substances	

Properties where there are wastewater treatment processes, handling and/or pumping equipment	AG
Properties where hazardous substances are handled in any manner in which the substance may enter the public water system (PWS)	AG
Properties with a piping system conveying a fluid not from an approved water supply that is interconnected with the PWS	AG
Piping system conveying a fluid not from an approved water supply that is not interconnected with the PWS	RP
Auxiliary Water Supplies (Non-potable)	
Properties where there is an auxiliary supply that is interconnected with the PWS (except for makeup water for an auxiliary system using rainwater only)	AG
Properties where an auxiliary supply using rainwater is interconnected with the PWS	Two RPs ¹
Properties where there is an auxiliary supply that is not interconnected with the PWS	RP
Fire Protection Systems	
Properties where the fire protection system is supplied from the PWS and interconnected with an onsite auxiliary water supply	AG
Properties where the fire protection system supplied from the PWS with no interconnections to auxiliary water supplies	DCDA or DCDA_II
Properties where chemicals are injected into the fire system	RPDA or RPDA_II
Marina and Port Facilities	
All marina and port facilities	RPDA or RPDA_II
Properties with Multiple Service Connections to the PWS	
Properties with multiple standard service connections, at least one of which requires backflow protection for containment	Varies ²
Irrigation Systems	
Properties with dedicated irrigation meters	RP
Properties with irrigation systems into which fertilizers, herbicides, or pesticides are or can be injected	RP
Water Storage Facility Not under Control of the PWS	
Water storage facility not under control of the PWS	AG
Repeated History of Cross-Connections	
Properties where there is a repeated history of cross-connections being established or re-established	RP or AG ³
Restricted Entry	

Properties where entry is restricted so that inspections for cross-connections cannot be made in accordance with these rules and regulations	RP
Unabated Internal Cross-Connections	
Properties where internal cross-connections are not abated in accordance with these rules and regulations	RP or AG ⁴
Buildings Higher than 40 Feet	
Properties where there are buildings with a highest point equal to or greater than 40 feet in height above the point of connection	DC
Temporary (Non-Fire) Connections to Fire Hydrants	
Connections for temporary uses, such as construction projects	Single swing-check valve ⁵

¹ One RP must be installed at the point of connection to the public water system; a second RP must be installed where the potable makeup water supplies a rainwater storage tank or directly supplies the auxiliary water system.

² The same level of protection must be provided for all standard service connections; the level of protection must address the highest degree of hazard on the property that cannot be isolated.

³ A water user supervisor might also be required.

⁴ To be determined by the Water Quality Division of the San Francisco Public Utilities Commission.

⁵ A higher level of protection might be required, depending on the level of hazard.

Rule 4.

Installation Requirements for Backflow Preventers

- a) All backflow preventers that are installed, replaced or relocated shall be under permit from the Department of Building Inspection, Plumbing Inspections Division.
- b) All backflow preventers for containment shall be installed as close as practical but in any case within 25 feet of the downstream side of the point of connection.
- c) All backflow preventers shall be accessible for field testing and maintenance. The following requirements apply to RPs and DCs:
 - i. The lowest point of the assembly must be at least 12 inches above grade.
 - ii. Side clearances must be at least 12 inches. On the side of the assembly that contains the test cocks, a side clearance of at least 24 inches is recommended.
- d) Existing PVBs must be installed at least 12 inches above all downstream piping and flood-level rim of receptor.
- e) Assemblies must be installed so that the make and serial number are visible in a readily accessible location. These identifiers must not be painted over or otherwise made illegible.
- f) Assemblies may not be installed in pits or vaults in the ground.
- g) If an assembly is installed 5 feet or more above the finished floor/ground, a platform approved by CAL OSHA (California Occupational Safety and Health Administration) must

be used for testing/servicing by testers or contractors. The platform may be permanent or portable.

h) If an enclosure is used, the enclosure must be large enough or removable to allow for testing/servicing.

i) When an RP is installed indoors, a drain funnel must also be installed to prevent flooding.

Rule 5.

Requirements for Permits to Operate

a) A valid backflow prevention assembly tester permit to operate is required for anyone testing backflow prevention assemblies in the City and County of San Francisco (City).

b) A valid cross-connection control specialist permit to operate is required for anyone who conducts a cross-connection control test or site survey to assess cross-connection control requirements in the City.

c) The General Manager shall maintain a current list of names and business addresses of all valid permits to operate issued under this rule and all permits that have been suspended or revoked.

d) Permit requirements:

i. All applicants for a backflow prevention assembly tester permit to operate must have a current "Backflow Prevention Assembly Tester" certification from a recognized organization acceptable to the General Manager. Acceptable organizations are listed in Appendix B of the City's *Manual for Cross-Connection Control*, available at sfwater.org/backflow.

ii. All applicants for a cross-connection control specialist permit to operate must have a current "Cross-Connection Control Specialist" and "Backflow Prevention Assembly Tester" certifications from a recognized organization acceptable to the General Manager. Acceptable organizations are listed in Appendix B of the City's *Manual for Cross-Connection Control*, available at sfwater.org/backflow.

iii. All backflow prevention assembly testers and cross-connection control specialists shall take and pass an examination administered by the General Manager in order to qualify for a valid permit to operate.

iv. All backflow prevention assembly testers and cross-connection control specialists shall attend an annual meeting held by the General Manager.

v. Each holder of a permit to operate who is not a City employee shall maintain general liability insurance in full force and effect, at his or her expense, for all activities performed under the permit to operate. Such insurance shall include coverage for bodily injury, personal injury, including death resulting therefrom, and property damage insurance, with limits not less than \$1 million each occurrence combined single limit. The City, its officers and employees shall be named as additional insureds under the policy, and a cross-liability clause shall

be attached. Such insurance shall provide 10-day prior written notice of cancellation, non-renewal, or material change to the General Manager. A certificate of insurance, in form and with insurers acceptable to City, shall be required prior to the issuance of any permit to operate issued under this rule or any renewal thereof.

- e) Each permit to operate shall be valid for a period of one year from the date of issuance. The permit to operate may be renewed if the holder maintains a current "Backflow Prevention Assembly Tester" or "Cross-Connection Control Specialist" certification, as applicable, from a recognized testing organization, maintains insurance as set forth in subsection (d) above, and pays applicable fees.
- f) The General Manager may suspend or revoke a permit to operate at any time for cause.

Rule 6.

Companies Employing Authorized Backflow Prevention Assembly Testers and Authorized Cross-Connection Control Specialists

- a) Companies that employ Authorized Backflow Prevention Assembly Testers and Authorized Cross-Connection Control Specialists must register with the General Manager.
- b) Companies must maintain general liability insurance in full force and effect, at company expense, for all activities performed by their testers and specialists. Such insurance must include coverage for bodily injury, personal injury, including death resulting therefrom, and property damage insurance, with limits not less than \$1 million each occurrence combined single limit. The City, its officers, and employees must be named as additional insureds under the policy, and a cross-liability clause must be attached. The insurance must provide 10-day prior written notice of cancellation, non-renewal, or material change to the General Manager.
- c) Companies must provide the General Manager and the San Francisco Department of Public Health (SFDPH) with the names of testers and cross-connection control specialists working for them and notify SFDPH when a tester or specialist leaves the firm.
- d) Companies must provide the General Manager and the SFDPH with the names of up to two persons who may act as Authorized Representatives for the purchase of backflow tags on behalf of the company.
- e) Companies must maintain a continuous record of the dates and locations of all activities performed in relation to backflow prevention (e.g., tests, repairs, inspections, surveys, cross-connection control tests) for three years. The records must be made available at the request of the General Manager. If a company ceases doing business in San Francisco, all records relating to backflow prevention in the preceding three years must be provided to the General Manager.

Rule 7.

Testing, Inspection and Repair Requirements for Backflow Preventers

- (a) All testing, inspections, and repairs shall be at the sole expense of the property owner.

- (b) Property owners shall inspect and/or test their backflow preventers at least annually and in any case within 30 days of receiving notice from the General Manager to do so.
- (c) Air gap separations shall be visually inspected annually by the General Manager or an Authorized Cross-Connection Control Specialist.
- (d) Backflow prevention assemblies:
- i. An Authorized Backflow Prevention Assembly Tester shall test all backflow prevention assemblies following installation, repair, or re-location and at least annually thereafter. The General Manager may require more frequent testing if determined to be necessary.
 - ii. Testers must use a dedicated test kit for assemblies on potable water systems. Test kits that have been used on auxiliary water systems may not be used on potable water systems.
 - iii. When an assembly is inspected and has passed the testing procedure, the Authorized Backflow Prevention Assembly Tester shall:
 - A. Immediately affix a backflow tag to the assembly.
 - B. Enter the test data in the San Francisco Public Utilities Commission's Cross-Connection Assembly Management System database and send a copy to the property owner within five business days of each inspection or test.
 - iv. All backflow prevention assemblies that fail the field test shall be repaired, overhauled or replaced, and immediately retested before being placed into service. If an assembly cannot be repaired or otherwise made functional on the same day as the initial test, the tester must enter the test data into the San Francisco Public Utilities Commission's Cross-Connection Assembly Management System database by close of business of the day of the initial test.

Rule 8.
Backflow Tag Sales

- a) Backflow tags are available for sale from the Customer Services Bureau of the San Francisco Public Utilities Commission, located on the first floor at 525 Golden Gate Avenue, San Francisco. Tags may be obtained in person or by mail. Payments may be made by cash (in person only), company or cashier's check, and money order. (Personal checks are not accepted.)
- b) Tags may be purchased by Authorized Backflow Prevention Assembly Testers or Authorized Representatives of testing companies.
- c) To purchase tags in person, the buyer must provide official identification (e.g., driver's license), name of the company being represented, and payment. Tags obtained in person may be purchased in any amount.
- d) To purchase tags by mail, buyers must go online to sfwater.org/backflow, scroll down to "Backflow Prevention Assembly Testers and Test Companies," and click on "Request to

Purchase Backflow Tags.” Buyers must fill out the PDF form, print it out, and mail it with payment to Customer Services Bureau, San Francisco Public Utilities Commission, 525 Golden Gate Avenue, 2nd Floor, San Francisco, CA 94102. The bureau will mail the tags by certified mail within five business days of receiving the request. Tags obtained by mail may only be purchased in increments of 100.

e) The cost of backflow tags is specified in the City’s *Manual for Cross-Connection Control*.

**Rule 9.
Inspection and Testing Requirements for Dual-Plumbed Systems**

- f) All inspections, testing and repairs shall be at the sole expense of the property owner.
- g) Property owners shall inspect and/or test their dual-plumbed systems within 30 days of receiving a notice from the General Manager to do so.
- h) Inspection and testing requirements are listed in Table 2 below.

Table 2: Inspection and Testing Requirements for Auxiliary Water Supplies

Type	Initial Inspection and Shutdown Test	Annual Inspection ¹	Subsequent Cross-Connection Test
Municipally supplied recycled water	Yes	Yes	Every four years ¹ (need not be shutdown test)
Blackwater	Yes	No ²	Every four years ¹ (need not be shutdown test)
Other auxiliary supply (graywater, rainwater, groundwater, etc.)	Yes	No ²	No

1. The General Manager may reduce testing frequency if the property owner can document to the General Manager’s satisfaction that there have been no plumbing changes in the dual-plumbed system.
2. Although the Cross-Connection Control Program does not require annual inspections, all operators of auxiliary water systems in the City are subject to monitoring and reporting requirements under Article 12C of the San Francisco Health Code, which is administered by the SFPDH.

Any changes made to auxiliary water systems must be done under permit from the San Francisco Department of Building Inspection and in conformance with the requirements of San Francisco Health Code Article 12C and rules and regulations

pursuant to Article 12C. As part of the permitting process, the Department of Building Inspection and/or SFDPH are responsible for ensuring additional inspections and cross-connection testing, as required. If the degree of hazard changes (e.g., a blackwater treatment system is installed), the required level of protection must conform with Table 1, and the General Manager must be informed at least 30 days before the change is made.

- i) Cross-connection testing requirements:
 - i. Cross-connection testing shall be performed by an Authorized Cross-Connection Control Specialist in the presence of the General Manager and the water user supervisor for the property.
 - ii. Upon installation, dual-plumbed systems shall be tested for possible cross-connections with the potable water system following the plumbing test procedures approved by the General Manager and described in the *City's Manual for Cross-Connection Control*, available at sfwater.org/backflow.
 - iii. Thereafter, dual-plumbed systems shall be tested for cross-connections as described in Table 2 above and in accordance with the *City's Manual for Cross-Connection Control*, available at sfwater.org/backflow.
 - iv. A written report documenting the result of inspections and/or testing shall be submitted to the General Manager within five days following completion of the inspections and/or testing.
- j) Recordkeeping. Property owners shall maintain cross-connection testing and inspection records for their properties in accordance with these rules and regulations for a period of three years. The records shall be made available at the request of the General Manager.

Rule 10.

Emergency Cross-Connection Response Plan for Dual-Plumbed Systems

- a) All emergency response activities and repairs shall be at the sole expense of the property owner.
- b) The customer and property owner shall immediately notify the General Manager upon discovery of the incident.
- c) The customer and property owner shall submit written notification within 24 hours of the incident and include an explanation of the nature of the cross-connection, date and time discovered, and the contact information of the person reporting the cross-connection.
- d) The customer and property owner shall provide potable drinking water for building occupants, if applicable, until the potable water system is deemed safe to drink.
- e) The customer and property owner shall shut down the auxiliary water piping to the building and drain the auxiliary water riser.
- f) The General Manager shall shut down the potable water supply at the point of connection.

- g) The customer and property owner shall uncover and disconnect the cross-connection.
- h) After the cross-connection has been remediated, the customer and property owner shall conduct a visual inspection and cross-connection test, as described in Rule 8.
- i) The property's internal potable water system shall be disinfected in accordance with the California Plumbing Code, Chapter 16A, section 1620A.
- j) After 24 hours, the customer and property owner shall flush the building's potable water system and conduct a standard bacteriological test.
- k) After approval by the General Manager, the customer and property owner may recharge the property's internal potable water system.

Rule 11.

Water User Supervisor

- a) For properties that have a multi-piping system that conveys various types of fluids, some of which may be hazardous, and where changes in the piping system are frequently made, the General Manager may require the property owner to designate a water user supervisor.
- b) The water user supervisor shall be responsible for the avoidance of cross-connections during the installation, operation and maintenance of the water user's pipelines and equipment.
- c) In the event that a cross-connection is discovered, the water user supervisor shall follow the **emergency response plan** described in Rule 9.

Rule 12.

Inspections and Notices

- a) Upon notification by the General Manager, a property owner shall eliminate any unprotected cross-connections within seven calendar days, unless the General Manager authorizes an alternate deadline for remediation.
- b) If a property owner refuses or fails to eliminate a cross-connection within the allotted time, the General Manager may proceed with enforcement activities in accordance with Rule 13 of these rules and regulations.
- c) **Right of Entry:** The General Manager may inspect any property to determine compliance with the provisions of San Francisco Health Code Article 12A and applicable laws and regulations. The right of entry may be exercised during normal business hours in the absence of advance notice.
- d) **High Risk of Hazard:** Whenever an existing or potential unprotected cross-connection poses a high risk of hazard to the public water system and requires immediate abatement, as determined by the General Manager, the General Manager may immediately terminate water service without initial or final notification until the cross-connection has been eliminated and necessary payments have been made, including but not limited to fines in accordance with Rule 13 of these rules and regulations and service shut-off and service turn-on fees.

Rule 13.

Enforcement, Violations and Penalties

- a) In the event that any rule is violated, the General Manager may issue written notices establishing a deadline for compliance or modify or terminate service.
- b) Modification or termination of water service: The General Manager shall implement one or more of the following alternatives and notify the property owner.
 - i. Install a flow restrictor, with applicable fees, on all non-fire service lines to the property to minimize the backflow hazards until they have been corrected.
 - ii. Disconnect the noncompliant water service(s) until the cross-connection has been eliminated and necessary payments have been made, including but not limited to service shut-off and service turn-on fees.
 - iii. If the noncompliant water service is a fire service, disconnection of the associated domestic water service until the cross-connection has been eliminated and necessary payments have been made.
 - iv. Any other action deemed necessary by the General Manager to protect the public water system.
- c) Any property owner who violates any provision of Article 12A or any rule or regulation pursuant to Article 12A shall be subject to enforcement in accordance Chapter 100 of the San Francisco Administrative Code, as amended, with respect to administrative penalties and any other available legal remedies. Enforcement procedures are described in the City's *Manual for Cross-Connection Control*, available at sfwater.org/backflow. For purposes of this rule, "charging official" shall mean the General Manager, or his or her designee; "violation" shall mean a violation of Article 12A or these rules and regulations; and "violator" shall mean the customer and/or property owner.
- d) Any customer or property owner who violates any provision of Article 12A or any rule or regulation adopted pursuant to Article 12A may be subject to an administrative penalty of up to \$1,000 per violation per day. Citations will be served to both the customer and the property owner in a manner consistent with Chapter 100 of the San Francisco Administrative Code. Payment of fines shall be directed to the Treasurer of the City and County of San Francisco, 1 Dr. Carlton B. Goodlett Place, San Francisco, CA 94102.
- e) Any Authorized Backflow Prevention Assembly Tester or Authorized Cross-Connection Control Specialist who violates any provision of Article 12A or any rule or regulation adopted pursuant to Article 12A may be subject to an administrative penalty of up to \$1,000 per violation per day, as well as other penalties set forth in the *Manual for City's Cross-Connection Control*. Any company employing Authorized Backflow Prevention Assembly Testers or Authorized Cross-Connection Control Specialists who violate Article 12A or any rule or regulation adopted pursuant to Article 12A may also be subject to an administrative penalty of up to \$1,000 per violation per day and other penalties set forth in the *Manual for City's Cross-Connection Control*.
- f) The General Manager may recover any costs and fees, including but not limited to attorneys'

fees, for enforcement initiated through and authorized under San Francisco Health Code Article 12A.

- g) The final decision of the General Manager to impose administrative penalties, as provided in Article 12A, may be appealed in the manner described in Administrative Code Chapter 100.